Appendix A: LID Fact Sheets

PRESERVING IMPORTANT HYDROLOGIC FEATURES AND FUNCTION

There are many features in the natural landscape that provide the important hydrologic functions of retention, detention, infiltration, and filtering of stormwater. These features include, but are not limited to; highly permeable soils, pocket wetlands, significant small (headwater) drainage features, riparian buffers, floodplains, undisturbed natural vegetation, and tree clusters. All areas of hydrologic importance should be delineated at the earliest stage in the development planning process.

STRATEGIES

1. ***Buffers provide filtration, infiltration, flood management, and bank stability benefits.*** Unlike stormwater ponds and other structural infrastructure, buffers are essentially a no capital cost and low maintenance form of "green" infrastructure. The benefits of buffers diminish when slopes are greater than 25%; therefore steep slopes should not be counted as buffer.
2. ***Preserve areas of undisturbed soil and vegetation cover.*** Typical construction practices, such as topsoil stripping and stockpiling, and site grading and compaction by construction equipment, can considerably reduce the infiltration capacity (and treatment capacity) of soils. During construction, natural heritage features and locations where stormwater infiltration practices will be constructed should be delineated and not subject to construction equipment or other vehicular traffic, nor stockpiling of topsoil.
3. ***Avoid development on permeable soils.*** Highly permeable soils (i.e., hydrologic soil groups A and B) function as important groundwater recharge areas. To the greatest extent possible, these areas should be preserved in an undisturbed condition or set aside for stormwater infiltration practices. Where avoiding development on permeable soils is not possible, stormwater management should focus on mitigation of reduced groundwater recharge through application of stormwater infiltration practices.
4. ***Preserve existing trees and, where possible, tree clusters.*** Mature stands of deciduous trees will intercept 10 to 20% of annual precipitation falling on them, and a stand of evergreens will intercept 15 to 40%. Preserving mature trees will provide immediate benefits in new developments, whereas newly planted trees will take 10 years or more to provide equivalent benefits. Tree clusters can be incorporated into parking lot interiors or perimeters, private lawns, open space areas, road buffers, and median strips. An uncompacted soil volume of 15 to 28 m3 is recommended to achieve a healthy mature tree with a long lifespan.

SITING AND LAYOUT OF DEVELOPMENT

The location and configuration of elements, such as streets, sidewalks, driveways, and buildings, within the framework of the natural heritage system provides many opportunities to reduce stormwater runoff.

STRATEGIES

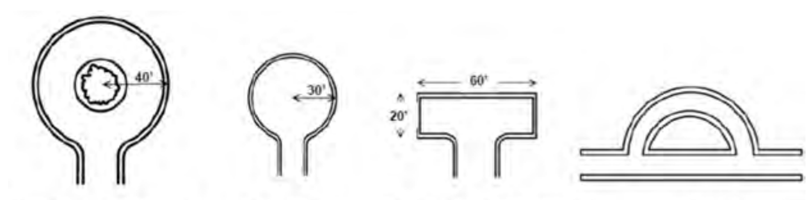
5. ***Fit the design to the terrain.*** Using the terrain and natural drainage as a design element will reduce the amount of clearing and grading required and the extent of necessary underground drainage infrastructure. This helps to preserve predevelopment drainage boundaries.
6. ***Use open space or clustered development.*** Clustering development increases the development density in less sensitive areas of the site while leaving the rest of the site as protected community open space. Some features of open space or clustered development are smaller lots, shared driveways, and shared parking. Clustered development also reduces the amount of impervious surfaces and stormwater runoff to be managed, reduces pressure on buffer areas, reduces the construction footprint, and provides more area and options for stormwater controls.
7. ***Use innovative street network designs.*** Certain roadway network designs (e.g., loops, cul-de-sacs, fused grids) create less impervious area than others. These layouts by themselves may not achieve the many goals of urban design. However, used in a hybrid form together or with other street patterns, they can meet multiple urban design objectives and reduce the necessary street area, thereby reducing the amount of impervious surfaces and stormwater runoff to be managed.
8. ***Reduce roadway setbacks and lot frontages.*** The lengths of setbacks and frontages are a determinant for the area of pavement, street, driveways, and walkways, needed to service a development. Municipal zoning regulations for setbacks and frontages have been found to be a significant influence on the production of stormwater runoff.

REDUCING IMPERVIOUS AREA

Many of the strategies described previously are primarily for the purpose of reducing impervious area on a macro scale. The following strategies provide examples of how to reduce impervious area on a micro or lot level scale.

STRATEGIES

9. ***Reduce street width.*** Streets constitute the largest percentage of impervious area and contribute proportionally to the urban runoff. Streets widths are sized for the free flow of traffic and movements of large emergency vehicles. In many cases, such as low density residential, these widths are oversized for the typical function of the street. Amending urban design standards to allow alternative, narrower street widths might be appropriate in some situations. There are a variety of ways to accommodate emergency vehicle movements and traffic flow on narrower streets, including alternative street parking configurations, vehicle pullout space, connected street networks, prohibiting parking near intersections, and reinforced turf or gravel edges.
10. ***Reduce building footprints.*** Reduce the building footprint by using taller multi-story buildings and taking advantage of opportunities to consolidate services into the same space.
11. ***Reduce parking footprints.*** Excess parking not only results in greater stormwater impacts and greater stormwater management costs but also adds unnecessary construction and maintenance costs and uses space that could be used for a revenue generating purpose.
    - Keep the number of parking spaces to the minimum required. Parking ratio requirements are often set to meet the highest hourly parking demand during the peak season. The parking space requirement should instead consider an average parking demand and other factors influencing demand like access to mass transit.
    - Take advantage of opportunities for shared parking. For example, businesses with daytime parking peaks can be paired with evening parking peaks, such as offices and a theatre, or land uses with weekday peak demand can be paired with weekend peak demand land uses, such as a school and church.
    - Reductions in impervious surface can also be found in the geometry of the parking lot. One way aisles when paired with angled parking will require less space than a two way aisle. Other reductions can be found in using unpaved end-of-stall overhangs, setting aside smaller stalls for compact vehicles, and configuring or overlapping common areas like fire lanes, collectors, loading, and drop off areas.
    - More costly approaches to reducing the parking footprint include parking structures or underground parking.
12. ***Consider alternative cul-de-sac designs.*** Using alternatives to the standard 15 metre radius cul-de-sac can further reduce the impervious area required to service each dwelling. Ways to reduce the impervious areas of cul-de-sacs include a landscaped or bioretention centre island, T-shaped turnaround, or by using a loop road instead.
13. ***Eliminate unnecessary sidewalks and driveways.*** A flexible design standard for sidewalks is recommended to allow for unnecessary sidewalks to be eliminated. Sidewalks that are not needed for pedestrian circulation or connectivity should be removed. Often sidewalks are only necessary on one side of the street. Driveway impervious area can be reduced through the use of shared driveways or alley accessed garages



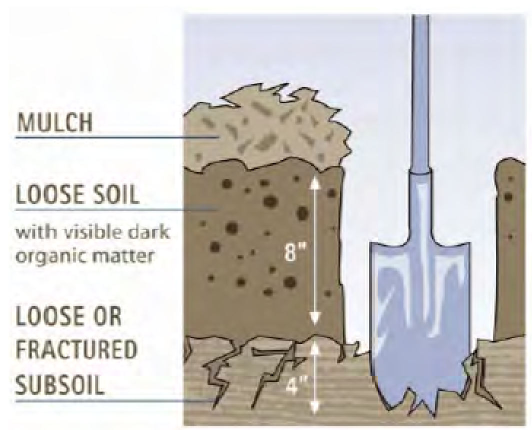
40 ft cul-de sac with landscaped island | 30 ft radius cul-de-sac | 60 by 20 ft T-shaped turnaround | Loop road

Source: CWP, 1998

	Square grid (Miletus, Houston, Portland, etc.)	Oblong grid (most cities with a grid)	Oblong grid 2 (some cities or in certain areas)	Loops (Subdivisions – 1950 to now)	Culs-de-sac (Radburn – 1932 to now)
Percentage of area for streets	36.0%	35.0%	31.4%	27.4%	23.7%
Percentage of buildable area	64.0%	65.0%	68.6%	72.6%	76.3%

Source: CMHC, 2002

Soil Amendment Guidelines



Soil amendment sizing criteria:

impervious area / soil area = 1
- use 100 mm compost, till to 300 - 450 mm depth

impervious area / soil area = 2
- use 200 mm compost, till to 300 - 450 mm depth

impervious area / soil area = 3
- use 300 mm compost, till to 450 - 600 mm depth

Compost should consist of well-aged (at least one year) leaf compost. Amended soil should have an organic content of 8-15% by weight or 30-40% by volume.

Source: Soils for Salmon, 2005

Open Drainage Applied in a Medium Density Neighbourhood

Source: U.S. EPA

USING NATURAL DRAINAGE SYSTEMS

Rather than collect and move stormwater rapidly to a centralized location for detention and treatment, the goal of these strategies is to take advantage of undisturbed vegetated areas and natural drainage patterns (e.g., small headwater drainage features). These strategies will extend runoff flow paths and slow down flow to allow soils and vegetation to treat and retain it. Using natural systems or green infrastructure is often more cost effective than traditional drainage systems, and they provide more ancillary benefits.

STRATEGIES

14. ***"Disconnect" impervious areas.*** Roof leaders or downspouts, parking lots, driveways, sidewalks, and patios should be disconnected from the storm sewer and directed towards stabilized pervious areas as sheet flow where possible. In cases of concentrated flow, the flow can be broken up with level spreaders or flow dissipating riprap. With the proper treatment, the landscaped areas of a site can accept runoff from impervious areas. Deep tilling or soil aeration is recommended for topsoil that has been replaced or compacted by construction equipment. Soil amendments can be applied to hydrologic soil group C and D soils to encourage runoff absorption. Use deep rooting vegetation in landscaped areas when possible which will maintain and possibly improve soil infiltration rate over time:
    - ***Undisturbed densely vegetated areas and buffers*** - A hydrologist and/or ecologist should be consulted before designing a site to drain to sensitive natural heritage features like pocket wetlands.
    - ***Landscaped and disturbed areas*** - With the proper treatment, the landscaped areas of the site can accept runoff from impervious areas. Deep tilling or soil aeration is recommended for topsoil that has been replaced or compacted by construction equipment. Soil amendments can be applied to hydrologic soil group C and D soils to encourage runoff absorption. Use deep rooting vegetation in landscaped areas when possible which will maintain and possibly improve the infiltration rates over time.
15. ***Preserve or create micro-topography.*** Undisturbed lands have a micro-topography of dips, hummocks and mounds which slow and retain runoff. Site grading smoothes out these topographic features. Micro-topography can be restored in areas of ornamental landscaping or naturalization.
16. ***Extend drainage flow paths.*** Slowing down flows and lengthening flow paths allow more opportunities for stormwater to be filtered and infiltrated. Extending the travel time can also delay and lower peak flows. Where suitable, flows should be conveyed using vegetated open channels (e.g., enhanced grass swales).

CVC/TRCA LOW IMPACT DEVELOPMENT
PLANNING AND DESIGN GUIDE - FACT SHEET

LOW IMPACT DEVELOPMENT SITE DESIGN STRATEGIES

TORONTO AND REGION Conservation for The Living City

CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 3.2 OF THE CVC/TRCA LID SWM GUIDE

RAINWATER HARVESTING

CVC/TRCA LOW IMPACT DEVELOPMENT
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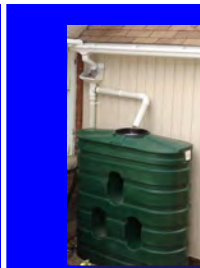


GENERAL DESCRIPTION

Rainwater harvesting is the process of intercepting, conveying and storing rainfall for future use. The rain that falls upon a catchment surface, such as a roof, is collected and conveyed into a storage tank. Storage tanks range in size from rain barrels for residential land uses (typically 190 to 400 litres in size), to large cisterns for industrial, commercial and institutional land uses. A typical pre-fabricated cistern can range from 750 to 40,000 litres in size.

With minimal pretreatment (e.g., gravity filtration or first-flush diversion), the captured rainwater can be used for outdoor non-potable water uses such as irrigation and pressure washing, or in the building to flush toilets or urinals. It is estimated that these applications alone can reduce household municipal water consumption by up to 55%. The capture and use of rainwater can, in turn, significantly reduce stormwater runoff volume and pollutant load. By providing a reliable and renewable source of water to end users, rainwater harvesting systems can also help reduce demand on municipal treated water supplies. This helps to delay expansion of treatment and distribution systems, conserve energy used for pumping and treating water and lower consumer water bills.

DESIGN GUIDANCE

CATCHMENT AREA
The catchment area is simply the surface from which rainfall is collected. Generally, roofs are the catchment area, although rainwater from low traffic parking lots and walkways, may be suitable for some non-potable uses (e.g., outdoor washing). The quality of the harvested water will vary according to the type of catchment area and material from which it is constructed. Water harvested from parking lots, walkways and certain types of roofs, such as asphalt shingle, tar and gravel, and wood shingle roofs, should only be used for irrigation or toilet flushing due to potential for contamination with toxic compounds.

COLLECTION AND CONVEYANCE SYSTEM
The collection and conveyance system consists of the eavestroughs, downspouts and pipes that channel runoff into the storage tank. Eavestroughs and downspouts should be designed with screens to prevent large debris from entering the storage tank. For dual use cisterns (used year-round for both outdoor and indoor uses), the conveyance pipe leading to the cistern should be buried at a depth no less than the local maximum frost penetration depth and have a minimum 1% slope. If this is not possible, conveyance pipes should either be located in a heated indoor environment (e.g., garage, basement) or be insulated or equipped with heat tracing to prevent freezing. All connections between downspouts, conveyance pipes and the storage tank must prevent entry of small animals or insects into the storage tank.

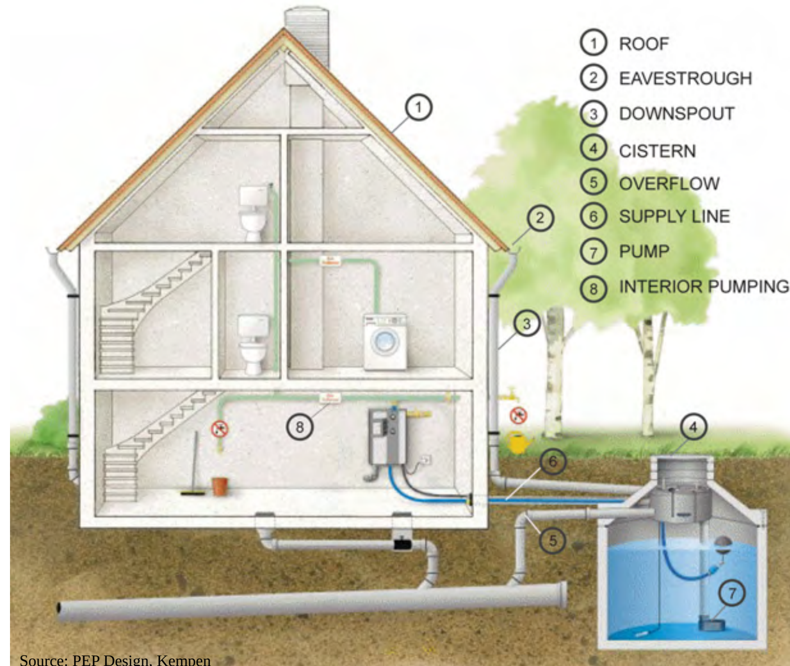
PRE-TREATMENT
Pretreatment is needed to remove debris, dust, leaves, and other debris that accumulates on roofs and prevents clogging within the rainwater harvesting system. For dual use cisterns that supply water for irrigation and toilet flushing only, filtration or first-flush diversion pretreatment is recommended. To prevent ice accumulation and damage during winter, first-flush diverters or in-ground filters should be in a temperature controlled environment, buried below the local frost penetration depth, insulated or equipped with heat tracing.

STORAGE TANKS
The storage tank is the most important and typically the most expensive component of a rainwater harvesting system. The required size of storage tank is dictated by several variables: rainfall and snowfall frequencies and totals, the intended use of the harvested water, the catchment surface area, aesthetics, and budget. In the Greater Toronto Area, an initial target for sizing the storage tank could be the predicted rainwater usage over a 10 to 12 day period.

DISTRIBUTION SYSTEM
Most distribution systems are gravity fed or operated using pumps to convey harvested rainwater from the storage tank to its final destination. Typical outdoor systems use gravity to feed hoses via a tap and spigot. For underground cisterns, a water pump is needed. Indoor systems usually require a pump, pressure tank, back-up water supply line and backflow preventer. The typical pump and pressure tank arrangement consists of a multistage centrifugal pump, which draws water out of the storage tank into the pressure tank, where it is stored for distribution.

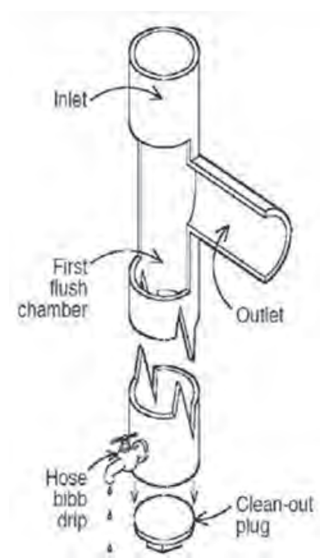
OVERFLOW SYSTEM
An overflow system must be included in the design. Overflow pipes should have a capacity equal to or greater than the inflow pipe(s). The overflow system may consist of a conveyance pipe from the top of the cistern to a pervious area down gradient of the storage tank, where suitable grading exists. The overflow discharge location should be designed as simple downspout disconnection to a pervious area, vegetated filter strip, or grass swale. The overflow conveyance pipe should be screened to prevent small animals and insects from entering. Where site grading does not permit overflow discharge to a pervious area, the conveyance pipe may either be indirectly connected to a storm sewer (discharge to an impervious area connected to a storm sewer inlet) or directly connected to a storm sewer with incorporation of a backflow preventer.

ACCESS AND MAINTENANCE
For underground cisterns, a standard size manhole opening should be provided for maintenance purposes. This access point should be secured with a lock to prevent unwanted access.

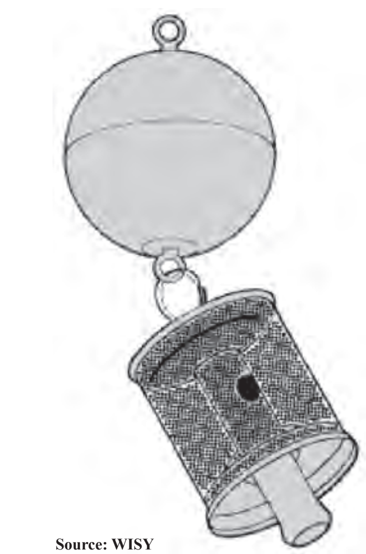


Source: PEP Design, Kempen

OVERVIEW



FIRST FLUSH DIVERTER



Source: WISY

FLOATING SUCTION FILTER

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Rainwater Harvesting	Yes - magnitude depends on water usage	Yes - size for the water quality storage requirement	Partial - can be used in series with other practices

GENERAL SPECIFICATIONS

Component	Specification	Quantity
Eavestroughs and Downspouts	Materials commonly used for eavestroughs and downspouts include polyvinylchloride (PVC) pipe, vinyl, aluminum and galvanized steel. Lead should not be used as solder as rainwater can dissolve the lead and contaminate the water supply.	Length of eavestroughs and downspouts is determined by the size and layout of the catchment and the location of the storage tanks.
Pretreatment	At least one of the following: • leaf and mosquito screens (1 mm mesh size); • first-flush diverter; • in-ground filter; • in-tank filter. Large tanks (10 m3 or larger) should have a settling compartment for removal of sediments.	1 per inlet to the collection system
Storage Tanks	• Materials used to construct storage tanks should be structurally sound. • Tanks should be installed in locations where native soils or building structures can support the load associated with the volume of stored water. • Storage tanks should be water tight and sealed using a water safe, non-toxic substance. • Tanks should be opaque to prevent the growth of algae • Previously used containers to be converted to rainwater storage tanks should be fit for potable water or food-grade products. • Cisterns above- or below ground must have a lockable opening of at least 450 mm diameter.	The size of the cistern(s) is determined during the design calculations.

Note: This table does not address indoor systems or pumps.

SITE CONSIDERATIONS

Available Space
Storage tanks can be placed underground, indoors, on roofs, or adjacent to buildings depending on intended uses of the rainwater.

Site Topography
Influences the placement of the storage tank and design of the distribution and overflow systems.

Soil
Underground cisterns should be placed on or in native, rather than fill soil.

Head
Rain barrels or above ground cisterns with gravity distribution systems should be sited up-gradient from landscaping areas to which rainwater is to be applied.

Pollution Hot Spot Runoff
Can be an effective BMP for roof runoff from sites where land uses or activities at ground level have the potential to generate highly contaminated runoff.

Winter Operation
Can be used throughout the winter if tanks are located below the local frost penetration depth or indoors.

Underground Utilities
Presence of underground utilities may constrain the location of underground storage tanks.

Plumbing Code
Code allows the use of harvested rainwater for toilet and urinal flushing, but systems require installation of backflow prevention devices.

Standing Water and Mosquitoes
If improperly managed, tanks can create habitat suitable for mosquito breeding, so screens should be placed on inlets and outlets to prevent entry.

Child Safety
Above and below ground cisterns with openings large enough for children to enter must have lockable covers.

Setback
Tanks should be water tight to avoid ponding or saturation of soils within 4 metres of building foundations.

Vehicle Loading
Underground tanks should be sited in areas without vehicular traffic.

Drawdown Between Storms
A suggested target for sizing the storage tank to ensure drawdown between storms is the predicted rainwater demand over a 10 to 12 day period.

OPERATION AND MAINTENANCE

Maintenance requirements for rainwater harvesting systems vary according to use. Systems that are used to provide supplemental irrigation water have relatively low maintenance requirements, while systems designed for indoor uses have much higher maintenance requirements. All rainwater harvesting system components should undergo regular inspections every six months during the spring and fall seasons to keep leaf screens, eavestroughs and downspouts free of leaves and other debris; check screens and patch holes or gaps; clean and maintain first flush diverters and filters, especially those on drip irrigation systems; inspect and clean storage tank lids, paying special attention to vents and screens on inflow and outflow spigots; and replace damaged system components as needed.

MOSQUITO CONTROL
If screening is not sufficient to deter mosquitoes, vegetable oil can be used to smother larvae. Alternatively mosquito dunks or pellets containing larvicide can be used.

WINTER OPERATION
Rainwater harvesting systems have a number of components that can be affected by freezing winter temperatures. For above-ground systems, winter-time operation may not be possible. Prior to the onset of freezing temperatures, above-ground systems should be disconnected and drained. For below-ground and indoor systems, downspouts and overflow components should be checked for ice blockages during snowmelt events.

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FOR FURTHER DETAILS SEE SECTION 4.1 OF THE CVC/TRCA LID SWM GUIDE

GREEN ROOFS

CVC/TRCA LOW IMPACT DEVELOPMENT
PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

Green roofs, also known as "living roofs" or "rooftop gardens", consist of a thin layer of vegetation and growing medium installed on top of a conventional flat or sloped roof. Green roofs are touted for their benefits to cities, as they improve energy efficiency, reduce urban heat island effects, and create greenspace for passive recreation or aesthetic enjoyment. They are also attractive for their water quality, water balance, and peak flow control benefits. The green roof acts like a lawn or meadow by storing rainwater in the growing medium and ponding areas. Excess rainfall enters underdrains and overflow points and is conveyed in the building drainage system. After the storm, a large portion of the stored water is evapotranspired by the plants, evaporates or slowly drains away.

There are two types of green roofs: intensive and extensive. Intensive green roofs contain greater than 15 cm depth of growing medium, can be planted with deeply rooted plants and are designed to handle pedestrian traffic. Extensive green roofs consist of a thinner growing medium layer (15 cm depth or less) with herbaceous vegetative cover. Guidance here focuses on extensive green roofs.

DESIGN GUIDANCE

ROOF STRUCTURE

The load bearing capacity of the roof structure must be sufficient to support the soil and plants of the green roof assembly, as well as the live load associated with maintenance staff accessing the roof. A green roof assembly weighing more than 80 kg per square metre, when saturated, requires consultation with a structural engineer. Green roofs may be installed on roofs with slopes up to 10%. As a fire resistance measure, non-vegetative materials, such as stone or pavers should be installed around all roof openings and at the base of all walls that contain openings.

WATERPROOFING SYSTEM

The first layer above the roof surface is a waterproofing membrane. Two common waterproofing techniques are monolithic and thermoplastic sheet membranes. Another option is a liquid-applied inverted roofing membrane assembly system in which the insulation is placed over the waterproofing, which adheres to the roof structure. An additional protective layer is generally placed on top of the membrane followed by a physical or chemical root barrier. Once the waterproofing system has been installed it should be fully tested prior to construction of the drainage system. Electronic leak detection systems should also be installed at this time if desired.

DRAINAGE LAYER

The drainage system includes a porous drainage layer and a geosynthetic filter mat to prevent fine growing medium particles from clogging the porous media. The drainage layer can be made up of gravels or recycled-polyethylene materials that are capable of water retention and efficient drainage. The depth of the drainage layer depends on the load bearing capacity of the roof structure and the stormwater retention requirements. The porosity of the drainage layer should be greater than or equal to 25%.

CONVEYANCE AND OVERFLOW

Once the porous media is saturated, all runoff (infiltrate or overland flow) should be directed to a traditional roof storm drain system. Landscaping style catch basins should be installed with the elevation raised to the desired ponding elevation. Alternately, roof drain flow restrictors can be used. Excess runoff can be directed through roof leaders to another stormwater BMP such as a rain barrel, soakaway, bioretention area, swale or simply drain to a pervious area.

GROWING MEDIUM

The growing medium is usually a mixture of sand, gravel, crushed brick, compost, or organic matter combined with soil. The medium ranges between 40 and 150 mm in depth and increases the roof load by 80 to 170 kg per square metre when fully saturated. The sensitivity of the receiving water to which the green roof ultimately drains should be taken into consideration when selecting the growing medium mix. Green roof growing media with less compost in the mix will leach less nitrogen and phosphorus. Low nutrient growing media also promotes the dominance of stress-tolerant native plants. Fertilizer applied to the growing medium during production and the period during which vegetation is becoming established should be coated controlled release fertilizer to reduce the risk of damage to vegetation and leaching of nutrients into overflowing runoff. Fertilizer applications should not exceed 5 g of nitrogen per square metre.

MODULAR SYSTEMS

Modular systems are trays of vegetation in a growing medium that are prepared and grown off-site and placed on the roof for complete coverage. There are also pre-cultivated vegetation blankets that are grown in flexible growing media structures, allowing them to be rolled out onto the green roof assembly. The advantage of these systems is that they can be removed for maintenance.

Green Rooftops are composed of:

- A roof structure capable of supporting the weight of a green roof system;
- A waterproofing system designed to protect the building and roof structure;
- A drainage layer that consists of a porous medium capable of water storage for plant uptake;
- A geosynthetic layer to prevent fine soil media from clogging the porous media;
- Soil with appropriate characteristics to support selected green roof plants;
- Plants with appropriate tolerance for harsh rooftop conditions and shallow rooting depths.

GREEN ROOF LAYERS
(Source: Great Lakes Water Institute)

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Green Rooftops	Yes	Yes	Yes

GENERAL SPECIFICATIONS

ASTM International released the following Green Roof standards in 2005:

- E2396-05 Standard Test Method for Saturated Water Permeability of Granular Drainage Media;
- E2397-05 Standard Determination of Dead Loads and Live Loads associated with Green Roof Systems;
- E2398-05 Standard test method for water capture and media retention of geocomposite drain layers for green roof systems;
- E2399-05 Standard Test Method for Maximum Media Density for Dead Load Analysis of Green Roof Systems; and
- E2400-06 Standard Guide for Selection, Installation, and Maintenance of Plants for Green Roof Systems.

Although the Ontario Building Code (2006) does not specifically address the construction of green roofs, requirements from the Building Code Act and Division B may apply to components of the construction. Further requirements from sections 2.4 and 2.11 of the 1997 Ontario Fire Code also require consideration.

COMMON CONCERNS

WATER DAMAGE TO ROOF

While failure of waterproofing elements may present a risk of water damage, a warranty can ensure that any damage to the waterproofing system will be repaired. Leak detection systems can also be installed to minimize or prevent water damage.

VEGETATION MAINTENANCE

Extreme weather conditions can have an impact on plant survival. Appropriate plant selection will help to ensure plant survival during weather extremes. Irrigation during the first year may be necessary in order to establish vegetation. Vegetation maintenance costs decrease substantially after the first two years.

COLD CLIMATE

Green roofs are a feasible BMP for cold climates. Snow can protect the vegetation layer and once thawed, will percolate into the growing medium and is either absorbed or drained away just as it would during a rain event. No seasonal adjustments in operation are needed.

COST

An analysis to determine cost effectiveness for a given site should include the roof lifespan, energy savings, stormwater management requirements, aesthetics, market value, tax and other municipal incentives. It is estimated that green roofs can extend the life of a roof structure by as long as 20 years by reducing exposure of the materials to sun and precipitation. They can also reduce energy demand by as much as 75% .

ON PRIVATE PROPERTY

Property owners or managers will need to be educated on their routine operation and maintenance needs, understand the long-term maintenance plan, and may be subject to a legally binding maintenance agreement. An incentive program such as a storm sewer user fee based on the area of impervious cover on a property that is directly connected to a storm sewer could be used to encourage property owners or managers to maintain existing practices.

CONSTRUCTION CONSIDERATIONS

An experienced professional green roof installer should install the green roof. The installer must work with the construction contractor to ensure that the waterproofing membrane installed is appropriate for use under a green roof assembly. Conventional green roof assemblies should be constructed in sections for easier inspection and maintenance access to the membrane and roof drains. Green roofs can be purchased as complete systems from specialized suppliers who distribute all the assembly components, including the waterproofing membrane. Alternatively, a green roof designer can design a customized green roof and specify suppliers for each component of the system.

OPERATION AND MAINTENANCE

- Green roof maintenance is typically greatest in the first two years as plants are becoming established. Vegetation should be monitored to ensure dense coverage. A warranty on the vegetation should be included in the construction contract.
- Regular operation of a green roof includes irrigation and leak detection. Watering should be based on actual soil moisture conditions as plants are designed to be drought tolerant. Electronic leak detection is recommended. This system, also used with traditional roofs, must be installed prior to the green roof.
- Ongoing maintenance should occur at least twice per year and should include weeding to remove volunteer seedlings of trees and shrubs and debris removal. In particular, the overflow conveyance system should be kept clear.

SITE CONSIDERATIONS

Roof Slope
Green roofs may be installed on roofs with slopes up to 10%.

Drainage Area & Runoff Volume
Green roofs are designed to capture precipitation falling directly onto the roof surface. They are not designed to receive runoff diverted from other source areas.

Structural Requirements
Load bearing capacity of the building structure and selected roof deck need to be sufficient to support the weight of the soil, vegetation and accumulated water or snow, and may also need to support pedestrians, concrete pavers, etc.

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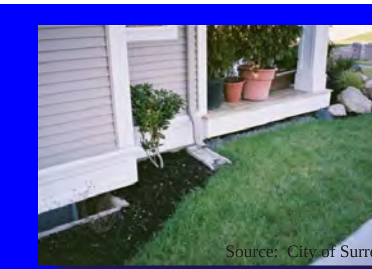
CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 4.2 OF THE CVC/TRCA LID SWM GUIDE



DOWNSPOUT DISCONNECTION

CVC/TRCA LOW IMPACT DEVELOPMENT PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

Simple downspout disconnection involves directing flow from roof downspouts to a pervious area that drains away from the building. This prevents stormwater from directly entering the storm sewer system or flowing across a "connected" impervious surface, such as a driveway, that drains to a storm sewer. Simple downspout disconnection requires a minimum flow path length across the pervious area of 5 metres.

DESIGN GUIDANCE

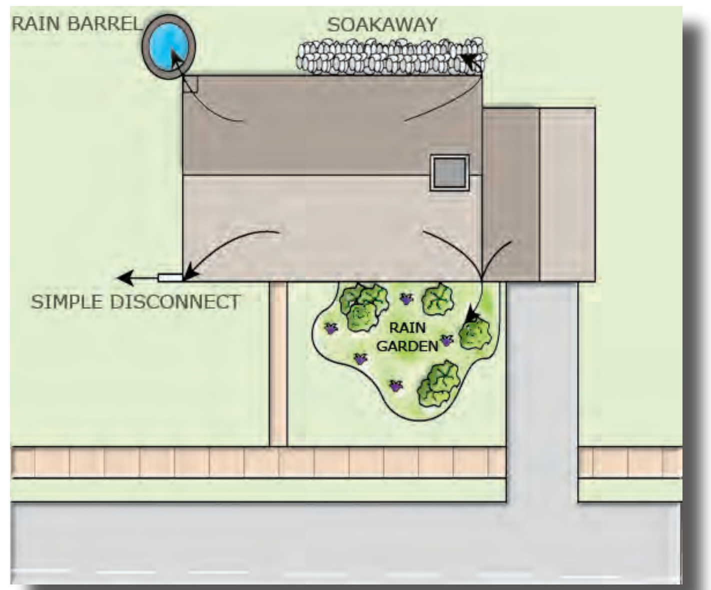
Roof downspout disconnections should meet the following criteria:

- Pervious areas used for downspout disconnection should be graded to have a slope of between 1 to 5%;
- Pervious areas should slope away from the building;
- The flow path length across the pervious area should be 5 metres or greater;
- The infiltration rate of soils in the pervious area should be 15 mm/hr or greater (i.e., hydraulic conductivity of 1x10-6 cm/s or greater);
- If infiltration rate of the soil in the pervious area is less than 15 mm/hr, it should be tilled to a depth of 300 mm and amended with compost to achieve a ratio of 8 to 15% organic content by weight or 30 to 40% by volume;
- If the flow path length across the pervious area is less than 5 metres and the soils are hydrologic soil group C or D, roof runoff should be directed to another LID practice (e.g., rainwater harvesting system, bioretention area, swale, soakaway, perforated pipe system);
- The total roof area contributing drainage to any single downspout discharge location should not exceed 100 square metres; and,
- A level spreading device (e.g., pea gravel diaphragm) or energy dissipating device (e.g., splash pad) should be placed at the downspout discharge location to distribute runoff as evenly as possible over the pervious area.

APPLICATIONS

There are many options for keeping roof runoff out of the storm sewer system. Some of the options are as follows:

- Simple roof downspout disconnection to a pervious area or vegetated filter strip, where sufficient flow path length across the pervious area and suitable soil conditions exist;
- Roof downspout disconnection to a pervious area or vegetated filter strip that has been tilled and amended with compost to improve soil infiltration rate and moisture storage capacity;
- Directing roof runoff to an enhanced grass swale, dry swale, bioretention area, soakaway or perforated pipe system;
- Directing roof runoff to a rainwater harvesting system (e.g., rain barrel or cistern) with overflow to a pervious area, vegetated filter strip, swale, bioretention area, soakaway or permeable pavement.



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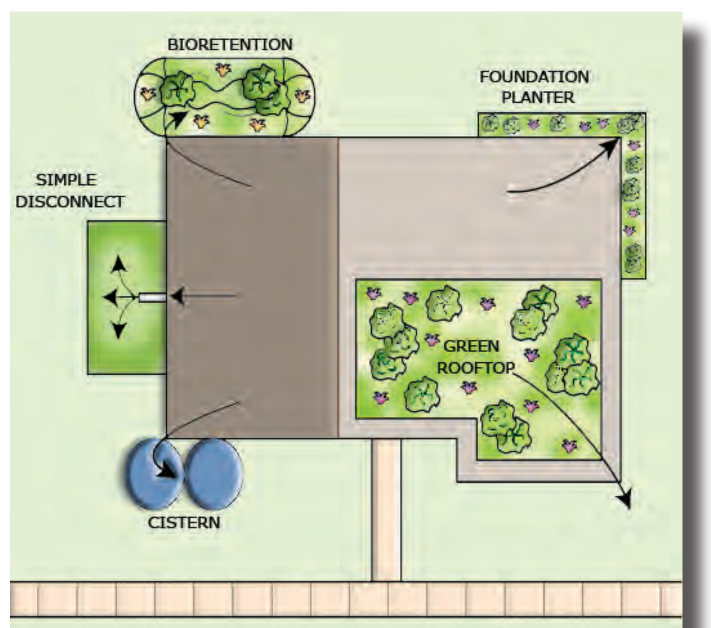


COMMERCIAL

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benfit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Downspout Disconnection	Partial - depends on soil infiltration rate and length of flow path over the pervious area	Partial - depends on soil infiltration rate and length of flow path over the pervious area	Partial - depends on combination with other practices

Downspout disconnection is primarily a practice used to help achieve water balance benefits, although it can also contribute to water quality improvement. Very limited research has been conducted on the runoff reduction benefits of downspout disconnection, so initial estimates are drawn from research on filter strips, which operate in a similar manner. The research indicates that runoff reduction is a function of soil type, slope, vegetative cover and filtering distance. A conservative runoff reduction rate is 25% for hydrologic soil group (HSG) C and D soils and 50% for HSG A and B soils.* These values apply to disconnections that meet the feasibility criteria outlined in this section, and do not include any further runoff reduction due to the use of compost amendments along the filter path.

*Hydrologic soil group (HSG) classifications are based on the ability of the soil to transmit water. Soil groups are ranked from A to D. Group A soils are sandy, loamy sand, or sandy loam types. Group B soils are silt loam or loam types, Group C soils are sandy clay loam types. Group D soils are clay loam, silty clay loam, sandy clay, silty clay or clay types

OVERVIEW

CONSTRUCTION CONSIDERATIONS

SOIL DISTURBANCE AND COMPACTION
Only vehicular traffic necessary for construction should be allowed on the pervious areas to which roof downspouts will be discharged. If vehicle traffic is unavoidable, then the pervious area should be tilled to a depth of 300 mm to loosen the compacted soil.

EROSION AND SEDIMENT CONTROL
If possible, construction runoff should be directed away from the proposed downspout discharge location. After the contributing drainage area and the downspout discharge location are stabilized and vegetated, erosion and sediment control structures can be removed.

OPERATION AND MAINTENANCE

Maintenance of disconnected downspouts will generally be no different than for lawns or landscaped areas. A maintenance agreement with property owners or managers may be required to ensure that downspouts remain disconnected and the pervious area remains pervious. For long-term efficacy, the pervious area should be protected from compaction. One method is to plant shrubs or trees along the perimeter of the pervious area to prevent traffic. On commercial sites, the pervious area should not be an area with high foot traffic. If ponding of water for longer than 24 hours occurs, the pervious area should be dethatched and aerated. If ponding persists, regrading or tilling to reverse compaction and/or addition of compost to improve soil moisture retention may be required.

SITE CONSIDERATIONS

Site Topography
Disconnected downspouts should discharge to a gradual slope that conveys runoff away from the building. The slope should be between 1% and 5%. Grading should discourage flow from reconnecting with adjacent impervious surfaces.

Water Table
Roof downspouts should only be disconnected where the minimum depth to the seasonally high water table is at least one (1) metre below the surface.

Pollution Hot Spot Runoff
Downspout disconnection can be used where land uses or activities at ground-level have the potential to generate highly contaminated runoff (e.g., vehicle fueling, servicing and demolition areas, outdoor storage and handling areas for hazardous materials and some heavy industry sites) as long as the roof runoff is kept separate from runoff from ground-level impervious surfaces.

COMMON CONCERNS

- **ON PRIVATE PROPERTY**
Property owners or managers will need to be educated on its function and maintenance needs, and may be subject to a legally binding maintenance agreement. An incentive program such as a storm sewer user fee based on the area of impervious cover on a property that is directly connected to a storm sewer could be used to encourage property owners or managers to maintain existing practices.

- **STANDING WATER AND PONDING**
Downspout disconnection is not intended to pond water, so any standing water should be infiltrated or evaporated within 24 hours of the end of each runoff event. If ponding for longer than 24 hours occurs, mitigation actions noted under Operation and Maintenance should be undertaken.

TORONTO AND REGION Conservation for The Living City

CVC CREDIT VALLEY CONSERVATION

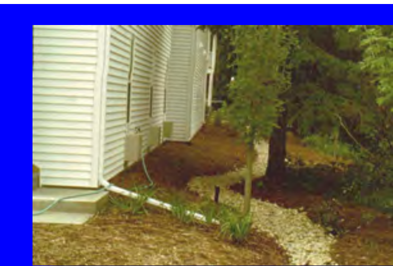
FOR FURTHER DETAILS SEE SECTION 4.3 OF THE CVC/TRCA LID SWM GUIDE

SOAKAWAYS, INFILTRATION TRENCHES AND CHAMBERS

CVC/TRCA LOW IMPACT DEVELOPMENT PLANNING AND DESIGN GUIDE - FACT SHEET


Source: Lanark Consultants Ltd


Source: Pennsylvania Department of Environmental Protection



GENERAL DESCRIPTION

Soakaways are rectangular or circular excavations lined with geotextile fabric and filled with clean granular stone or other void forming material that receive runoff from a perforated pipe inlet and allow it to infiltrate into the native soil. They typically service individual lots and receive only roof and walkway runoff but can also be designed to receive overflows from rainwater harvesting systems. Soakaways can also be referred to as infiltration galleries, dry wells or soakaway pits.

Infiltration trenches are rectangular trenches lined with geotextile fabric and filled with clean granular stone or other void forming material. Like soakaways, they typically service an individual lot and receive only roof and walkway runoff. This design variation on soakaways is well suited to sites where available space for infiltration is limited to narrow strips of land between buildings or properties, or along road rights-of-way. They can also be referred to as infiltration galleries or linear soakaways.

Infiltration chambers are another design variation on soakaways. They include a range of proprietary manufactured modular structures installed underground, typically under parking or landscaped areas that create large void spaces for temporary storage of stormwater, allowing it to infiltrate into the underlying native soil. Structures typically have open bottoms, perforated side walls and optional underlying granular stone reservoirs. They can be installed individually or in series in trench or bed configurations. They can infiltrate roof, walkway, parking lot and road runoff with adequate pretreatment. Due to the large volume of underground void space they create in comparison to a soakaway of the same dimensions, and the modular nature of their design, they are well suited to sites where available space for other types of BMPs is limited, or where it is desirable for the facility to have little or no surface footprint (e.g., high density development contexts). They can also be referred to as infiltration tanks.

DESIGN GUIDANCE

- MONITORING WELLS
  Capped vertical non-perforated pipes connected to the inlet and outlet pipes are recommended to provide a means of inspecting and flushing them out as part of routine maintenance. A capped vertical standpipe consisting of an anchored 100 to 150 mm diameter perforated pipe with a lockable cap installed to the bottom of the facility is also recommended for monitoring the length of time required to fully drain the facility between storms. Manholes and inspection ports should be installed in infiltration chambers to provide access for monitoring and maintenance activities.

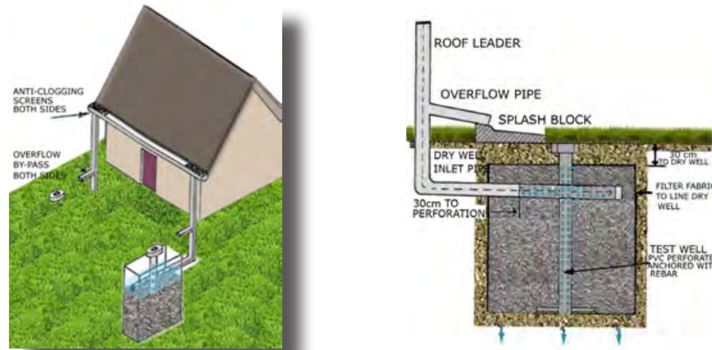
- PRE-TREATMENT
  It is important to prevent sediment and debris from entering infiltration facilities because they could contribute to clogging and failure of the system. The following pretreatment devices are options:

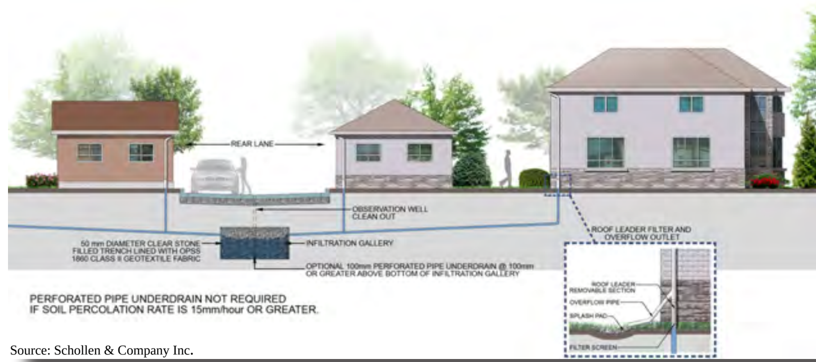
  - Leaf screens: Leaf screens are mesh screens installed either on the building eavestroughs or roof downspouts and are used to remove leaves and other large debris from roof runoff.

  - In-ground devices: Devices placed between a conveyance pipe and the facility (e.g., oil and grit separators, sedimentation chamber or goss traps), that can be designed to remove both large and fine particulate from runoff. A number of proprietary stormwater filter designs are available

  - Vegetated filter strips or grass swales: Road and parking lot runoff can be pretreated with vegetated filter strips or grass swales prior to entering the infiltration practice

- FILTER MEDIA
  - Stone reservoir: Soakaways and infiltration trenches should be filled with uniformly-graded, washed stone that provides 30 to 40% void space. Granular material should be 50 mm clear stone
  - Geotextile: A non-woven needle punched, or woven monofilament geotextile fabric should be installed around the stone reservoir of soakaways and infiltration trenches with a minimum overlap at the top of 300 mm. Woven slit film and non-woven heat bonded fabrics should not be used as they are prone to clogging. Specification of geotextile fabrics should consider the apparent opening size (AOS) for non-woven fabrics, or percent open area (POA) for woven fabrics, which affect the long term ability to maintain water flow. Other factors that need consideration include maximum forces to be exerted on the fabric, and the load bearing ratio, texture (i.e., grain size distribution) and permeability of the native soil in which they will be installed.


DRY WELL SYSTEM


Source: Schollen & Company Inc.

INFILTRATION TRENCH BELOW A LANEWAY


Source: Schollen & Company Inc.

INFILTRATION CHAMBER SYSTEM UNDER A PARKING LOT

- GEOMETRY AND SITE LAYOUT
  Soakaways and infiltration chambers can be designed in a variety of shapes, while infiltration trenches are typically rectangular excavations with a bottom width generally between 600 and 2400 mm. Facilities should have level or nearly level bed bottoms.

- CONVEYANCE AND OVERFLOW
  Inlet pipes to soakaways and infiltration trenches are typically perforated pipe connected to a standard non-perforated pipe or eavestrough that conveys runoff from the source area to the facility. The inlet and overflow outlet to the facility should be installed below the maximum frost penetration depth to prevent freezing. The overflow outlet can simply be the perforated pipe inlet that backs up when the facility is at capacity and discharges to a splash pad and pervious area at grade or can be a pipe that is at the top of the gravel layer and is connected to a storm sewer. Outlet pipes must have capacity equal to or greater than the inlet.

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Soakaways, Infiltration Trenches and Chambers	Yes	Yes	Partial, depends on soil infiltration rate

CONSTRUCTION CONSIDERATIONS

SOIL DISTURBANCE AND COMPACTION: Before site work begins, locations of facilities should be clearly marked. Only vehicular traffic used for construction of the infiltration facility should be allowed close to the facility location.

EROSION AND SEDIMENT CONTROL: Infiltration practices should never serve as a sediment control device during construction. Construction runoff should be directed away from the proposed facility location. After the site is vegetated, erosion and sediment control structures can be removed.

COMMON CONCERNS

- RISK OF GROUNDWATER CONTAMINATION
  Most pollutants in urban runoff are well retained by infiltration practices and soils and therefore, have a low to moderate potential for groundwater contamination. To minimize risk of groundwater contamination the following management approaches are recommended:
  - infiltration practices should not receive runoff from high traffic areas where large amounts of de-icing salts are applied (e.g., busy highways), nor from pollution hot spots;
  - prioritize infiltration of runoff from source areas that are comparatively less contaminated such as roofs, low traffic roads and parking areas; and,
  - apply sedimentation pretreatment practices (e.g., oil and grit separators) before infiltration of road or parking area runoff.

- RISK OF SOIL CONTAMINATION
  Available evidence from monitoring studies indicates that small distributed stormwater infiltration practices do not contaminate underlying soils, even after 10 years of operation.

- ON PRIVATE PROPERTY
  Property owners or managers will need to be educated on their routine maintenance needs, understand the long-term maintenance plan, and be subject to a legally binding maintenance agreement. An incentive program such as a storm sewer user fee based on the area of impervious cover on a property that is directly connected to a storm sewer could be used to encourage property owners or managers to maintain existing practices. Alternatively, infiltration practices could be located in an expanded road right-of-way or "stormwater easement" so that municipal staff can access the facility in the event it fails to function properly.

- WINTER OPERATION
  Soakaways, infiltration trenches and chambers will continue to function during winter months if the inlet pipe and top of the facility is located below the local maximum frost penetration depth.

OPERATION AND MAINTENANCE

Maintenance typically consists of cleaning out leaves, debris and accumulated sediment caught in pretreatment devices, inlets and outlets annually or as needed. Inspection via an monitoring well should be performed to ensure the facility drains within the maximum acceptable length of time (typically 72 hours) at least annually and following every major storm event (>25 mm). If the time required to fully drain exceeds 72 hours, drain via pumping and clean out the perforated pipe underdrain, if present. If slow drainage persists, the system may need removal and replacement of granular material and/or geotextile fabric.

SITE CONSIDERATIONS

Wellhead Protection
Facilities receiving road or parking lot runoff should not be located within two (2) year time-of-travel wellhead protection areas.

Site Topography
Facilities cannot be located on natural slopes greater than 15%.

Water Table
The bottom of the facility should be vertically separated by one (1) metre from the seasonally high water table or top of bedrock elevation.

Soil
Soakaways, infiltration trenches and chambers can be constructed over any soil type, but hydrologic soil group A or B soils are best for achieving water balance and channel erosion control objectives. If possible, facilities should be located in portions of the site with the highest native soil infiltration rates. Designers should verify the soil infiltration rate at the proposed location and depth through field measurement of hydraulic conductivity under field saturated conditions.

Drainage Area
Typically are designed with an impervious drainage area to treatment facility area ratio of between 5:1 and 20:1. A maximum ratio of 10:1 is recommended for facilities receiving road or parking lot runoff.

Pollution Hot Spot Runoff
To protect groundwater from possible contamination, runoff from pollution hot spots should not be treated by soakaways, infiltration trenches or chambers.

Setback from Buildings
Facilities should be setback a minimum of four (4) metres from building foundations.

Proximity to Underground Utilities
Local utility design guidance should be consulted to define the horizontal and vertical offsets. Generally, requirements for underground utilities passing near the practice will be no different than for utilities in other pervious areas. However, the designer should consider the need for long term maintenance when locating infiltration facilities near other underground utilities.

TORONTO AND REGION Conservation for The Living City

CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 4.4 OF THE CVC/TRCA LID SWM GUIDE

BIORETENTION

CVC/TRCA LOW IMPACT DEVELOPMENT PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

As a stormwater filter and infiltration practice, bioretention temporarily stores, treats and infiltrates runoff. Depending on native soil infiltration rate and physical constraints, the system may be designed without an underdrain for full infiltration, with an underdrain for partial infiltration, or with an impermeable liner and underdrain for filtration only (i.e., a biofilter). The primary component of the practice is the filter bed which is a mixture of sand, fines and organic material. Other elements include a mulch ground cover and plants adapted to the conditions of a stormwater practice. Bioretention is designed to capture small storm events or the water quality storage requirement. An overflow or bypass is necessary to pass large storm event flows. Bioretention can be adapted to fit into many different development contexts and provide a convenient area for snow storage and treatment.

Source: Minnesota Businesses for Clean Water

Source: City of Portland

DESIGN GUIDANCE

SOIL CHARACTERISTICS

Bioretention can be constructed over any soil type, but hydrologic soil group A and B are best for achieving water balance goals. If possible, bioretention should be sited in the areas of the development with the highest native soil infiltration rates. Bioretention in soils with infiltration rates less than 15 mm/hr will require an underdrain. Designers should verify the native soil infiltration rate at the proposed location and depth through measurement of hydraulic conductivity under field saturated conditions.

GEOMETRY & SITE LAYOUT

Key geometry and site layout factors include:

- The minimum footprint of the filter bed area is based on the drainage area. Typical drainage areas to bioretention are between 100 m2 to 0.5 hectares. The maximum recommended drainage area is 0.8 hectares. Typical ratios of impervious drainage area to treatment facility area range from 5:1 to 15:1.
- Bioretention can be configured to fit into many locations and shapes. However, cells that are narrow may concentrate flow as it spreads throughout the cell and result in erosion.
- The filter bed surface should be level to encourage stormwater to spread out evenly over the surface.

PRE-TREATMENT

Pretreatment prevents premature clogging by capturing coarse sediment particles before they reach the filter bed. Where the runoff source area produces little sediment, such as roofs, bioretention can function effectively without pretreatment. To treat parking area or road runoff, a two-cell design that incorporates a forebay is recommended. Pretreatment practices that may be feasible, depending on the method of conveyance and the availability of space include:

- *Two-cell design (channel flow):* Forebay ponding volume should account for 25% of the water quality storage requirement and be designed with a 2:1 length to width ratio.
- *Vegetated filter strip (sheet flow):* Should be a minimum of three (3) metres in width. If smaller strips are used, more frequent maintenance of the filter bed can be anticipated.
- *Gravel diaphragm (sheet flow):* A small trench filled with pea gravel, which is perpendicular to the flow path between the edge of the pavement and the bioretention practice will promote settling out of sediment and maintain sheet flow into the facility. A drop of 50-150 mm into the gravel diaphragm can be used to dissipate energy and promote settling.
- *Rip rap and/or dense vegetation (channel flow):* Suitable for small bioretention cells with drainage areas less than 100 square metres.

GRAVEL STORAGE LAYER

- DEPTH: Should be a minimum of 300 mm deep and sized to provide the required storage volume. Granular material should be 50 mm diameter clear stone.
- PEA GRAVEL CHOKING LAYER: A 100 mm deep layer of pea gravel (3 to 10 mm diameter clear stone) should be placed on top of the coarse gravel storage layer as a choking layer separating it from the overlying filter media bed.

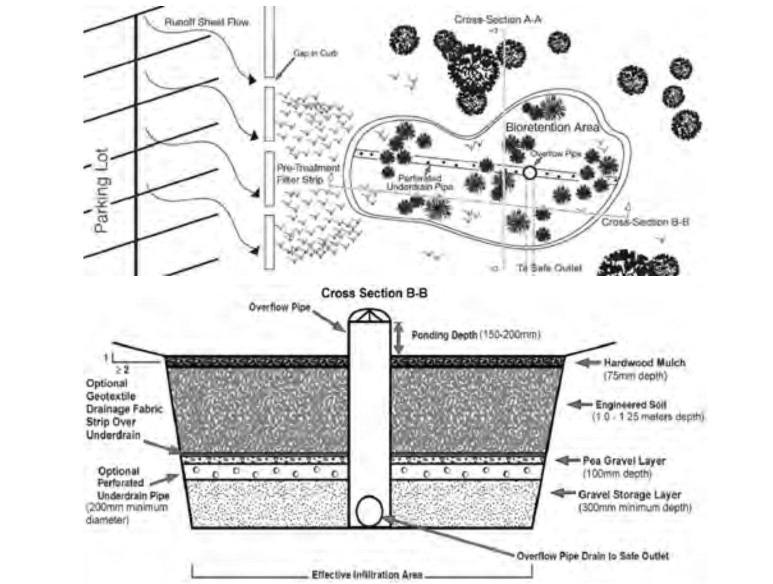
FILTER MEDIA

- COMPOSITION: To ensure a consistent and homogeneous bed, filter media should come pre-mixed from an approved vendor.
- DEPTH: Recommended depth is between 1.0 and 1.25 m. However in constrained applications, pollutant removal benefits may be achieved in beds as shallow as 500 mm. If trees are to be included in the design, bed depth must be at least 1.0 m.
- MULCH: A 75 mm layer of mulch on the surface of the filter bed enhances plant survival, suppresses weed growth and pretreats runoff before it reaches the filter bed.

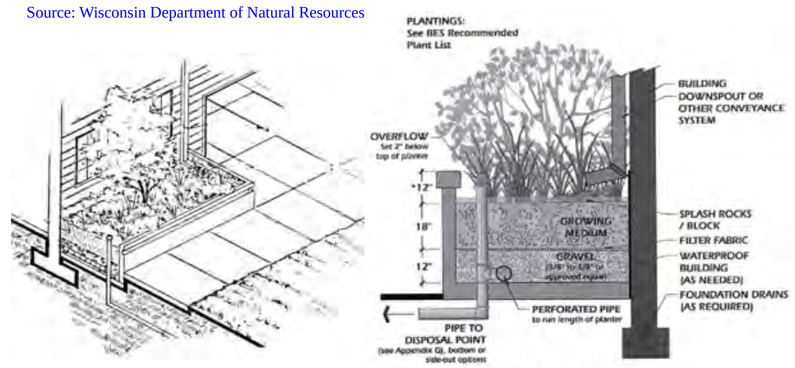
CONVEYANCE AND OVERFLOW

Bioretention can be designed to be inline or offline from the drainage system. Inline bioretention accepts all flow from a drainage area and conveys larger event flows through an overflow outlet. Overflow structures must be sized to safely convey larger storm events out of the facility. The invert of the overflow should be placed at the maximum water surface elevation of the bioretention area, which is typically 150-250 mm above the filter bed surface.

Offline bioretention practices use flow splitters or bypass channels that only allow the required water quality storage volume to enter the facility. This may be achieved with a pipe, weir, or curb opening sized for the target flow, but in conjunction, create a bypass channel so that higher flows do not pass over the surface of the filter bed. Using a weir or curb opening minimizes clogging and reduces maintenance frequency.



Source: Wisconsin Department of Natural Resources



Source: City of Portland

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefits
Bioretention with no underdrain	Yes	Yes - size for water quality storage requirement	Partial - based on available storage volume and infiltration rates
Bioretention with underdrain	Partial - based on available storage volume beneath the underdrain and soil infiltration rate	Yes - size for water quality storage requirement	Partial - based on available storage volume beneath the underdrain and soil infiltration rate
Bioretention with underdrain and impermeable liner	Partial - some volume reduction through evapotranspiration	Yes - size for water quality storage requirement	Partial - some volume reduction through evapotranspiration

UNDERDRAIN

- Only needed where native soil infiltration rate is less than 15 mm/hr (hydraulic conductivity of less than 1x10-6 cm/s).
- Should consist of a perforated pipe embedded in the coarse gravel storage layer at least 100 mm above the bottom.
- A strip of geotextile filter fabric placed between the filter media and pea gravel choking layer over the perforated pipe is optional to help prevent fine soil particles from entering the underdrain.
- A vertical standpipe connected to the underdrain can be used as a cleanout and monitoring well.

MONITORING WELLS

A capped vertical stand pipe consisting of an anchored 100 to 150 mm diameter perforated pipe with a lockable cap installed to the bottom of the facility is recommended for monitoring drainage time between storms.

GENERAL SPECIFICATIONS

Material	Specification	Quantity
Filter Media Composition	Filter Media Soil Mixture to contain: • 85 to 88% sand • 8 to 12% soil fines • 3 to 5% organic matter (leaf compost) Other Criteria: • Phosphorus soil test index (P-Index) value between 10 to 30 ppm • Cationic exchange capacity (CEC) greater than 10 meq/100 g • Free of stones, stumps, roots and other large debris • pH between 5.5 to 7.5 • Infiltration rate greater than 25 mm/hr	Recommended depth is between 1.0 and 1.25 metres.
Mulch Layer	Shredded hardwood bark mulch	A 75 mm layer on the surface of the filter bed
Geotextile	Material specifications should conform to Ontario Provincial Standard Specification (OPSS) 1860 for Class II geotextile fabrics. Should be woven monofilament or non-woven needle punched fabrics. Woven slit film and non-woven heat bonded fabrics should not be used as they are prone to clogging. For further guidance see CVC/TRCA LID SWM Planning and Design Guide, Table 4.5.5.	Strip over the perforated pipe underdrain (if present) between the filter media bed and gravel storage layer (stone reservoir)
Gravel	Washed 50 mm diameter clear stone should be used to surround the underdrain and for the gravel storage layer Washed 3 to 10 mm diameter clear stone should be used for pea gravel choking layer.	Volume based on dimensions, assuming a void space ratio of 0.4.
Underdrain	Perforated HDPE or equivalent, minimum 100 mm diameter, 200 mm recommended.	• Perforated pipe for length of cell. • Non-perforated pipe as needed to connect with storm drain system. • One or more caps. • T's for underdrain configuration

CONSTRUCTION CONSIDERATIONS

Ideally, bioretention sites should remain outside the limit of disturbance until construction of the bioretention begins to prevent soil compaction by heavy equipment. Locations should not be used as sediment basins during construction, as the concentration of fines will prevent post-construction infiltration. To prevent sediment from clogging the surface of a bioretention cell, stormwater should be diverted away from the bioretention until the drainage area is fully stabilized.

For further guidance regarding key steps during construction, see the CVC/TRCA LID SWM Planning and Design Guide, Section 4.5.2 - Construction Considerations)

OPERATION AND MAINTENANCE

Bioretention requires routine inspection and maintenance of the landscaping as well as periodic inspection for less frequent maintenance needs or remedial maintenance. Generally, routine maintenance will be the same as for any other landscaped area; weeding, pruning, and litter removal. Regular watering may be required during the first two years until vegetation is established.

For the first two years following construction the facility should be inspected at least quarterly and after every major storm event (> 25 mm). Subsequently, inspections should be conducted in the spring and fall of each year and after major storm events. Inspect for vegetation density (at least 80% coverage), damage by foot or vehicular traffic, channelization, accumulation of debris, trash and sediment, and structural damage to pretreatment devices.

Trash and debris should be removed from pretreatment devices, the bioretention area surface and inlet and outlets at least twice annually. Other maintenance activities include reapplying mulch, pruning, weeding replacing dead vegetation and repairing eroded areas as needed. Remove accumulated sediment on the bioretention area surface when dry and exceeding 25 mm depth.

SITE CONSIDERATIONS

Wellhead Protection

Facilities receiving road or parking lot runoff should not be located within two (2) year time-of-travel wellhead protection areas.

Available Space

Reserve open areas of about 10 to 20% of the size of the contributing drainage area.

Site Topography

Contributing slopes should be between 1 to 5%. The surface of the filter bed should be flat to allow flow to spread out. A stepped multi-cell design can also be used.

Available Head

If an underdrain is used, then 1 to 1.5 metres elevation difference is needed between the inflow point and the downstream storm drain invert.

Water Table

A minimum of one (1) metre separating the seasonally high water table or top of bedrock elevation and the bottom of the practice is necessary.

Soils

Bioretention can be located over any soil type, but hydrologic soil group A and B soils are best for achieving water balance benefits. Facilities should be located in portions of the site with the highest native soil infiltration rates. Where infiltration rates are less than 15 mm/hr (hydraulic conductivity less than 1x10-6 cm/s) an underdrain is required. Native soil infiltration rate at the proposed facility location and depth should be confirmed through measurement of hydraulic conductivity under field saturated conditions.

Drainage Area & Runoff Volume

Typical contributing drainage areas are between 100 m2 to 0.5 hectares. The maximum recommended contributing drainage area is 0.8 hectares. Typical ratios of impervious drainage area to treatment facility area range from 5:1 to 15:1.

Pollution Hot Spot Runoff

To protect groundwater from possible contamination, runoff from pollution hot spots should not be treated by bioretention facilities designed for full or partial infiltration. Facilities designed with an impermeable liner (filtration only facilities) can be used to treat runoff from pollution hot spots.

Proximity to Underground Utilities

Designers should consult local utility design guidance for the horizontal and vertical clearances required between storm drains, ditches, and surface water bodies.

Overhead Wires

Check whether the future tree canopy height in the bioretention area will interfere with existing overhead phone and power lines.

Setback from Buildings

If an impermeable liner is used, no setback is needed. If not, a four (4) metre setback from building foundations should be applied.

TORONTO AND REGION Conservation for The Living City

CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 4.5 OF THE CVC/TRCA LID SWM GUIDE

VEGETATED FILTER STRIPS

CVC/TRCA LOW IMPACT DEVELOPMENT PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

Vegetated filter strips (a.k.a. buffer strips and grassed filter strips) are gently sloping, densely vegetated areas that treat runoff as sheet flow from adjacent impervious areas. They slow runoff velocity and filter out suspended sediment and associated pollutants, and provide some infiltration into underlying soils. Originally used as an agricultural treatment practice, filter strips have evolved into an urban SWM practice. Vegetation may be comprised of a variety of trees, shrubs and native plants to add aesthetic value as well as water quality benefits. With proper design and maintenance, filter strips can provide relatively high pollutant removal benefits. Maintaining sheet flow into the filter strip through the use of a level spreading device (e.g., pea gravel diaphragm) is essential. Using vegetated filter strips as pretreatment practices to other best management practices is highly recommended. They also provide a convenient area for snow storage and treatment, and are particularly valuable due to their capacity for snowmelt infiltration.

DESIGN GUIDANCE

GEOMETRY AND SITE LAYOUT

The maximum contributing flow path length across adjacent impervious surfaces should not exceed 25 metres. The impervious surfaces draining to a filter strip should not have slopes greater than 3%.

The filter strip should have a flow path length of at least five (5) metres to provide substantial water quality benefits; however, some pollutant removal benefits are realized with three (3) metres of flow path length.

PRETREATMENT

A pea gravel diaphragm at the top of the slope is recommended to act as a pretreatment device and level spreader to maintain sheet flow into the filter strip.

CONVEYANCE AND OVERFLOW

Level spreaders are recommended to ensure runoff draining into the filter strip does so as sheet flow (e.g., pea gravel diaphragms, concrete curbs with cutouts). When filter strip slopes are greater than 5%, a series of level spreaders should be used to help maintain sheet flow.

When designed as a stand alone water quality BMP (i.e., not pretreatment to another BMP) the vegetated filter strip should be designed with a pervious berm at the toe of the slope for shallow ponding of runoff. The berm should be 150 to 300 millimetres in height above the bottom of the depression and should contain a perforated pipe underdrain connected to the storm sewer. The volume ponded behind the berm should be equal to the water quality storage requirement. During larger storms, runoff overtops the berm and flows directly into a storm sewer inlet.

SOIL AMENDMENTS

If soils on the filter strip site are highly compacted, or of such low fertility that vegetation cannot become established, they should be tilled to a depth of 300 mm and amended with compost to achieve an organic content of 8 to 15% by weight or 30 to 40% by volume.

OPERATION AND MAINTENANCE

Generally, routine maintenance will be the same as for any other landscaped area; weeding, pruning, and litter removal. Regular watering may be required during the first two years until vegetation is established. Routine inspection is very important to ensure that dense vegetation cover is maintained and inflowing runoff does not become concentrated and short circuit the practice. Vehicles should not be parked or driven on filter strips. For routine mowing of grassed filter strips, the lightest possible mowing equipment should be used to prevent soil compaction.

For the first two years following construction the filter strip should be inspected at least quarterly and after every major storm event (> 25 mm). Subsequently, inspections should be conducted in the spring and fall of each year and after major storm events. Inspect for vegetation density (at least 80% coverage), damage by foot or vehicular traffic, channelization, accumulation of debris, trash and sediment, and structural damage to pretreatment devices.

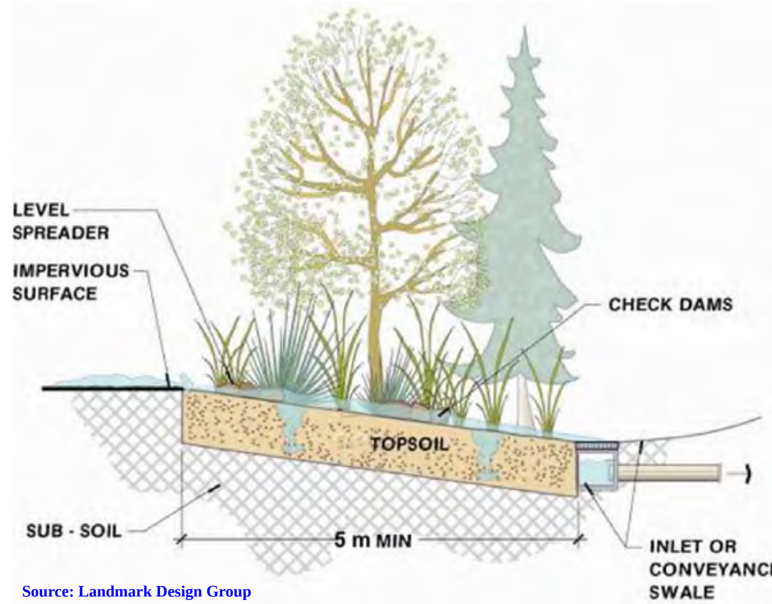
Trash and debris should be removed from pretreatment devices and the filter strip surface at least twice annually. Other maintenance activities include weeding, replacing dead vegetation, repairing eroded areas, dethatching and aerating as needed. Remove accumulated sediment on the filter strip surface when dry and exceeding 25 mm depth


Source: Trinkaus Engineering


Source: Wisconsin Department of Natural Resources

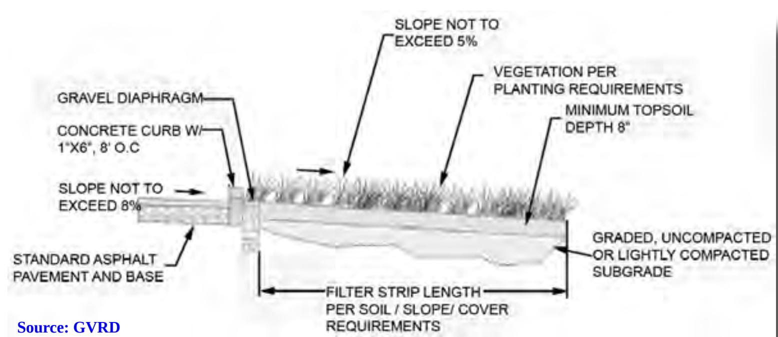

Source: Wisconsin Department of Natural Resources


Source: Washington State Department of Transportation



Source: Landmark Design Group

VEGETATED FILTER STRIPS



Source: GVRD

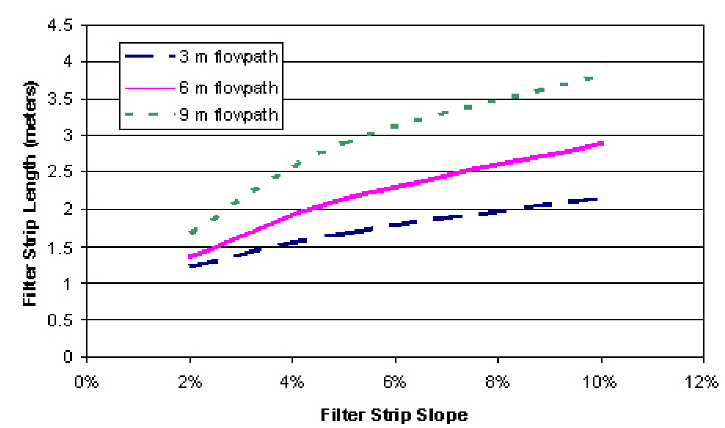
Source: CWP

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Vegetated Filter Strips	Partial - depends on soil infiltration rate	Partial - depends on soil infiltration rate and flow path length	Partial - depends on soil infiltration rate

GENERAL SPECIFICATIONS

Material	Specification	Quantity
Gravel Diaphragm	Washed 3 to 10 mm diameter stone	Diaphragm should be a minimum of 300 mm wide and 600 mm deep (MDE, 2000).
Gravel/ Earthen Berm	Berm should be composed of sand (35 to 60%), silt (30 to 55%), and gravel (10 to 25%) (MDE, 2000) Gravel should be 15 to 25 mm in diameter.	N/A



Source: Pennsylvania Department of Environmental Protection

CONSTRUCTION CONSIDERATIONS

Soil Disturbance and Compaction

The limits of disturbance should be clearly shown on all construction drawings. Before site work begins, areas for filter strips should be clearly marked and protected by acceptable signage and silt fencing. Only vehicular traffic used for construction should be allowed within three metres of the filter strip.

Erosion and Sediment Control

Construction runoff should be directed away from the proposed filter strip site. If used for sediment control during construction, it should be regraded and revegetated after construction is finished.

SITE CONSIDERATIONS

Available Space

The flow path length across the vegetated filter strip should be at least 5 metres to provide substantial water quality benefits. Vegetated filter strips incorporated as pretreatment to another BMP may be designed with shorter flow path lengths.

Site Topography

Filter strips are best used to treat runoff from ground-level impervious surfaces that generate sheet flow (e.g., roads and parking areas). The recommended filter strip slope is between 1 to 5%.

Flow Path Length Across Impermeable Surface

The maximum flow path length across the contributing impermeable surface should be less than 25 metres.

Soil

Filter strips are a suitable practice on all soil types. If soils are highly compacted, or of such low fertility that vegetation cannot become established, they should be tilled to a depth of 300 mm and amended with compost to achieve an organic content of 8 to 15% by weight or 30 to 40% by volume.

Pollution Hot Spot Runoff

To protect groundwater from possible contamination, source areas where land uses or human activities have the potential to generate highly contaminated runoff (e.g., vehicle fueling, servicing and demolition areas, outdoor storage and handling areas for hazardous materials and some heavy industry sites) should not be treated by vegetated filter strips.

Water table

Filter strips should only be used where depth to the seasonally high water table is at least one (1) metre below the ground surface.

TORONTO AND REGION Conservation for The Living City

CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 4.6 OF THE CVC/TRCA LID SWM GUIDE

PERMEABLE PAVEMENT

CVC/TRCA LOW IMPACT DEVELOPMENT
PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

Permeable pavements, an alternative to traditional impervious pavement, allow stormwater to drain through them and into a stone reservoir where it is infiltrated into the underlying native soil or temporarily detained. They can be used for low traffic roads, parking lots, driveways, pedestrian plazas and walkways. Permeable pavement is ideal for sites with limited space for other surface stormwater BMPs. Examples of permeable pavement types include:

- permeable interlocking concrete pavers (i.e., block pavers);
- plastic or concrete grid systems (i.e., grid pavers);
- pervious concrete; and
- porous asphalt.

Depending on the native soils and physical constraints, the system may be designed with no underdrain for full infiltration, with an underdrain for partial infiltration, or with an impermeable liner and underdrain for a no infiltration or detention and filtration only practice.

DESIGN GUIDANCE

GEOMETRY & SITE LAYOUT

Permeable pavement systems can be used for entire parking lot areas or driveways or can be designed to receive runoff from adjacent impervious pavement. For example, the parking spaces of a parking lot or road can be permeable pavers while the drive lanes are impervious asphalt. In general, the impervious area should not exceed 1.2 times the area of the permeable pavement which receives the runoff (GVRD, 2005).

PRE-TREATMENT

In most permeable pavement designs, the pavement bedding layer acts as pretreatment to the stone reservoir below. Periodic vacuum sweeping and preventative measures like not storing snow or other materials on the pavement are critical to prevent clogging. An optional pretreatment element can be a pea gravel choking layer above the coarse gravel storage reservoir.

CONVEYANCE AND OVERFLOW

All designs require an overflow outlet connected to a storm sewer with capacity to convey larger storms. One option is to set storm drain inlets slightly above the surface elevation of the pavement, which allows for temporary shallow ponding above the surface. Another design option is an overflow edge, which is a gravel trench along the downgradient edge of the pavement surface that drains to the stone reservoir below.

Pavements designed for full infiltration, where native soil infiltration rate is 15 mm/hr or greater, do not require incorporation of a perforated pipe underdrain. Pavements designed for partial infiltration, where native soil infiltration rate is less than 15 mm/hr, should incorporate a perforated pipe underdrain placed near the top of the granular stone reservoir. Partial infiltration designs can also include a flow restrictor assembly on the underdrain to optimize infiltration with desired drawdown time between storm events.

MONITORING WELLS

A capped vertical standpipe consisting of an anchored 100 to 150 mm diameter perforated pipe with a lockable cap installed to the bottom of the facility is recommended for monitoring the length of time required to fully drain the facility between storms.

STONE RESERVOIR

The stone reservoir must be designed to meet both runoff storage and structural support requirements. Clean washed stone is recommended as any fines in the aggregate material will migrate to the bottom and may prematurely clog the native soil. The bottom of the reservoir should be flat so that runoff will be able to infiltrate evenly through the entire surface. If the system is not designed for infiltration, the bottom should be sloped at 1 to 5% toward the underdrain.

GEOTEXTILE

A non-woven needle punched, or woven monofilament geotextile fabric should be installed between the stone reservoir and native soil to maintain separation.

EDGE RESTRAINTS

Pavers must abut tightly against the restraints to prevent rotation under load and any consequent spreading of joints. The restraints must be able to withstand the impact of temperature changes, vehicular traffic and snow removal equipment. Metal or plastic stripping is acceptable in some cases, but concrete edges are preferred. Concrete edge restraints should be supported on a minimum base of 150 mm of aggregate.

LANDSCAPING

Adjacent landscaping areas should drain away from permeable pavement to prevent sediments from running onto the surface. Urban trees also benefit from being surrounded by permeable pavement rather than impervious cover, because their roots receive more air and water.

OPERATION AND MAINTENANCE

Annual inspections of permeable pavement should be conducted in the spring to ensure continued infiltration performance. Check for deterioration and whether water is draining between storms. The pavement reservoir should drain completely within 72 hours of the end of the storm event. The following maintenance procedures and preventative measures should be incorporated into a maintenance plan:

Surface Sweeping: Sweeping should occur once or twice a year with a commercial vacuum sweeping unit. Permeable pavement should not be washed with high pressure water systems or compressed air units.

Inlet Structures: Drainage pipes and structures within or draining to the subsurface bedding beneath permeable pavement should be cleaned out on regular intervals.

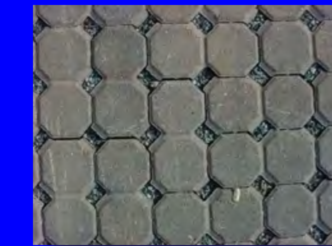
Heavy Vehicles: Trucks and other heavy vehicles should be prevented from tracking or spilling dirt onto the permeable pavement.

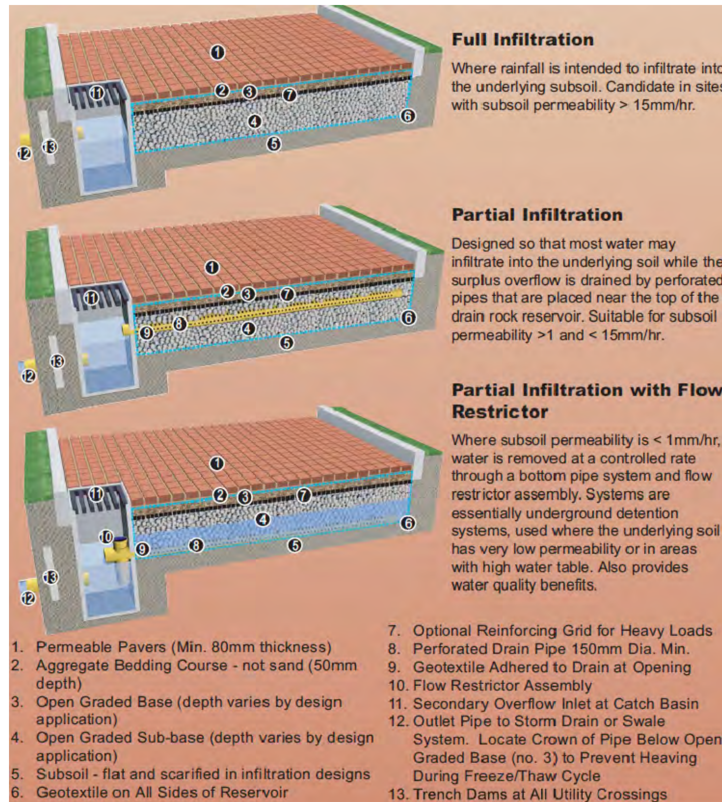
Construction and Hazardous Materials: Due to the potential for groundwater contamination, all construction or hazardous material carriers should be prohibited from entering a permeable pavement site.

Drainage Areas: Impervious areas contributing to the permeable pavement should be regularly swept and kept clear of litter and debris. Flows from any landscaped areas should be diverted away from thepavement or be well stabilized with vegetation.

Grid Pavers: Grid paver systems that have been planted with grass should be mowed regularly with the clippings removed. Grassed grid pavers may require periodic watering and fertilization to establish and maintain healthy vegetation.

Winter Maintenance: Sand should not be spread on permeable pavement as it can quickly lead to clogging. Deicers should only be used in moderation and only when needed. Pilot studies have found that permeable pavement requires 75% less de-icing salt than conventional pavement over the course of a typical winter season. Permeable pavement is plowed for snow removal like any other pavement. Plowed snow piles should not be stored on permeable pavement systems.





Source: GVRD

ABILTY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Permeable pavement with no underdrain	Yes	Yes - size for water quality storage requirement	Partial - based on available storage volume and soil infiltration rate
Permeable pavement with underdrain	Moderate - based on native soil infiltration rates and storage beneath the underdrain	Yes - size for water quality storage requirement	Partial - based on available storage volume and soil infiltration rate
Permeable pavement with underdrain and liner	No - some volume reduction occurs through evapotranspiration	Moderate - limited filtering and settling of sediments	Partial - based on available storage volume and soil infiltration rate

GENERAL SPECIFICATIONS

Material	Specification	Quantity
Pervious Concrete	• NO4-RG-S7 mix with air entrainment proven to have the best freeze-thaw durability after 300 freeze-thaw cycles. • 28 day compressive strength = 5.5 to 20 MPa • Void ratio = 14% - 31% • Permeability = 900 to 21,500 mm/hr	Thickness will range from 100mm - 150 mm depending on the expected loads
Porous Asphalt	• Open-graded asphalt mix with a minimum of 16% air voids • Polymers can be added to provide additional strength for heavy loads • The University of New Hampshire Stormwater Center has detailed design specifications for porous asphalt on their webpage: http://www.unh.edu/erg/cstev/pubs_specs_info	Thickness will range from 50 mm to 100 mm depending on the expected loads.
Permeable Pavers	• Permeable pavers should conform to manufacturer specifications. • ASTM No. 8 (5 mm dia.) crushed aggregate is recommended for fill material in the paver openings. For narrow joints between interlocking shapes, a smaller sized aggregate may be used (Smith, 2006). • Pavers shall meet the minimum material and physical properties set forth in CAN 3-A231.2, Standard Specification for Precast Concrete Pavers. • Pigment in concrete pavers shall conform to ASTM C 979. • Maximum allowable breakage of product is 5%.	For vehicular applications, the minimum paver thickness is 80 mm and for pedestrian applications is 60 mm. Joint widths should be no greater than 15 mm for pedestrian applications.
Stone Reservoir	All aggregates should meet the following criteria: • Maximum wash loss of 0.5% • Minimum durability index of 35 • Maximum abrasion of 10% for 100 revolutions and maximum of 50% for 500 revolutions Granular Subbase The granular subbase material shall consist of granular material graded in accordance with ASTM D 2940. Material should be clear crushed 50 mm diameter stone with void space ratio of 0.4. Granular Base The granular base material shall be crushed stone conforming to ASTM C 33 No 57. Material should be clear crushed 20 mm diameter stone. Bedding The granular bedding material shall be graded in accordance with the requirements of ASTM C 33 No 8. The typical bedding thickness is between 40 mm and 75 mm. Material should be 5 mm diameter stone or as determined by the Design Engineer (Smith, 2006).	See BMP Sizing section for aggregate bed depth and multiply by application are to get total volume.
Geotextile	Material specifications should conform to Ontario Provincial Standard Specification (OPSS) 1860 for Class II geotextile fabrics. Should be woven monofilament or non-woven needle punched fabrics. Woven slit film and non-woven heat bonded fabrics should not be used as they are prone to clogging. Primary considerations are: • Suitable apparent opening size (AOS) for non-woven fabrics, or percent open area (POA) for woven fabrics, to maintain water flow even with sediment and microbial film build-up; • Maximum forces that will be exerted on the fabric (i.e., what tensile, tear and puncture strength ratings are required?); • Load bearing ratio of the underlying native soil (i.e., is geotextile needed to prevent downward migration of aggregate into the native soil?); • Texture (i.e., grain size distribution) of the overlying aggregate material; and • Permeability of the native soil. For further guidance see CVC/TRCA LID SWM Planning and Design Guide, Table 4.7.3.	Between stone reservoir and native soil.
Underdrain (optional)	• HDPE or equivalent material, continuously perforated with smooth interior and a minimum inside diameter of 100 mm. • Perforations in pipes should be 10 mm in diameter. • A standpipe from the underdrain to the pavement surface can be used for monitoring and maintenance of the underdrain. The top of the standpipe should be covered with a screw cap and a vandal-proof lock.	Pipes should terminate 0.3 m short from the sides of the base.

SITE CONSIDERATIONS

Wellhead Protection

Permeable pavement should not be used for road or parking surfaces within two (2) year time-of-travel wellhead protection areas.

Site Topography

Permeable pavement surface should be at least 1% and no greater than 5%.

Water Table

The base of permeable pavement stone reservoir should be at least one (1) metre above the seasonally high water table or top of bedrock elevation.

Soil

Systems located in native soils with an infiltration rate of less than 15 mm/hr (i.e., hydraulic conductivity of less than 1x10-6 cm/s) require a perforated pipe underdrain. Native soil infiltration rate at the proposed location and depth should be confirmed through measurement of hydraulic conductivity under field saturated conditions.

Drainage Area & Runoff Volume

In general, the impervious area treated should not exceed 1.2 times the area of permeable pavement which receives the runoff.

Setback from Buildings

Should be located downslope from building foundations. If the pavement does not receive runoff from other surfaces, no setback is required. If the pavement receives runoff from other surfaces a minimum setback of four (4) metres downgradient is recommended.

Pollution Hot Spot Runoff

To protect groundwater from possible contamination, runoff from pollution hot spots should not be treated by permeable pavement.

CONSTRUCTION CONSIDERATIONS

SEDIMENT CONTROL

The treatment area should be fully protected during construction so that no sediment reaches the permeable pavement system. Construction traffic should be blocked from the permeable pavement and its drainage areas once the pavement has been installed.

BASE CONSTRUCTION

In parking lots, the stone aggregate should be placed in 100 mm to 150 mm lifts and compacted with a minimum 9,070 kg (10 ton) steel drum roller.

WEATHER

Porous asphalt and pervious concrete will not properly pour and set in extremely high and low temperatures.

PAVEMENT PLACEMENT

Properly installed permeable pavement requires trained and experienced producers and construction contractors.

TORONTO AND REGION Conservation for The Living City
CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 4.7 OF THE CVC/TRCA LID SWM GUIDE

ENHANCED GRASS SWALES

CVC/TRCA LOW IMPACT DEVELOPMENT
PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

Enhanced grass swales are vegetated open channels designed to convey, treat and attenuate stormwater runoff (also referred to as enhanced vegetated swales). Check dams and vegetation in the swale slows the water to allow sedimentation, filtration through the root zone and soil matrix, evapotranspiration, and infiltration into the underlying native soil. Simple grass channels or ditches have long been used for stormwater conveyance, particularly for roadway drainage. Enhanced grass swales incorporate design features such as modified geometry and check dams that improve the contaminant removal and runoff reduction functions of simple grass channel and roadside ditch designs.

Where development density, topography and depth to water table permit, enhanced grass swales are a preferred alternative to both curb and gutter and storm drains as a stormwater conveyance system. When incorporated into a site design, they can reduce impervious cover, accent the natural landscape, and provide aesthetic benefits.

DESIGN GUIDANCE

GEOMETRY AND SITE LAYOUT

- Shape: Should be designed with a trapezoidal or parabolic cross section. Trapezoidal swales will generally evolve into parabolic swales over time, so the initial trapezoidal cross-section design should be checked for capacity and conveyance assuming it is a parabolic cross-section. Swale length between culverts should be 5 metres or greater.
- Bottom Width: Should be designed with a bottom width between 0.75 and 3.0 metres. Should allow for shallow flows and adequate water quality treatment, while preventing flows from concentrating and creating gullies.
- Longitudinal Slope: Slopes should be between 0.5% and 4%. Check dams should be incorporated on slopes greater than 3%.
- Length: When used to convey and treat road runoff, the length simply parallels the road, and therefore should be equal to, or greater than the contributing roadway length.
- Flow Depth: A maximum flow depth of 100 mm is recommended during a 4 hour, 25 mm Chicago storm event.
- Side Slopes: Should be as flat as possible to aid in providing pretreatment for lateral incoming flows and to maximize the swale filtering surface. Steeper side slopes are likely to have erosion gullying from incoming lateral flows. A maximum slope of 2.5:1 (H:V) is recommended and a 4:1 slope is preferred where space permits.

PRE-TREATMENT

A pea gravel diaphragm located along the top of each bank can be used to provide pretreatment of any runoff entering the swale laterally along its length. Vegetated filter strips or mild side slopes (3:1) also provide pretreatment for any lateral sheet flow entering the swale. Sedimentation forebays at inlets to the swale are also a pretreatment option.

CONVEYANCE AND OVERFLOW

Grass swales must be designed for a maximum velocity of 0.5 m/s or less for the 4 hour 25 mm Chicago storm event. The swale should also convey the locally required design storm (usually the 10 year storm) at non-erosive velocities.

SOIL AMENDMENTS

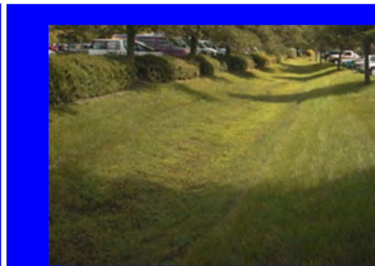
If soils along the location of the swale are highly compacted, or of such low fertility that vegetation cannot become established, they should be tilled to a depth of 300 mm and amended with compost to achieve an organic content of 8 to 15% by weight or 30 to 40% by volume.


Source: Delaware Department of Transportation

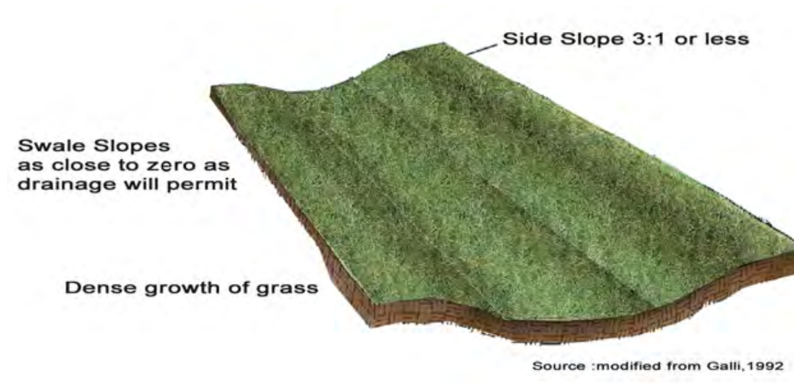

Source: Seattle Public Utilities


Source: Thomas Engineering

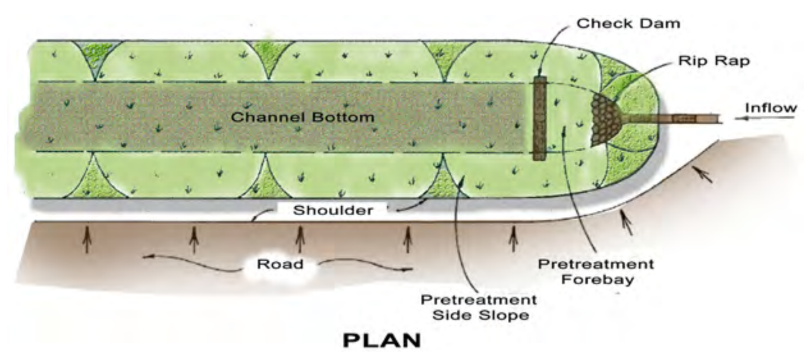

Source: Sue Donaldson

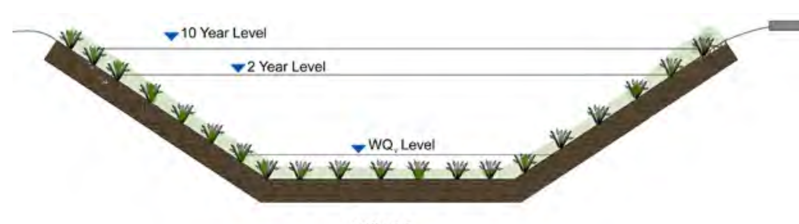



Source: CWP



PLAN VIEW OF A GRASS SWALE





PLAN AND PROFILE VIEWS

ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Enhanced Grass Swale	Partial - depends on soil infiltration rate	Yes, if design velocity is 0.5 m/s or less for a 4 hour, 25 mm Chicago storm	Partial - depends on soil infiltration rate

GENERAL SPECIFICATIONS

Component	Specification	Quantity
Check Dams	Constructed of a non-erosive material such as suitably sized aggregate, wood, gabions, riprap, or concrete. All check dams should be underlain with geotextile filter fabric. Wood used for check dams should consist of pressure treated logs or timbers, or water-resistant tree species such as cedar, hemlock, swamp oak or locust.	Spacing should be based on the longitudinal slope and desired ponding volume.
Gravel Diaphragm	Washed stone between 3 and 10 mm in diameter.	Minimum of 300 mm wide and 600 mm deep.

CONSTRUCTION CONSIDERATIONS

Grass swales should be clearly marked before site work begins to avoid disturbance during construction. No vehicular traffic, except that specifically used to construct the facility, should be allowed within the swale site. Any accumulation of sediment that does occur within the swale must be removed during the final stages of grading to achieve the design cross-section. Final grading and planting should not occur until the adjoining areas draining into the swale are stabilized. Flow should not be diverted into the swale until the banks are stabilized.

Preferably, the swale should be planted in the spring so that the vegetation can become established with minimal irrigation. Installation of erosion control matting or blanketing to stabilize soil during establishment of vegetation is highly recommended. If sod is used, it should be placed with staggered ends and secured by rolling the sod. This helps to prevent gullies.

OPERATION AND MAINTENANCE

Generally, routine maintenance will be the same as for any other landscaped area; weeding, pruning, and litter removal. Grassed swales should be mown at least twice yearly to maintain grass height between 75 and 150 mm. The lightest possible mowing equipment should be used to prevent soil compaction. Routine roadside ditch maintenance practices such as scraping and re-grading should be avoided. Regular watering may be required during the first two years until vegetation is established. Routine inspection is very important to ensure that dense vegetation cover is maintained and inlets and pretreatment devices are free of debris.

For the first two years following construction the swale should be inspected at least quarterly and after every major storm event (> 25 mm). Subsequently, inspections should be conducted in the spring and fall of each year and after major storm events. Inspect for vegetation density (at least 80% coverage), damage by foot or vehicular traffic, accumulation of debris, trash and sediment, and structural damage to pretreatment devices.

Trash and debris should be removed from pretreatment devices and the surface of the swale at least twice annually. Other maintenance activities include weeding, replacing dead vegetation, repairing eroded areas, dethatching and aerating as needed. Remove accumulated sediment on the swale surface when dry and exceeding 25 mm depth.

SITE CONSIDERATIONS

Available Space
Grass swales usually consume about 5 to 15% of their contributing drainage area. A width of at least 2 metres is needed.

Site Topography
Site topography constrains the application of grass swales. Longitudinal slopes between 0.5 and 6% are allowable. This prevents ponding while providing residence time and preventing erosion. On slopes steeper than 3%, check dams should be used.

Drainage Area & Runoff Volume
The conveyance capacity should match the drainage area. Sheet flow to the grass swale is preferable. If drainage areas are greater than 2 hectares, high discharge through the swale may not allow for filtering and infiltration, and may create erosive conditions. Typical ratios of impervious drainage area to treatment facility area range from 5:1 to 10:1.

Soil
Grass swales can be applied on sites with any type of soils.

Pollution Hot Spot Runoff
To protect groundwater from possible contamination, source areas where land uses or human activities have the potential to generate highly contaminated runoff (e.g., vehicle fueling, servicing and demolition areas, outdoor storage and handling areas for hazardous materials and some heavy industry sites) should not be treated by grass swales.

Proximity to Underground Utilities
Utilities running parallel to the grass swale should be offset from the centerline of the swale. Underground utilities below the bottom of the swale are not a problem.

Water Table
The bottom of the swale should be separated from the seasonally high water table or top of bedrock elevation by at least one (1) metre.

Setback from Buildings
Should be located a minimum of four (4) metres from building foundations to prevent water damage.

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FOR FURTHER DETAILS SEE SECTION 4.8 OF THE CVC/TRCA LID SWM GUIDE

DRY SWALES

CVC/TRCA LOW IMPACT DEVELOPMENT PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

A dry swale can be thought of as an enhanced grass swale that incorporates an engineered filter media bed and optional perforated pipe underdrain or a bioretention cell configured as a linear open channel. They can also be referred to as infiltration swales or bio-swales. Dry swales are similar to enhanced grass swales in terms of the design of their surface geometry, slope, check dams and pretreatment devices. They are similar to bioretention cells in terms of the design of the filter media bed, gravel storage layer and optional underdrain. In general, they are open channels designed to convey, treat and attenuate stormwater runoff. Vegetation or aggregate material on the surface of the swale slows the runoff water to allow sedimentation, filtration through the root zone and engineered soil bed, evapotranspiration, and infiltration into the underlying native soil.


Source: TRCA


Source: Seattle Public Utilities


Source: City of Portland


Source: Lynn Richards


Source: Portland Public Schools


Source: Lake County Illinois

DESIGN GUIDANCE

GEOMETRY AND SITE LAYOUT

- SHAPE: A parabolic shape is preferable for aesthetic, maintenance and hydraulic reasons. However, design may be simplified with a trapezoidal cross-section as long as the engineered soil (filter media) bed boundaries lay in the flat bottom areas. Swale length between culverts should be 5 metres or greater.
- BOTTOM WIDTH: For the trapezoidal cross section, the bottom width should be between 0.75 and 2 metres. When greater widths are desired, bioretention cell designs should be used.
- SIDE SLOPES: Should be no steeper than 3:1 for maintenance considerations (mowing). Flatter slopes are encouraged where adequate space is available to provide pretreatment for sheet flows entering the swale.
- LONGITUDINAL SLOPE: Should be as gradual as possible to permit the temporary ponding of the water quality storage requirement. Should be designed with longitudinal slopes generally ranging from 0.5 to 4%, and no greater than 6%. On slopes steeper than 3%, check dams should be used. Check dam spacing should be based on the slope and desired ponding volume. They should be spaced far enough apart to allow access for maintenance equipment (e.g., mowers).

PRE-TREATMENT

Pretreatment prevents premature clogging by capturing coarse sediments before they reach the filter bed. Where runoff source areas produce little sediment, such as roofs, dry swales can function effectively without pretreatment. To treat parking area or road runoff, a two-cell design that incorporates a forebay is recommended. Pretreatment practices that may be feasible, depending on conveyance method and availability of space include:

- SEDIMENTATION FOREBAY (TWO-CELL DESIGN): Forebay ponding volume should account for 25% of the water quality storage requirement and be designed with a 2:1 length to width ratio.
- VEGETATED FILTER STRIP (SHEET FLOW): Should ideally be a minimum of three (3) metres in width. If smaller strips are used, more frequent maintenance of the filter bed can be anticipated.
- GRAVEL DIAPHRAGM (SHEET FLOW): A small trench filled with pea gravel, which is perpendicular to the flow path between the edge of the pavement and the dry swale will promote settling out of sediment and maintain sheet flow into the facility. A drop of 50-150 mm into the gravel diaphragm can be used to dissipate energy and promote settling.
- RIP RAP AND/OR DENSE VEGETATION (CHANNEL FLOW): Suitable for small dry swales with drainage areas less than 100 square metres.

GRAVEL STORAGE LAYER

- DEPTH: Should be a minimum of 300 mm deep and sized to provide the required storage volume. Granular material should be 50 mm diameter clear stone.
- PEA GRAVEL CHOKING LAYER: A 100 mm deep layer of pea gravel (3 to 10 mm diameter clear stone) should be placed on top of the coarse gravel storage layer as a choking layer separating it from the overlying filter media bed.

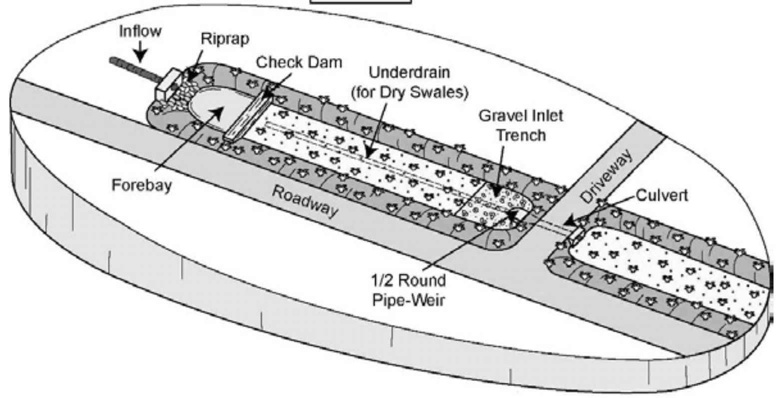
FILTER MEDIA

- COMPOSITION: To ensure a consistent and homogeneous bed, filter media should come pre-mixed from an approved vendor.
- DEPTH: Recommended depth is between 1.0 and 1.25 m. However in constrained applications, pollutant removal benefits may be achieved in beds as shallow as 500 mm. If trees are to be included in the design, bed depth must be at least 1.0 m.
- MULCH: A 75 mm layer of mulch on the surface of the filter bed enhances plant survival, suppresses weed growth and pretreats runoff before it reaches the filter bed.

UNDERDRAIN

- Only needed where native soil infiltration rate is less than 15 mm/hr (hydraulic conductivity of less than 1x10-6 cm/s).
- Should consist of a perforated pipe embedded in the coarse gravel storage layer at least 100 mm above the bottom.
- A strip of geotextile filter fabric placed between the filter media and pea gravel choking layer over the perforated pipe is optional to help prevent fine soil particles from entering the underdrain.
- A vertical standpipe connected to the underdrain at the furthest downstream end of the swale can be used as a cleanout and monitoring well.

Swales



ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Dry swale with no underdrain or full infiltration	Yes	Yes - size for water quality storage requirement	Partial - based on available storage volume and soil infiltration rate
Dry swale with underdrain or partial infiltration	Partial - based on available storage volume beneath the underdrain and soil infiltration rate	Yes - size for water quality storage requirement	Partial - based on available storage volume beneath the underdrain and soil infiltration rate
Dry swale with underdrain and impermeable liner or no infiltration	Partial - some volume reduction through evapotranspiration	Yes - size for water quality storage requirement	Partial - some volume reduction through evapotranspiration

OPERATION AND MAINTENANCE

Dry swales require routine inspection and maintenance of the landscaping as well as periodic inspection for less frequent maintenance needs or remedial maintenance. Generally, routine maintenance will be the same as for any other landscaped area; weeding, pruning, and litter removal. Regular watering may be required during the first two years until vegetation is established.

For the first two years following construction the facility should be inspected at least quarterly and after every major storm event (> 25 mm). Subsequently, inspections should be conducted in the spring and fall of each year and after major storm events. Inspect for vegetation density (at least 80% coverage), damage by foot or vehicular traffic, channelization, accumulation of debris, trash and sediment, and structural damage to pretreatment devices.

Trash and debris should be removed from pretreatment devices, the dry swale surface and inlet and outlets at least twice annually. Other maintenance activities include reapplying mulch, pruning, weeding replacing dead vegetation and repairing eroded areas as needed. Remove accumulated sediment on the dry swale surface when dry and exceeding 25 mm depth.

CONVEYANCE AND OVERFLOW

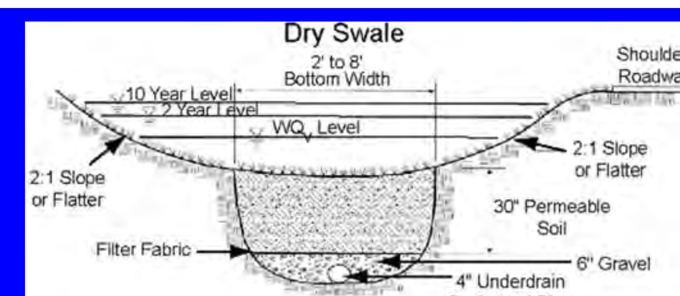
Should be designed for a maximum velocity of 0.5 m/s or less for a 4 hour 25 mm Chicago storm event. The swale should also convey the locally required design storm (usually the 10 year storm) at non-erosive velocities with freeboard provided above the required design storm water level.

MONITORING WELLS

A capped vertical standpipe consisting of an anchored 100 to 150 millimetre diameter perforated pipe with a lockable cap installed to the bottom of the facility at the furthest downgradient end is recommended for monitoring the length of time required to fully drain the facility between storms.

GENERAL SPECIFICATIONS

Material	Specification	Quantity
Filter Media Composition	Filter Media Soil Mixture to contain: • 85 to 88% sand • 8 to 12% soil fines • 3 to 5% organic matter (leaf compost) Other Criteria: • Phosphorus soil test index (P-Index) value between 10 to 30 ppm • Cationic exchange capacity (CEC) greater than 10 meq/100 g • Free of stones, stumps, roots and other large debris • pH between 5.5 to 7.5 • Infiltration rate greater than 25 mm/hr.	Volumetric computation based on surface area and depth used in design computations
Geotextile	Material specifications should conform to Ontario Provincial Standard Specification (OPSS) 1860 for Class II geotextile fabrics. Should be woven monofilament or non-woven needle punched fabrics. Woven slit film and non-woven heat bonded fabrics should not be used as they are prone to clogging. For further guidance see CVC/TRCA LID SWM Planning and Design Guide, Table 4.9.4.	Strip over the perforated pipe underdrain (if present) between the filter media bed and gravel storage layer (stone reservoir).
Gravel	Washed 50 mm diameter clear stone with void space ratio of 0.4 should be used to surround the underdrain.	Volumetric computation based on depth.
Underdrain (optional)	Perforated HDPE or equivalent material, minimum 100 mm dia., 200 mm dia. recommended. Set pipe invert at least 100 mm above bottom of the gravel layer.	• Perforated pipe for length of dry swale. • Non-perforated pipe to connect with storm drain system. • One or more caps. • T's for underdrain
Check Dams	• Should be constructed of a non-erosive material such as wood, gabions, riprap, or concrete and underlain with filter fabric. • Wood used should consist of pressure treated logs or timbers, or water-resistant tree species such as cedar, hemlock, swamp oak or locust.	Computation of check dam material needed based on surface area and depth used in design computations
Mulch or Matting	• Shredded hardwood bark mulch • Where flow velocities dictate, use erosion and sediment control matting - coconut fiber or equivalent.	Mulch - A 75 mm layer on the surface of the filter bed. Matting - based on filter bed area.



SITE CONSIDERATIONS

Available Space
Footprints are 5 to 15% of their contributing drainage area. Swale length between culverts should be 5m or greater.

Site Topography
Longitudinal slopes ranging from 0.5 to 4%. On slopes steeper than 3%, check dams should be used.

Drainage Area and Runoff Volume to Site
Typically treat drainage areas of two hectares or less. Typical ratios of impervious drainage area to treatment facility area range from 5:1 to 15:1.

Soil
Dry swales can be located over any soil type, but hydrologic soil group A and B soils are best for achieving water balance benefits. Facilities should be located in portions of the site with the highest native soil infiltration rates. Where infiltration rates are less than 15 mm/hr (hydraulic conductivity less than 1x10-6 cm/s) an underdrain is required. Native soil infiltration rate at the proposed facility location and depth should be confirmed through measurement of hydraulic conductivity under field saturated conditions.

Wellhead Protection
Facilities receiving road or parking lot runoff should not be located within two (2) year time-of-travel wellhead protection areas.

Water Table
The bottom of the swale should be separated from the seasonally high water table or top of bedrock elevation by at least one (1) metre to prevent groundwater contamination.

Pollution Hot Spot Runoff
To protect groundwater from possible contamination, runoff from pollution hot spots should not be treated by dry swales designed for full or partial infiltration. Facilities designed with an impermeable liner (filtration only facilities) can be used to treat runoff from pollution hot spots.

Setback from Buildings
Should be set back four (4) metres from building foundations unless an impermeable liner and underdrain system is used.

Proximity to Underground Utilities
Designers should consult local utility design guidance for the horizontal and vertical clearance between storm drains, ditches, and surface water bodies.

CONSTRUCTION CONSIDERATIONS

Ideally, dry swale sites should remain outside the limit of disturbance until construction of the swale begins to prevent soil compaction by heavy equipment. Dry swale locations should never be used as the site of sediment basins during construction, as the concentration of fines will prevent post-construction infiltration. To prevent clogging, stormwater should be diverted away from the practice until the drainage area is fully stabilized.

Toronto and Region Conservation for The Living City

CVC Credit Valley Conservation

FOR FURTHER DETAILS SEE SECTION 4.9 OF THE CVC/TRCA LID SWM GUIDE

PERFORATED PIPE SYSTEMS

CVC/TRCA LOW IMPACT DEVELOPMENT PLANNING AND DESIGN GUIDE - FACT SHEET

GENERAL DESCRIPTION

Perforated pipe systems can be thought of as long infiltration trenches or linear soak-aways that are designed for both conveyance and infiltration of stormwater runoff. They are composed of perforated pipes installed in gently sloping granular stone beds that are lined with geotextile fabric that allow infiltration of runoff into the gravel bed and underlying native soil while it is being conveyed from source areas or other BMPs to an end-of-pipe facility or receiving waterbody. Perforated pipe systems can be used in place of conventional storm sewer pipes, where topography, water table depth, and runoff quality conditions are suitable. They are suitable for treating runoff from roofs, walkways, parking lots and low to medium traffic roads, with adequate pretreatment. Perforated pipe systems can also be referred to as pervious pipe systems, exfiltration systems, clean water collector systems and percolation drainage systems.

DESIGN GUIDANCE

SOIL CHARACTERISTICS

Perforated pipe systems can be constructed over any soil type, but hydrologic soil group A or B soils are best for achieving water balance objectives. If possible, facilities should be located in portions of the site with the highest native soil infiltration rates. Designers should verify the native soil infiltration rate at the proposed location and depth through measurement of hydraulic conductivity under field saturated conditions.

GEOMETRY AND SITE LAYOUT

Gravel beds in which the perforated pipes are installed are typically rectangular excavations with a bottom width between 600 and 2400 mm. The gravel beds should have gentle slopes between 0.5 to 1%.

PRE-TREATMENT

It is important to prevent sediment and debris from entering infiltration facilities because they could contribute to clogging and failure of the system. The following pre-treatment devices are options:

- *In-ground devices:* Devices placed between a conveyance pipe and the facility (e.g., oil and grit separators, sedimentation chambers, goss traps), that can be designed to remove both large and fine particulate from runoff. A number of proprietary filter designs are also available.
- *Vegetated filter strips or grass swales:* Road and parking lot runoff can be pretreated with vegetated filter strips or grass swales prior to entering the infiltration practice.

CONVEYANCE AND OVERFLOW

Collection and conveyance of runoff into the perforated pipe system can be accomplished through conventional catchbasins and non-perforated pipes leading from foundation drains and roof downspouts. Perforated pipes should be smooth walled to reduce the potential for clogging and facilitate clean out. The gravel filled trench should be 75 to 150 mm deep above the perforated pipe. On-line concrete, clay or plastic trench baffles or other barriers can be installed across the granular filled trench to reduce flow along the system, thereby increasing the potential for infiltration. Overflows from the granular filled trench should either back up into manholes that are also connected to conventional storm sewers or be conveyed to a storm sewer or receiving waterbody by overland flow.

FILTER MEDIA

- *Gravel filled trench:* Should be filled with uniformly-graded, washed, 50 mm clear stone that provides 40% void space.
- *Geotextile:* A non-woven needle punched, or woven monofilament geotextile fabric should be installed around the stone reservoir of perforated pipe systems with a minimum overlap at the top of 300 mm.

COMMON CONCERNS

Risk of Groundwater Contamination

Most pollutants in urban runoff are well retained by infiltration practices and soils and therefore, have a low to moderate potential for groundwater contamination. To minimize risk of groundwater contamination the following management approaches are recommended:

- infiltration practices should not receive runoff from high traffic areas where large amounts of de-icing salts are applied (e.g., busy highways), nor from pollution hot spots;
- prioritize infiltration of runoff from source areas that are comparatively less contaminated such as roofs, low traffic roads and parking areas; and,
- apply sedimentation pretreatment practices (e.g., oil and grit separators) before infiltration of road or parking area runoff.

Standing Water and Mosquitoes

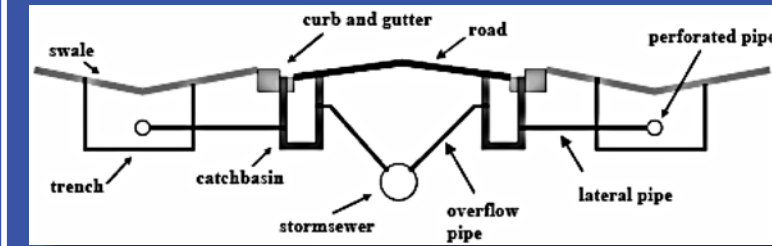
Complete drawdown should occur within 72 hours after a storm event, before mosquitoes have an opportunity to breed.

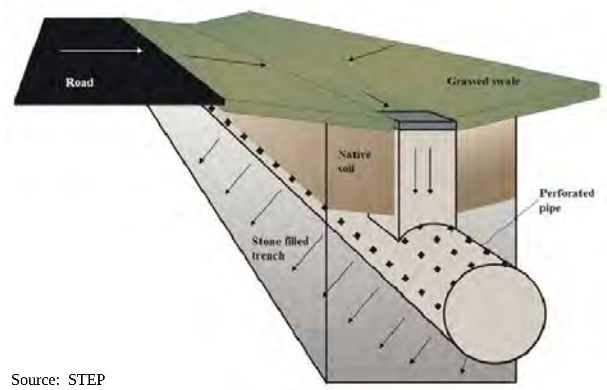
Foundations and Seepage

Should be setback at least four (4) metres from building foundations to prevent basement flooding and damage during freeze/thaw cycles.

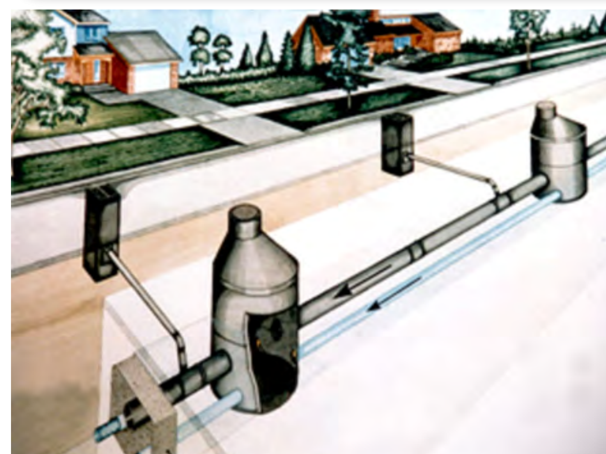
Winter Operation

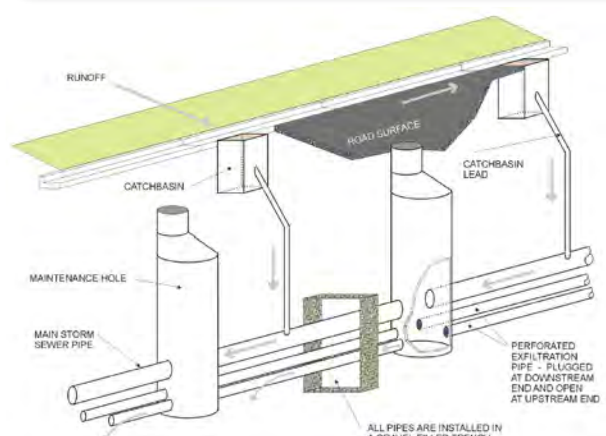
Perforated pipe systems will continue to function during winter months if the inlet pipe and top of the gravel bed is located below the local maximum frost penetration depth.





Source: STEP





Risk of Soil Contamination

Available evidence from monitoring studies indicates that small distributed stormwater infiltration practices do not contaminate underlying soils, even after 10 years of operation.

Maintenance

With proper location and adequate pretreatment, perforated pipe systems can continue to function effectively with very low levels of maintenance activities. Like conventional stormwater conveyance infrastructure (i.e., catchbasins and storm sewers), perforated pipe systems are typically located on public property (e.g., within road rights-of-way). An advantage to incorporating these systems in stormwater management systems is that legal agreements with property owners or managers, to ensure long term operation and maintenance, are not needed.

CONSTRUCTION CONSIDERATIONS

Soil Disturbance and Compaction

Before site work begins, locations of facilities should be clearly marked. Only vehicular traffic used for construction of the infiltration facility should be allowed close to the facility location.

Erosion and Sediment Control

Infiltration practices should never serve as a sediment control device during construction. Construction runoff should be directed away from the proposed facility location. After the site is vegetated, erosion and sediment control structures can be removed.

GENERAL SPECIFICATIONS

Material	Specification	Quantity
Perforated pipe	Pipe should be continuously perforated, smooth interior, with a minimum inside diameter of 200 millimetres.	Perforated pipe should run lengthwise through the facility at least 100 mm above the bottom of the gravel filled trench. Non-perforated pipe should be used for conveyance to the facility.
Stone	The trench in which perforated pipes are installed should be filled with washed 50 mm clear stone with a 40% void ratio.	Volume is based on trench dimensions and a void ratio of 40%.
Geotextile	Material specifications should conform to Ontario Provincial Standard Specification (OPSS) 1860 for Class II geotextile fabrics. Should be woven monofilament or non-woven needle punched fabrics. Woven slit film and non-woven heat bonded fabrics should not be used as they are prone to clogging. Primary considerations are: • Suitable apparent opening size (AOS) for non-woven fabrics, or percent open area (POA) for woven fabrics, to maintain water flow even with sediment and microbial film build-up; • Maximum forces that will be exerted on the fabric (i.e., what tensile, tear and puncture strength ratings are required?); • Load bearing ratio of the underlying native soil (i.e., is geotextile needed to prevent downward migration of aggregate into the native soil?); • Texture (i.e., grain size distribution) of the overlying native soil, filter media soil or aggregate material; and • Permeability of the native soil. For further guidance see CVC/TRCA LID SWM Planning and Design Guide, Table 4.10.4	Around the gravel filled trench (stone reservoir).

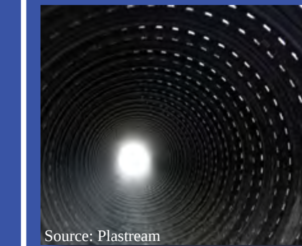
ABILITY TO MEET SWM OBJECTIVES

BMP	Water Balance Benefit	Water Quality Improvement	Stream Channel Erosion Control Benefit
Perforated Pipe Systems	Yes	Yes	Partial, depends on soil infiltration rate

OPERATION AND MAINTENANCE

Maintenance typically consists of cleaning out leaves, debris and accumulated sediment caught in pretreatment devices annually or as needed. Inspection via manholes should be performed to ensure the facility drains within the maximum acceptable length of time (typically 72 hours) at least annually and following every major storm event (>25 mm). If the time required to fully drain exceeds 72 hours, drain via pumping and clean out the perforated pipe by flushing. If slow drainage persists, the system may need removal and replacement of granular material and/or geotextile liner. Perforated pipe systems should be located below shoulders of roadways, pervious boulevards or grass swales where they can be readily excavated for servicing.


Source: STEP


Source: Plastream

SITE CONSIDERATIONS

Site Topography
Systems cannot be located on natural slopes greater than 15%. The gravel bed should be designed with gentle slopes between 0.5. to 1%.

Drainage Area
Typically designed with an impervious drainage area to treatment facility area ratio of between 5:1 to 10:1.

Soil
Perforated pipe systems can be located over any soil type, but hydrologic soil group A and B soils are best for achieving water balance benefits. Facilities should be located in portions of the site with the highest native soil infiltration rates. Native soil infiltration rate at the proposed facility location and depth should be confirmed through measurement of hydraulic conductivity under field saturated conditions.

Wellhead Protection
Facilities receiving road or parking lot runoff should not be located within two (2) year time-of-travel wellhead protection areas.

Water Table
The bottom of the gravel bed should be separated from the seasonally high water table or top of bedrock elevation by at least one (1) metre to prevent groundwater contamination.

Pollution Hot Spot Runoff
To protect groundwater from possible contamination, source areas where land uses or human activities have the potential to generate highly contaminated runoff (e.g., vehicle fueling, servicing and demolition areas, outdoor storage and handling areas for hazardous materials and some heavy industry sites) should not be treated by perforated pipe systems.

Setback from Buildings
Facilities should be setback a minimum of four (4) metres from building foundations.

Proximity to Underground Utilities
Local utility design guidance should be consulted to define the horizontal and vertical offsets. Generally, requirements for underground utilities passing near the practice will be no different than for utilities in other pervious areas.

TORONTO AND REGION Conservation for The Living City

CVC CREDIT VALLEY CONSERVATION

FOR FURTHER DETAILS SEE SECTION 4.10 OF THE CVC/TRCA LID SWM GUIDE

Table B1 LID Selection Matrix for Prestige Business Park (PBP) and Airport Related Commercial (ARC) Land-uses

	Employment Uses																					Ancillary Uses													
																											Amenities								
Land-use - Option 3 Hybrid - PBP and ARC: Land-uses with high urban design standards	Business/ Financial	R&D	Offices	Light Industrial	Warehousing	Wholesale Trade	Transportation	Communications	Government Services	Repair Services	Utilities	Freight Forwarders	Regional Integrators	On-site Customs Broker	Outdoor Storage	Distribution	Accommodations	Food and Catering	Convention Centers	Taxi Terminals	Automobile Rental	Ancillary Commercial	Commercial Schools	Financial Establishments	Personal Services	Labour Assoc. Halls	Day Cares	Health Services	Recreational Facilities	Open Spaces	Offices	Entertainment	Convenience Commercial	Gyms	Restaurants
Prestige Business Park (PBP)	■	■	■	■	■	■	■	■	■														■	■	■	■	■	■	■	■	■	■	■	■	■
Airport Related Commercial (ARC)	■	■	■														■	■	■	■	■				■		■		■	■	■	■		■	■
LID Techniques																																			
Rainwater Harvesting	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	‡	√	√	√	√	√
Green Roofs	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	‡	√	√	√	√	√
Downspout Disconnection	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√
Soakaway Pits	√	√	√	χ	√	√	χ	√	√								√	√	√	χ	χ		√	√	√	√	√	√	√	√	√	√	√	√	√
Bioretention	√	√	√	χ	√	√	χ	√	√								√	√	√	χ	χ		√	√	√	√	√	√	√	√	√	√	√	√	√
Special Bioretention																																			
Stormwater Planter	√	√	√	χ	√	√	χ	√	√								√	√	√	χ	χ		√	√	√	√	√	√	√	√	√	√	√	√	√
Stormwater Tree Pits	√	√	√	χ	√	√	χ	√	√								√	√	√	χ	χ		√	√	√	√	√	√	√	√	√	√	√	√	√
Compost Amendment	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√
Tree Clusters	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√
Filter Strips	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√
Permeable Pavement	√	√	√	√	√	√	χ, ‡	√	√								√	√	√	χ, ‡	χ, ‡		√	√	√	√	√	√	√	√	√	√	√	√	√
Grass Channel	√	√	√	√	√	√	√	√	√								√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	√
Dry Swales	√	√	√	χ	√	√	χ	√	√								√	√	√	χ	χ		√	√	√	√	√	√	√	√	√	√	√	√	√

Acceptable Practice	√
NOT Acceptable Practices	
High Risk Land use	χ
Cost	$
Operation and Maintenace	Δ
Developer Reluctance	•
Impractical	‡

Table B2 LID Selection Matrix for Light Industrial (IND) and Airport Related Business (ARB) Land-uses

Land-use - Option 3 Hybrid - IND and ARB: Land-uses with minimal urban design standards

	Employment Uses																				
Land-use - Option 3 Hybrid - IND and ARB: Land-uses with minimal urban design standards	Business/ Financial	R&D	Offices	Light Industrial	Warehousing	Wholesale Trade	Transportation	Communications	Government Services	Repair Services	Utilities	Freight Forwarders	Regional Integrators	On-site Customs Broker	Outdoor Storage	Distribution	Accommodations	Food and Catering	Convention Centers	Taxi Terminals	Automobile Rental
Light Industrial (IND)			■	■	■	■	■	■		■	■										
Airport Related Business (ARB)			■	■	■	■	■	■			■	■	■	■	■	■					
LID Techniques																					
Rainwater Harvesting			√	√	√	√	√	√		√	√	√	√	√	√	√					
Green Roofs			$,•	$,•	$,•	$,•	$,•	$,•		$,•	$,•	$,•	$,•	$,•	$,•	$,•					
Downspout Disconnection			√	√	√	√	√	√		√	√	√	√	√	√	√					
Soakaway Pits			√	χ	χ	√	χ	√		χ	χ	χ	χ	√	χ	χ					
Bioretention			√	χ	χ	√	χ	√		χ	χ	χ	χ	√	χ	χ					
Special Bioretention																					
Stormwater Planter			$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ		$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ					
Stormwater Tree Pits			$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ		$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ					
Compost Amendment			√	√	√	√	√	√		√	√	√	√	√	√	√					
Tree Clusters			√	√	√	√	√	√		√	√	√	√	√	√	√					
Filter Strips			√	√	√	√	√	√		√	√	√	√	√	√	√					
Permeable Pavement			$	χ	χ	$	χ	$		χ	χ	χ	χ	$	χ	χ					
Grass Channel			√	√	√	√	√	√		√	√	√	√	√	√	√					
Dry Swales			√	χ	χ	√	χ	√		χ	χ	χ	χ	√	χ	χ					

	Ancillary Uses													
						Amenities								
Land-use - Option 3 Hybrid - IND and ARB: Land-uses with minimal urban design standards	Ancillary Commercial	Commercial Schools	Financial Establishments	Personal Services	Labour Assoc. Halls	Day Cares	Health Services	Recreational Facilities	Open Spaces	Offices	Entertainment	Convenience Commercial	Gyms	Restaurants
Light Industrial (IND)	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Airport Related Business (ARB)	■	■	■	■	■	■	■	■	■	■	■	■	■	■
LID Techniques														
Rainwater Harvesting	√	√	√	√	√	√	√	√	‡	√	√	√	√	√
Green Roofs	$,•	$,•	$,•	$,•	$,•	$,•	$,•	$,•	‡	$,•	$,•	$,•	$,•	$,•
Downspout Disconnection	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Soakaway Pits	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Bioretention	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Special Bioretention														
Stormwater Planter	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ
Stormwater Tree Pits	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ	$,Δ
Compost Amendment	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Tree Clusters	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Filter Strips	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Permeable Pavement	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Grass Channel	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Dry Swales	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Acceptable Practice	√
NOT Acceptable Practices	
High Risk Land use	χ
Cost	$
Operation and Maintenace	Δ
Developer Reluctance	•
Impractical	‡

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	64758: Hamilton Airport Employment Growth District														
2	**Curve Numbers Calculations as of Nov 16, 2009**														
88	Area	S/C	Summary of Imperviousness by Land Use (% of Total Area)										Imperviousness		
89	(ha)	#	Woodlot	Row	Pasture	Rural	Builtup	Builtup	Comm.	Bedrock	Open	Imperv.	(% of Total Area)		
90				Crop		Res.	(L.D.)	(M.D.)			Water		Total	Indirect	Direct
91		% Impervious	-	-	-	20	50	65	80	100	100	100	(TIMP)		(XIMP)
92	***Existing Conditions***														
93	108.2	3-25					2		2			2	6	0	6
94	439.7	3-26					12	14	4			10	40	5	35
95	99.1	3-27					10					4	13	2	11
96	59.2	3-28					1					1	3	0	3
97	100.7	3-29					2		5			1	7	0	7
98	126.0	3-30					2	0	6			2	10	0	10
99	59.1	3-31					5		4			7	15	1	14
100	312.3	3-32					6		0			2	8	1	7
101	255.0	3-33					2	0				1	3	0	3
102	413.9	3-34					3	0	1			3	6	1	6
103	373.2	3-35					3					3	6	1	5
104	301.4	3-36					8					4	12	2	10
105	71.0	3-37					3	1	1			10	14	1	14
106															
107															
108															
109															
110															
111															
112															
113															
114															
115															
116															
117															
118															
119															

Existing Cond SWMHYMO Input Parameters

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
3	Subcatchment	Instantaneous	Drainage	Runoff	Curve	Initial Abstraction (mm)		Imperviousness (%)					Flow Length (m)		Slope (%)		Manning's 'n'		N
4	I.D.	Unit Hydrograph	Area	Coefficient	Number	Pervious	Impervious	Direct	+	Indirect	=	Total	Pervious	Impervious	Pervious	Impervious	Pervious	Impervious	
5		Classification	(ha)	(<10 Year)															
6	*Existing Conditions*																		
7	3-25	Nash	108.2	0.41	80	6.35	n/a	6	+	0	=	6	n/a	n/a	n/a	n/a	n/a	n/a	3
8	3-26	Standard	439.7	0.51	73	9.39	2.00	35	+	5	=	40	40	1712	2	1.00	0.24	0.015	n/a
9	3-27	Nash	99.1	0.47	84	4.84	n/a	11	+	2	=	13	n/a	n/a	n/a	n/a	n/a	n/a	3
10	3-28	Nash	59.2	0.39	79	6.75	n/a	3	+	0	=	3	n/a	n/a	n/a	n/a	n/a	n/a	3
11	3-29	Nash	100.7	0.39	79	6.75	n/a	7	+	0	=	7	n/a	n/a	n/a	n/a	n/a	n/a	3
12	3-30	Nash	126.0	0.40	79	6.75	n/a	10	+	0	=	10	n/a	n/a	n/a	n/a	n/a	n/a	3
13	3-31	Nash	59.1	0.38	77	7.59	n/a	14	+	1	=	15	n/a	n/a	n/a	n/a	n/a	n/a	3
14	3-32	Nash	312.3	0.44	82	5.58	n/a	7	+	1	=	8	n/a	n/a	n/a	n/a	n/a	n/a	3
15	3-33	Nash	255.0	0.34	78	7.16	n/a	3	+	0	=	3	n/a	n/a	n/a	n/a	n/a	n/a	3
16	3-34	Nash	413.9	0.39	79	6.75	n/a	6	+	1	=	6	n/a	n/a	n/a	n/a	n/a	n/a	3
17	3-35	Nash	373.2	0.38	78	7.16	n/a	5	+	1	=	6	n/a	n/a	n/a	n/a	n/a	n/a	3
18	3-36	Nash	301.4	0.43	82	5.58	n/a	10	+	2	=	12	n/a	n/a	n/a	n/a	n/a	n/a	3
19	3-37	Nash	71.0	0.42	81	5.96	n/a	14	+	1	=	14	n/a	n/a	n/a	n/a	n/a	n/a	3
20	Route 5	Nash	439.7	0.51	73	9.39	n/a	#VALUE!	+		=	40	n/a	n/a	n/a	n/a	n/a	n/a	3
21																			
22																			
23																			
24																			
25																			
26																			
27																			
28																			
29																			
30																			
31																			
32																			
33		Total/Average =	**3158.50**	**0.43**	**78**	**7.27**	**-**	**######**	**+**	**1**	**=**	**17**	-	-	-	-	-	-	-

	B	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
3	Subcatchment	Basin Length (m)							Basin Fall (m)							Basin Slope (%)						
4	I.D.	Overland			Channel			Total	Overland			Channel			Total	Overland			Channel			Effective
5		1	2	Subtotal	1	2	Subtotal		1	2	Subtotal	1	2	Subtotal		1	2	Effective	1	2	Effective	
6	*Existing Conditions*																					
7	3-25	845	-	845	1,081	-	1,081	1,926	2.5	-	2.5	8.0	-	8.0	10.5	0.3	-	0.3	0.7	-	0.7	0.5
8	3-26	851	684	1,535	1,568	250	1,818	3,353	7.0	4.0	11.0	3.0	0.5	3.5	14.5	0.8	0.6	0.7	0.2	0.2	0.2	0.3
9	3-27	625	-	625	662	781	1,443	2,068	3.0	-	3.0	4.0	8.0	12.0	15.0	0.5	-	0.5	0.6	1.0	0.8	0.7
10	3-28	300	-	300	1,295	880	2,175	2,475	0.5	-	0.5	10.0	6.0	16.0	16.5	0.2	-	0.2	0.8	0.7	0.7	0.6
11	3-29	282	-	282	1,137	1,471	2,608	2,890	1.5	-	1.5	11.0	6.0	17.0	18.5	0.5	-	0.5	1.0	0.4	0.6	0.6
12	3-30	637	250	887	1,045	1,083	2,128	3,015	5.0	3.0	8.0	5.0	7.0	12.0	20.0	0.8	1.2	0.9	0.5	0.6	0.6	0.6
13	3-31	269	-	269	400	-	400	669	0.5	-	0.5	1.0	-	1.0	1.5	0.2	-	0.2	0.3	-	0.3	0.2
14	3-32	801	-	801	1,645	993	2,638	3,439	4.0	-	4.0	9.0	3.0	12.0	16.0	0.5	-	0.5	0.5	0.3	0.4	0.4
15	3-33	581	-	581	1,017	718	1,735	2,316	1.0	-	1.0	7.0	0.5	7.5	8.5	0.2	-	0.2	0.7	0.1	0.2	0.2
16	3-34	1,503	1,239	2,742	1,685	773	2,458	5,200	1.5	4.0	5.5	5.0	1.5	6.5	12.0	0.1	0.3	0.2	0.3	0.2	0.3	0.2
17	3-35	705	1,053	1,758	1,256	1,860	3,116	4,874	3.0	4.0	7.0	3.5	3.0	2.0	9.0	0.4	0.4	0.4	0.3	0.2	0.2	0.2
18	3-36	257	-	257	1,098	2,276	3,374	3,631	0.5	-	0.5	11.0	8.0	19.0	19.5	0.2	-	0.2	1.0	0.4	0.5	0.4
19	3-37	337	-	337	757	489	1,246	1,583	4.0	-	4.0	3.0	2.0	5.0	9.0	1.2	-	1.2	0.4	0.4	0.4	0.5
20	Route 5	1,521	-	1,521	894	-	894	2,415	8.0	-	8.0	1.5	-	1.5	9.5	0.5	-	0.5	0.2	-	0.2	0.3
33		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	B	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK
3	Subcatchment	Land Use Along Flow Path				Velocity (m/s)				Upland T_c (minutes)							Time to Peak (hours)						
4	I.D.	Overland		Channel		Overland		Channel		Overland			Channel			Total	SCS	Airport	Bransby	SCS	Average	Chow	Kirpich
5		1	2	1	2	1	2	1	2	1	2	Subtotal	1	2	Subtotal		Upland		Williams	CN			
6	*Existing Conditions*																						
7	3-25	4.0	-	6.5		0.15	-	0.46		93	-	93	39		39	132	1.47	n/a	0.90	2.88	1.75	1.07	0.58
8	3-26	4.0	5.5	6.5	6.5	0.25	0.29	0.23	0.24	56	39	96	113	18	130	226	2.51	n/a	1.47	3.58	2.52	1.93	1.03
9	3-27	4.0	-	6.5	6.5	0.19	-	0.41	0.54	54	-	54	27	24	51	105	1.17	1.18	0.90	2.10	1.34	0.98	0.53
10	3-28	4.0	-	6.5	6.5	0.11	-	0.47	0.44	44	-	44	46	33	80	124	1.37	1.54	n/a	4.83	2.58	1.20	0.65
11	3-29	4.0	-	6.5	6.5	0.20	-	0.52	0.34	23	-	23	36	72	109	132	1.46	n/a	n/a	3.06	2.26	1.37	0.73
12	3-30	4.0	5.5	6.5	6.5	0.25	0.42	0.37	0.43	43	10	53	47	42	90	143	1.59	n/a	1.30	2.47	1.79	1.35	0.73
13	3-31	4.0	-	6.5	6.5	0.12	-	0.27	-	37	-	37	25	-	25	62	0.69	1.11	n/a	1.71	1.17	0.62	0.34
14	3-32	4.0	-	6.5	6.5	0.20	-	0.39	0.29	68	-	68	70	57	127	194	2.16	n/a	1.46	3.31	2.31	1.72	0.92
15	3-33	4.0	-	6.5	6.5	0.12	-	0.44	0.14	84	-	84	38	85	124	208	2.31	n/a	n/a	4.65	3.48	1.77	0.95
16	3-34	6.5	6.5	6.5	6.5	0.17	0.30	0.29	0.23	149	68	218	97	55	152	370	4.11	n/a	n/a	9.04	6.58	3.31	1.74
17	3-35	4.0	5.5	6.5	6.5	0.18	0.23	0.28	0.21	65	75	140	75	145	220	360	4.00	n/a	n/a	5.55	4.77	2.86	1.51
18	3-36	4.0	-	6.5	6.5	0.12	-	0.53	0.31	35	-	35	34	121	155	190	2.11	n/a	1.55	5.53	3.06	1.82	0.97
19	3-37	4.0	-	6.5	6.5	0.30	-	0.33	0.34	19	-	19	38	24	62	80	0.89	1.24	0.76	1.19	1.02	0.90	0.49
20	Route 5	5.0	-	6.5	6.5	0.23	-	0.22	-	112	-	112	69	-	69	180	2.00	n/a	1.06	3.18	2.08	1.49	0.80
33		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Existing Cond SWMHYMO Input Parameters

Upland Method Overland Flow Velocities

	Land Use Along Flow Path	$Slope_1$ (%)	$Velocity_1$ (m/s)	$Slope_2$ (%)	$Velocity_2$ (m/s)	m	b
1	Forest (Heavy Litter) & Hay Meadow	0.6	0.060	15	0.30	0.500	-1.111
2	Woodland, Fallow, Contour or Strip Crop	0.1	0.048	40	0.96	0.500	-0.819
3	Pasture	0.1	0.068	20	0.96	0.500	-0.667
4	Cultivated Straight Row	0.1	0.088	30	1.52	0.500	-0.556
5	Nearly Bare Soil, Untilled	0.1	0.099	10	0.99	0.500	-0.504
6	Grassed Waterway	0.2	0.205	40	2.90	0.500	-0.339
7	Small Upland Gullies & Paved Areas	0.2	0.275	40	3.89	0.500	-0.211

Existing Cond SWMHYMO Input Parameters

Table A-2
Summary of Hydrologic Modelling Parameters

Subcatchment I.D.	Instantaneous Unit Hydrograph Classification	Drainage Area (ha)	Imperviousness (%) Direct	+	Indirect	=	Total	SCS Curve Number	Initial Abstraction (mm) Pervious	Impervious	Manning's 'n' Pervious	Impervious	Time to Peak (hours)	Number of Linear Reservoirs	Flow Length (m) Pervious	Impervious	Slope (%) Pervious	Impervious
Existing Conditions																		
3-25	Nash	108.20	6	+	0	=	6	80	6.4	n/a	n/a	n/a	2	3	n/a	n/a	n/a	n/a
3-26	Standard	439.70	35	+	5	=	40	73	9.4	2.00	0.24	0.015	2.52	n/a	40	1,712	2	1
3-27	Nash	99.10	11	+	2	=	13	84	4.8	n/a	n/a	n/a	1.34	3	n/a	n/a	n/a	n/a
3-28	Nash	59.20	3	+	0	=	3	79	6.8	n/a	n/a	n/a	2.58	3	n/a	n/a	n/a	n/a
3-29	Nash	100.70	7	+	0	=	7	79	6.8	n/a	n/a	n/a	2.26	3	n/a	n/a	n/a	n/a
3-30	Nash	126.00	10	+	0	=	10	79	6.8	n/a	n/a	n/a	1.79	3	n/a	n/a	n/a	n/a
3-31	Nash	59.10	14	+	1	=	15	77	7.6	n/a	n/a	n/a	1.17	3	n/a	n/a	n/a	n/a
3-32	Nash	312.30	7	+	1	=	8	82	5.6	n/a	n/a	n/a	2.31	3	n/a	n/a	n/a	n/a
3-33	Nash	255.00	3	+	0	=	3	78	7.2	n/a	n/a	n/a	3.48	3	n/a	n/a	n/a	n/a
3-34	Nash	413.90	6	+	1	=	6	79	6.8	n/a	n/a	n/a	6.58	3	n/a	n/a	n/a	n/a
3-35	Nash	373.20	5	+	1	=	6	78	7.2	n/a	n/a	n/a	4.77	3	n/a	n/a	n/a	n/a
3-36	Nash	301.40	10	+	2	=	12	82	5.6	n/a	n/a	n/a	3.06	3	n/a	n/a	n/a	n/a
3-37	Nash	71.00	14	+	1	=	14	81	6.0	n/a	n/a	n/a	1.02	3	n/a	n/a	n/a	n/a
Subtotal/Weighted Average =		**2,718.8**	**12**	**+**	**1**	**=**	**13**	**79**	**6.9**	-	-	-	-	-	-	-	-	-

64758: Hamilton Airport Employment Growth District

Ultimate Runoff Coefficients as of Nov 10, 2007

COMMENTS

TABLE OF RUNOFF COEFFICIENTS (5 Year)							
Land Use	Hydrologic Soil Type						
	A	AB	B	BC	C	CD	D
Woodlot	0.08	0.14	0.19	0.25	0.28	0.32	0.35
Row Crop/Grain	0.22	0.26	0.31	0.35	0.42	0.48	0.55
Pasture	0.10	0.16	0.22	0.28	0.32	0.36	0.40
Rural Residential	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Builtup (L.D.)	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Builtup (M.D.)	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Commercial	0.10	0.12	0.14	0.16	0.18	0.20	0.22
School	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Open Water	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Impervious	0.90	0.90	0.90	0.90	0.90	0.90	0.90

Subcatchment	Runoff Coefficients for Pervious Land Use													Weighted Runoff Coefficient			
	Woodlot	Row Crop	Pasture	Rural Res.	Builtup (L.D.)	Builtup (M.D.)	Comm.	Bedrock	Open Water	Pervious Runoff Coefficient				($f_{perv} x C_{perv} + f_{imp} x C_{imp}$)			
										< 10 Yr	25 Yr	50 Yr	100 Yr	< 10 Yr	25 Yr	50 Yr	100 Yr
Existing Conditions																	
3-25 (108.20 ha)	0.02	0.28	0.07		0.00		0.00			0.37	0.41	0.45	0.47	0.41	0.44	0.48	0.49
3-26 (439.70 ha)	0.02	0.13	0.04		0.03	0.02	0.00			0.25	0.27	0.30	0.31	0.51	0.52	0.54	0.54
3-27 (99.10 ha)	0.03	0.34	0.02		0.02					0.40	0.45	0.49	0.51	0.47	0.51	0.54	0.56
3-28 (59.20 ha)	0.06	0.31	0.01		0.00					0.38	0.41	0.45	0.47	0.39	0.43	0.46	0.48
3-29 (100.70 ha)	0.06	0.28	0.01		0.00		0.00			0.35	0.38	0.42	0.43	0.39	0.42	0.45	0.47
3-30 (126.00 ha)	0.05	0.25	0.03		0.00	0.00	0.00			0.34	0.38	0.41	0.43	0.40	0.43	0.46	0.48
3-31 (59.10 ha)	0.10	0.17	0.01		0.01		0.00			0.29	0.32	0.35	0.36	0.38	0.41	0.43	0.44
3-32 (312.30 ha)	0.04	0.27	0.08		0.01		0.00			0.40	0.44	0.47	0.49	0.44	0.47	0.51	0.53
3-33 (255.00 ha)	0.03	0.07	0.21		0.00	0.00				0.32	0.35	0.39	0.40	0.34	0.37	0.40	0.42
3-34 (413.90 ha)	0.05	0.30	0.00		0.00	0.00	0.00			0.36	0.39	0.43	0.45	0.39	0.42	0.46	0.48
3-35 (373.20 ha)	0.06	0.29			0.00					0.35	0.39	0.42	0.44	0.38	0.42	0.45	0.47
3-36 (301.40 ha)	0.02	0.30	0.03		0.01					0.37	0.40	0.44	0.46	0.43	0.46	0.49	0.51
3-37 (71.00 ha)	0.03	0.20	0.09		0.01	0.00	0.00			0.34	0.38	0.41	0.43	0.42	0.45	0.48	0.49
TOTAL = 2,718.80ha									**TOTAL =**	**0.34**	**0.37**	**0.41**	**0.43**	**0.42**	**0.45**	**0.48**	**0.49**

Existing Cond SWMHYMO Input Parameters

Table C.3
Rational Calculations

S / C I.D.	Contributing S/C's	Upstream Area (ha)	Composite Runoff Coefficients (C)				Time of Conc. (min)	Rainfall Intensity (mm/hr)						Peak Flow (Q) (m^3/s)					
			<10 Year	25 Year	50 Year	100 Year		2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
3-25		108.2	0.41	0.44	0.48	0.49	105	15.2	20.0	24.6	27.1	30.0	33.1	1.86	2.46	3.03	3.62	4.33	4.9
3-26		439.7	0.51	0.52	0.54	0.54	151	11.6	15.4	19.0	20.9	23.2	25.6	7.24	9.59	11.84	13.44	15.33	17.1
3-27		99.1	0.47	0.51	0.54	0.56	80	18.4	24.2	29.8	32.7	36.2	39.8	2.41	3.16	3.89	4.60	5.44	6.2
3-28		59.2	0.39	0.43	0.46	0.48	155	11.4	15.1	18.6	20.6	22.8	25.1	0.74	0.98	1.21	1.45	1.75	2.0
Sum	25+26+27+28	706.2	0.48	0.50	0.52	0.53	256	7.8	10.5	13.0	14.3	15.9	17.6	7.39	9.86	12.21	14.15	16.42	18.5
3-29		100.7	0.39	0.42	0.45	0.47	136	12.6	16.6	20.5	22.6	25.0	27.6	1.37	1.82	2.24	2.68	3.20	3.6
3-30		126.0	0.40	0.43	0.46	0.48	107	14.9	19.7	24.3	26.7	29.6	32.6	2.11	2.78	3.43	4.06	4.82	5.5
3-31		59.1	0.38	0.41	0.43	0.44	70	20.3	26.6	32.7	35.9	39.8	43.7	1.28	1.68	2.07	2.41	2.83	3.2
Sum	25+26+27+28+29+30+31	992.0	0.45	0.48	0.50	0.51	281	7.3	9.8	12.1	13.4	14.9	16.4	9.19	12.27	15.21	17.76	20.74	23.4
3-32		312.3	0.44	0.47	0.51	0.53	138	12.4	16.4	20.2	22.3	24.7	27.2	4.73	6.25	7.72	9.21	11.00	12.5
3-33		255.0	0.34	0.37	0.40	0.42	209	9.1	12.2	15.0	16.6	18.4	20.3	2.22	2.95	3.65	4.40	5.29	6.1
Sum	32+33	567.3	0.39	0.43	0.46	0.48	262	7.7	10.3	12.7	14.1	15.6	17.3	4.81	6.42	7.95	9.56	11.46	13.1
3-34		413.9	0.39	0.42	0.46	0.48	395	5.7	7.6	9.4	10.5	11.7	12.9	2.57	3.45	4.29	5.16	6.19	7.1
Sum	32+33+34	981.2	0.39	0.43	0.46	0.48	415	5.5	7.3	9.1	10.1	11.2	12.4	5.89	7.91	9.83	11.85	14.22	16.3
3-35		373.2	0.38	0.42	0.45	0.47	286	7.2	9.6	11.9	13.2	14.7	16.2	2.88	3.85	4.77	5.75	6.89	7.9
3-36		301.4	0.43	0.46	0.49	0.51	184	10.0	13.3	16.5	18.2	20.2	22.2	3.63	4.82	5.96	7.08	8.41	9.6
3-37		71.0	0.42	0.45	0.48	0.49	61	22.3	29.2	35.9	39.4	43.6	47.9	1.87	2.45	3.01	3.53	4.16	4.7
Sum	25+26+27+28+29+30+31+35+36+37	1,737.6	0.43	0.46	0.49	0.50	501	4.7	6.4	7.9	8.8	9.8	10.8	9.95	13.40	16.67	19.73	23.29	26.5
Sum	All	2,718.8	0.42	0.45	0.48	0.49	501	4.7	6.4	7.9	8.8	9.8	10.8	15.06	20.28	25.22	30.05	35.68	40.7

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	64758: Hamilton Airport Employment Growth District - Sulpher Creek														
2	**Curve Numbers Calculations as of Nov 19, 2009**														
88	Area	S/C	Summary of Imperviousness by Land Use (% of Total Area)										Imperviousness		
89	(ha)	#	Woodlot	Row	Pasture	Rural	Builtup	Builtup	Comm.	Bedrock	Open	Imperv.	(% of Total Area)		
90				Crop		Res.	(L.D.)	(M.D.)			Water		Total	Indirect	Direct
91		% Impervious	-	-	-	20	50	65	80	100	100	100	(TIMP)		(XIMP)
92	***Existing Conditions***														
93	81.7	1-5				2.4	1					1	4	3	2
94	99.2	1-6				1	2					2	5	2	4
95	26.2	1-7					2		36			9	47	0	47
96	147.9	1-8				2	5		9			5	21	3	18
97	424.8	1-9				2	9		6			7	24	3	20
98	78.1	1-10					11		1			8	20	2	18
99	20.6	1-11					16					12	28	3	25
100	37.5	1-12					26		4			33	63	5	58
101	35.6	1-13A					30					31	61	6	55
102	200.9	1-13B					18	5	13			24	60	4	55
103															
104															
105															
106															
107															
108															
109															
110															
111															
112															
113															
114															
115															
116															
117															
118															
119															

Existing Cond SWMHYMO Input Parameters

	B	C	D	E	F	G	H	I	J	K	L	M
3	Subcatchment	Instantaneous	Drainage	Runoff	Curve	Initial Abstraction (mm)		Imperviousness (%)				
4	I.D.	Unit Hydrograph	Area	Coefficient	Number	Pervious	Impervious	Direct	+	Indirect	=	Total
5		Classification	(ha)	(<10 Year)								
6	*Existing Conditions*											
7	1-5	Nash	81.7	0.26	68	11.95	n/a	2	+	3	=	4
8	1-6	Nash	99.2	0.32	73	9.39	n/a	4	+	2	=	5
9	1-7	Standard	26.2	0.56	70	10.89	2.00	47	+	0	=	47
10	1-8	Nash	147.9	0.39	77	7.59	n/a	18	+	3	=	21
11	1-9	Standard	424.8	0.39	69	11.41	2.00	20	+	3	=	24
12	1-10	Nash	78.1	0.35	72	9.88	n/a	18	+	2	=	20
13	1-11	Standard	20.6	0.37	61	16.24	2.00	25	+	3	=	28
14	1-12	Standard	37.5	0.61	61	16.24	2.00	58	+	5	=	63
15	1-13A	Standard	35.6	0.59	61	16.24	2.00	55	+	6	=	61
16	1-13B	Standard	200.9	0.60	66	13.08	2.00	55	+	4	=	60
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
32												
33		Total/Average =	**1152.50**	**0.42**	**69**	**11.35**	**-**	**26**	**+**	**3**	**=**	**29**

	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH
3	Flow Length (m)		Slope (%)		Manning's 'n'		N	Basin Length (m)							Basin Fall (m)						
4	Pervious	Impervious	Pervious	Impervious	Pervious	Impervious		Overland			Channel			Total	Overland			Channel			Total
5								1	2	Subtotal	1	2	Subtotal		1	2	Subtotal	1	2	Subtotal	
7	n/a	n/a	n/a	n/a	n/a	n/a	3	219	-	219	712	715	1,427	1,646	0.5	-	0.5	3.0	3.0	6.0	6.5
8	n/a	n/a	n/a	n/a	n/a	n/a	3	393	-	393	812	-	812	1,205	1.0	-	1.0	4.0	-	4.0	5.0
9	40	418	2	1.00	0.17	0.015	n/a	228	-	228	353	-	353	581	0.5	-	0.5	2.0	-	2.0	2.5
10	n/a	n/a	n/a	n/a	n/a	n/a	3	582	882	1,464	686	846	1,532	2,996	3.0	5.0	8.0	5.0	5.0	10.0	18.0
11	40	1683	2	1.00	0.22	0.015	n/a	1,411	-	1,411	817	719	1,536	2,947	5.0	-	5.0	2.0	0.5	2.5	7.5
12	n/a	n/a	n/a	n/a	n/a	n/a	3	546	-	546	450	463	913	1,459	3.0	-	3.0	1.5	2.0	3.5	6.5
13	40	371	2	1.00	0.28	0.015	n/a	241	-	241	497	-	497	738	2.0	-	2.0	1.5	-	1.5	3.5
14	40	500	2	1.00	0.28	0.015	n/a	5	-	5	263	275	538	543	0.2	4.0	4.2	1.0	2.0	3.0	7.2
15	40	487	2	1.00	0.28	0.015	n/a	132	-	132	320	-	320	452	2.0	-	2.0	0.5	-	0.5	2.5
16	40	1157	2	1.00	0.29	0.015	n/a	747	612	1,359	476	683	1,159	2,518	10.0	4.0	14.0	3.0	5.0	8.0	22.0
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK
3	Basin Slope (%)							Land Use Along Flow Path				Velocity (m/s)				Upland T_c (minutes)							Time to Peak (hours)						
4	Overland			Channel			Effective	Overland		Channel		Overland		Channel		Overland			Channel			Total	SCS	Airport	Bransby	SCS	Average	Chow	Kirpich
5	1	2	Effective	1	2	Effective		1	2	1	2	1	2	1	2	1	2	Subtotal	1	2	Subtotal		Upland		Williams	CN			
7	0.2	-	0.2	0.4	0.4	0.4	0.4	4.0	-	6.5		0.13	-	0.34		27	-	27	34		34	62	0.69	1.70	n/a	4.06	2.15	1.02	0.55
8	0.3	-	0.3	0.5	-	0.5	0.4	4.0	5.5	6.5	6.5	0.14	-	0.37	-	47	-	47	36	-	36	83	0.92	1.35	n/a	2.62	1.63	0.79	0.43
9	0.2	-	0.2	0.6	-	0.6	0.4	4.0	5.5	6.5	6.5	0.13	-	0.40	-	29	-	29	15	-	15	44	0.49	0.66	0.33	1.71	0.80	0.45	0.25
10	0.5	0.6	0.5	0.7	0.6	0.6	0.6	4.0	5.5	6.5	6.5	0.20	0.29	0.45	0.41	49	52	100	25	35	60	160	1.78	n/a	n/a	3.31	2.54	1.38	0.74
11	0.4	-	0.4	0.2	0.1	0.1	0.2	4.0	5.5	6.5	6.5	0.17	-	0.26	0.14	142	-	142	52	86	137	279	3.10	n/a	n/a	5.06	4.08	2.13	1.13
12	0.5	-	0.5	0.3	0.4	0.4	0.4	4.0	5.5	6.5	6.5	0.21	-	0.31	0.35	44	-	44	24	22	47	91	1.01	1.37	n/a	2.14	1.50	0.88	0.48
13	0.8	-	0.8	0.3	-	0.3	0.4	4.0	5.5	6.5	6.5	0.25	-	0.29	-	16	-	16	28	-	28	44	0.49	0.97	n/a	1.34	0.94	0.53	0.29
14	4.0	-	4.0	0.4	0.7	0.5	0.5	4.0	5.5	6.5	6.5	0.56	-	0.33	0.45	0	-	0	13	10	24	24	0.26	0.51	0.28	0.48	0.38	0.38	0.21
15	1.5	-	1.5	0.2	-	0.2	0.2	4.0	5.5	6.5	6.5	0.34	-	0.21	-	6	-	6	25	-	25	32	0.35	0.63	0.27	0.67	0.48	0.44	0.24
16	1.3	0.7	0.9	0.6	0.7	0.7	0.8	4.0	5.5	6.5	6.5	0.32	0.31	0.42	0.45	39	33	72	19	25	44	116	1.29	n/a	0.99	2.97	1.75	1.06	0.57
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Existing Cond SWMHYMO Input Parameters

Upland Method Overland Flow Velocities

	Land Use Along Flow Path	$Slope_1$ (%)	$Velocity_1$ (m/s)	$Slope_2$ (%)	$Velocity_2$ (m/s)	m	b
1	Forest (Heavy Litter) & Hay Meadow	0.6	0.060	15	0.30	0.500	-1.111
2	Woodland, Fallow, Contour or Strip Crop	0.1	0.048	40	0.96	0.500	-0.819
3	Pasture	0.1	0.068	20	0.96	0.500	-0.667
4	Cultivated Straight Row	0.1	0.088	30	1.52	0.500	-0.556
5	Nearly Bare Soil, Untilled	0.1	0.099	10	0.99	0.500	-0.504
6	Grassed Waterway	0.2	0.205	40	2.90	0.500	-0.339
7	Small Upland Gullies & Paved Areas	0.2	0.275	40	3.89	0.500	-0.211

Existing Cond SWMHYMO Input Parameters

Table A-2
Summary of Hydrologic Modelling Parameters

Subcatchment I.D.	Instantaneous Unit Hydrograph Classification	Drainage Area (ha)	Imperviousness (%)					SCS Curve Number	Initial Abstraction (mm)		Manning's 'n'		Time to Peak (hours)	Number of Linear Reservoirs	Flow Length (m)		Slope (%)	
			Direct	+	Indirect	=	Total		Pervious	Impervious	Pervious	Impervious			Pervious	Impervious	Pervious	Impervious
Existing Conditions																		
1-5	Nash	81.72	2	+	3	=	4	68	12.0	n/a	n/a	n/a	2.15	3	n/a	n/a	n/a	n/a
1-6	Nash	99.18	4	+	2	=	5	73	9.4	n/a	n/a	n/a	1.63	3	n/a	n/a	n/a	n/a
1-7	Standard	26.20	47	+	0	=	47	70	10.9	2.00	0.17	0.015	na	n/a	40	418	2	1
1-8	Nash	147.90	18	+	3	=	21	77	7.6	n/a	n/a	n/a	2.54	3	n/a	n/a	n/a	n/a
1-9	Standard	424.80	20	+	3	=	24	69	11.4	2.00	0.22	0.015	na	n/a	40	1,683	2	1
1-10	Nash	78.10	18	+	2	=	20	72	9.9	n/a	n/a	n/a	1.50	3	n/a	n/a	n/a	n/a
1-11	Standard	20.60	25	+	3	=	28	61	16.2	2.00	0.28	0.015	na	n/a	40	371	2	1
1-12	Standard	37.50	58	+	5	=	63	61	16.2	2.00	0.28	0.015	na	n/a	40	500	2	1
1-13A	Standard	35.60	55	+	6	=	61	61	16.2	2.00	0.28	0.015	na	n/a	40	487	2	1
1-13B	Standard	200.90	55	+	4	=	60	66	13.1	2.00	0.29	0.015	na	n/a	40	1,157	2	1
0.0	Nash	0.00	0	+	0	=	0	0	0.0	0.00	0.00	0.000	0	0	0	0	0	0
0.0	Nash	0.00	0	+	0	=	0	0	0.0	0.00	0.00	0.000	0	0	0	0	0	0
0.0	Nash	0.00	0	+	0	=	0	0	0.0	0.00	0.00	0.000	0	0	0	0	0	0
Subtotal/Weighted Average =		**1,152.5**	**26**	**+**	**3**	**=**	**29**	**69**	**11.4**	-	-	-	-	-	-	-	-	-

64758: Hamilton Airport Employment Growth District - Sulpher Creek

Ultimate Runoff Coefficients as of Nov 10, 2007

COMMENTS

TABLE OF RUNOFF COEFFICIENTS (5 Year)

Land Use	Hydrologic Soil Type						
	A	AB	B	BC	C	CD	D
Woodlot	0.08	0.14	0.19	0.25	0.28	0.32	0.35
Row Crop/Grain	0.22	0.26	0.31	0.35	0.42	0.48	0.55
Pasture	0.10	0.16	0.22	0.28	0.32	0.36	0.40
Rural Residential	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Builtup (L.D.)	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Builtup (M.D.)	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Commercial	0.10	0.12	0.14	0.16	0.18	0.20	0.22
School	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Open Water	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Impervious	0.90	0.90	0.90	0.90	0.90	0.90	0.90

Subcatchment	Runoff Coefficients for Pervious Land Use												Weighted Runoff Coefficient ($f_{perv}xC_{perv} + f_{imp}xC_{imp}$)			
	Woodlot	Row Crop	Pasture	Rural Res.	Builtup (L.D.)	Builtup (M.D.)	Comm.	Bedrock	Open Water	Pervious Runoff Coefficient < 10 Yr	25 Yr	50 Yr	100 Yr	< 10 Yr	25 Yr	50 Yr	100 Yr
Existing Conditions																	
1-5 (81.72 ha)	0.01	0.21		0.01	0.00					0.23	0.25	0.27	0.28	0.26	0.28	0.30	0.31
1-6 (99.18 ha)	0.01	0.27		0.01	0.00					0.28	0.31	0.34	0.35	0.32	0.34	0.37	0.38
1-7 (26.20 ha)	0.01	0.21			0.00		0.02			0.25	0.28	0.30	0.31	0.56	0.57	0.59	0.59
1-8 (147.90 ha)	0.03	0.21		0.01	0.01		0.00			0.26	0.29	0.32	0.33	0.39	0.42	0.44	0.45
1-9 (424.80 ha)	0.04	0.16		0.01	0.01		0.00			0.23	0.26	0.28	0.29	0.39	0.41	0.42	0.43
1-10 (78.10 ha)	0.01	0.19			0.02		0.00			0.21	0.23	0.25	0.26	0.35	0.37	0.38	0.39
1-11 (20.60 ha)	0.05	0.08	0.01		0.03					0.17	0.18	0.20	0.21	0.37	0.38	0.39	0.40
1-12 (37.50 ha)			0.03		0.08		0.00			0.11	0.13	0.14	0.14	0.61	0.61	0.62	0.62
1-13A (35.60 ha)			0.03		0.08					0.11	0.13	0.14	0.14	0.59	0.59	0.60	0.60
1-13B (200.90 ha)			0.08		0.06	0.01	0.01			0.15	0.16	0.18	0.19	0.60	0.60	0.61	0.61
TOTAL = 1,152.50ha									**TOTAL =**	**0.22**	**0.24**	**0.26**	**0.27**	**0.42**	**0.44**	**0.46**	**0.46**

Existing Cond SWMHYMO Input Parameters

Table C.3
Rational Calculations

S / C I.D.	Contributing S/C's	Upstream Area (ha)	Composite Runoff Coefficients (C) <10 Year	25 Year	50 Year	100 Year	Time of Conc. (min)	Rainfall Intensity (mm/hr) 2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	Peak Flow (Q) (m^3/s) 2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
1-5		81.7	0.26	0.28	0.30	0.31	129	13.0	17.2	21.2	23.4	25.9	28.6	0.76	1.01	1.24	1.49	1.78	2.0
1-6		99.2	0.32	0.34	0.37	0.38	98	16.0	21.0	25.9	28.5	31.5	34.7	1.40	1.84	2.27	2.70	3.23	3.7
1-7		26.2	0.56	0.57	0.59	0.59	48	26.5	34.7	42.6	46.7	51.7	56.8	1.09	1.42	1.75	1.96	2.22	2.5
1-8		147.9	0.39	0.42	0.44	0.45	152	11.5	15.3	18.9	20.8	23.1	25.4	1.89	2.50	3.08	3.58	4.17	4.7
1-9		424.8	0.39	0.41	0.42	0.43	245	8.1	10.8	13.4	14.8	16.4	18.1	3.75	5.00	6.19	7.16	8.30	9.3
1-10		78.1	0.35	0.37	0.38	0.39	90	16.9	22.3	27.4	30.1	33.4	36.7	1.29	1.70	2.10	2.42	2.80	3.2
Sum	7 + 10	104.3	0.40	0.42	0.43	0.44	138	12.4	16.4	20.3	22.3	24.8	27.3	1.46	1.93	2.38	2.73	3.14	3.5
1-11		20.6	0.37	0.38	0.39	0.40	56	23.7	31.0	38.1	41.8	46.3	50.9	0.51	0.66	0.82	0.92	1.05	1.2
Sum	6 + 11	168.5	0.23	0.25	0.27	0.27	154	11.4	15.2	18.7	20.6	22.9	25.2	1.25	1.65	2.04	2.42	2.87	3.3
1-12		37.5	0.61	0.61	0.62	0.62	23	43.0	56.0	68.6	75.1	83.0	91.1	2.75	3.58	4.39	4.83	5.38	5.9
Sum	5 + 12	119.2	0.37	0.38	0.40	0.41	152	11.6	15.3	18.9	20.8	23.1	25.5	1.41	1.87	2.31	2.66	3.08	3.5
1-13A		35.6	0.59	0.59	0.60	0.60	29	37.2	48.5	59.5	65.1	71.9	79.0	2.19	2.85	3.49	3.85	4.29	4.7
1-13B		200.9	0.60	0.60	0.61	0.61	105	15.2	20.0	24.6	27.1	30.0	33.1	5.09	6.71	8.26	9.18	10.28	11.4
Sum	8 + 9 + 13b	773.6	0.44	0.46	0.47	0.48	270	7.5	10.1	12.5	13.8	15.3	16.9	7.25	9.68	11.99	13.73	15.75	17.7

Remember - if the flow from the sum of two catchments is less than the flow from one of the catchments then use the higher of the two flows for subsequent calculations

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	64758: Hamilton Airport Employment Growth District - Welland River														
2	**Curve Numbers Calculations as of Dec 1, 2009**														
88	Area	S/C	Summary of Imperviousness by Land Use (% of Total Area)										Imperviousness		
89	(ha)	#	Woodlot	Row	Pasture	Rural	Builtup	Builtup	Comm.	Bedrock	Open	Imperv.	(% of Total Area)		
90				Crop		Res.	(L.D.)	(M.D.)			Water		Total	Indirect	Direct
91		% Impervious	-	-	-	20	50	65	80	100	100	100	(TIMP)		(XIMP)
92	***Existing Conditions***														
93	106.3	2-14					2		2			2	6	0	6
94	214.7	2-15					12	14	4			10	40	5	35
95	87.0	2-16					10					4	13	2	11
96	393.7	2-17					1					1	3	0	3
97	60.7	2-18					2		5			1	7	0	7
98	89.8	2-19					2	0	6			2	10	0	10
99	101.1	2-20					5		4			7	15	1	14
100	132.1	2-21					6		0			2	8	1	7
101	109.9	2-22					2	0				1	3	0	3
102	214.0	2-23					3	0	1			3	6	1	6
103	60.9	2-24					3					3	6	1	5
104															
105															
106															
107															
108															
109															
110															
111															
112															
113															
114															
115															
116															
117															
118															
119															

Existing Cond SWMHYMO Input Parameters

	B	C	D	E	F	G	H	I	J	K	L	M
3	Subcatchment	Instantaneous	Drainage	Runoff	Curve	Initial Abstraction (mm)		Imperviousness (%)				
4	I.D.	Unit Hydrograph	Area	Coefficient	Number	Pervious	Impervious	Direct	+	Indirect	=	Total
5		Classification	(ha)	(<10 Year)								
6	*Existing Conditions*											
7	2-14	Nash	106.3	0.31	73	9.39	n/a	6	+	0	=	6
8	2-15	Standard	214.7	0.50	71	10.37	2.00	35	+	5	=	40
9	2-16	Nash	87.0	0.39	79	6.75	n/a	11	+	2	=	13
10	2-17	Nash	393.7	0.37	78	7.16	n/a	3	+	0	=	3
11	2-18	Nash	60.7	0.40	79	6.75	n/a	7	+	0	=	7
12	2-19	Nash	89.8	0.39	79	6.75	n/a	10	+	0	=	10
13	2-20	Nash	101.1	0.43	81	5.96	n/a	14	+	1	=	15
14	2-21	Nash	132.1	0.40	81	5.96	n/a	7	+	1	=	8
15	2-22	Nash	109.9	0.36	80	6.35	n/a	3	+	0	=	3
16	2-23	Nash	214.0	0.39	78	7.16	n/a	6	+	1	=	6
17	2-24	Nash	60.9	0.39	79	6.75	n/a	5	+	1	=	6
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30		Total/Average =	**1570.20**	**0.40**	**77**	**7.44**	**-**	**10**	**+**	**1**	**=**	**11**

	B	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
3	Subcatchment	Flow Length (m)		Slope (%)		Manning's 'n'		N	Basin Length (m)						
4	I.D.	Pervious	Impervious	Pervious	Impervious	Pervious	Impervious		Overland			Channel			Total
5									1	2	Subtotal	1	2	Subtotal	
7	2-14	n/a	n/a	n/a	n/a	n/a	n/a	3	325	-	325	1,738	1,808	3,546	3,871
8	2-15	40	1196	2	1.00	0.24	0.015	n/a	321	905	1,226	664	1,918	2,582	3,808
9	2-16	n/a	n/a	n/a	n/a	n/a	n/a	3	5	-	5	1,093	766	1,859	1,864
10	2-17	n/a	n/a	n/a	n/a	n/a	n/a	3	453	1,857	2,310	1,125	1,934	3,059	5,369
11	2-18	n/a	n/a	n/a	n/a	n/a	n/a	3	321	-	321	546	1,471	2,017	2,338
12	2-19	n/a	n/a	n/a	n/a	n/a	n/a	3	5	-	5	952	1,083	2,035	2,040
13	2-20	n/a	n/a	n/a	n/a	n/a	n/a	3	700	-	700	1,005	1,085	2,090	2,790
14	2-21	n/a	n/a	n/a	n/a	n/a	n/a	3	696	-	696	1,037	805	1,842	2,538
15	2-22	n/a	n/a	n/a	n/a	n/a	n/a	3	270	-	270	1,572	450	2,022	2,292
16	2-23	n/a	n/a	n/a	n/a	n/a	n/a	3	5	-	5	1,796	1,287	3,083	3,088
17	2-24	n/a	n/a	n/a	n/a	n/a	n/a	3	294	-	294	529	1,063	1,592	1,886
30		-	-	-	-	-	-	-	-	-	-	-	-	-	-

	B	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
3	Subcatchment	Basin Fall (m)							Basin Slope (%)							Land Use Along Flow Path			
4	I.D.	Overland			Channel			Total	Overland			Channel			Effective	Overland		Channel	
5		1	2	Subtotal	1	2	Subtotal		1	2	Effective	1	2	Effective		1	2	1	2
7	2-14	1.0	-	1.0	16.0	4.0	20.0	21.0	0.3	-	0.3	0.9	0.2	0.4	0.4	4.0	-	6.5	
8	2-15	0.5	11.0	11.5	6.0	5.0	11.0	22.5	0.2	1.2	0.6	0.9	0.3	0.3	0.4	4.0	5.5	6.5	6.5
9	2-16	0.2	-	0.2	4.0	1.0	5.0	5.2	4.0	-	4.0	0.4	0.1	0.2	0.2	4.0	-	6.5	6.5
10	2-17	2.5	12.0	14.5	5.0	5.0	10.0	24.5	0.6	0.6	0.6	0.4	0.3	0.3	0.4	4.0	5.5	6.5	6.5
11	2-18	1.0	-	1.0	6.0	12.0	18.0	19.0	0.3	-	0.3	1.1	0.8	0.9	0.7	4.0	-	6.5	6.5
12	2-19	0.2	-	0.2	5.0	1.0	6.0	6.2	4.0	-	4.0	0.5	0.1	0.2	0.2	4.0	5.5	6.5	6.5
13	2-20	1.5	-	1.5	7.0	7.0	14.0	15.5	0.2	-	0.2	0.7	0.6	0.7	0.5	4.0	-	6.5	6.5
14	2-21	1.5	-	1.5	10.0	3.0	13.0	14.5	0.2	-	0.2	1.0	0.4	0.6	0.4	4.0	-	6.5	6.5
15	2-22	0.5	-	0.5	15.0	2.5	17.5	18.0	0.2	-	0.2	1.0	0.6	0.8	0.7	4.0	-	6.5	6.5
16	2-23	0.5	-	0.5	2.5	1.5	4.0	4.5	10.0	-	10.0	0.1	0.1	0.1	0.1	4.0	5.5	6.5	6.5
17	2-24	1.5	-	1.5	5.0	8.0	2.0	3.5	0.5	-	0.5	0.9	0.8	0.8	0.7	4.0	5.5	6.5	6.5
30		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	B	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK
3	Subcatchment	Velocity (m/s)				Upland T_c (minutes)							Time to Peak (hours)						
4	I.D.	Overland		Channel		Overland			Channel			Total	SCS	Airport	Bransby	SCS	Average	Chow	Kirpich
5		1	2	1	2	1	2	Subtotal	1	2	Subtotal		Upland		Williams	CN			
7	2-14	0.15	-	0.51		35	-	35	57		57	92	1.02	n/a	n/a	6.06	3.54	2.00	1.07
8	2-15	0.11	0.42	0.50	0.27	49	36	85	22	118	140	225	2.50	n/a	1.72	4.67	2.96	1.96	1.05
9	2-16	0.56	-	0.32	0.19	0	-	0	57	67	123	123	1.37	1.81	n/a	0.79	1.32	1.39	0.75
10	2-17	0.21	0.30	0.35	0.27	37	102	138	53	119	172	311	3.45	n/a	n/a	4.78	4.11	2.53	1.34
11	2-18	0.16	-	0.56	0.48	34	-	34	16	51	67	102	1.13	1.35	1.05	3.38	1.73	1.04	0.56
12	2-19	0.56	-	0.38	0.16	0	-	0	41	112	153	153	1.70	2.06	n/a	0.85	1.53	1.65	0.88
13	2-20	0.13	-	0.44	0.43	91	-	91	38	42	80	171	1.90	n/a	1.31	4.41	2.54	1.43	0.77
14	2-21	0.13	-	0.52	0.32	90	-	90	33	41	75	164	1.83	n/a	1.18	4.07	2.36	1.37	0.74
15	2-22	0.12	-	0.52	0.40	38	-	38	51	19	69	107	1.19	n/a	n/a	4.18	2.69	1.07	0.58
16	2-23	0.88	-	0.20	0.18	0	-	0	151	118	269	270	3.00	n/a	n/a	0.77	1.88	2.58	1.36
17	2-24	0.20	-	0.52	0.46	25	-	25	17	38	56	80	0.89	1.22	n/a	2.22	1.45	0.87	0.47
30		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Existing Cond SWMHYMO Input Parameters

Upland Method Overland Flow Velocities

	Land Use Along Flow Path	$Slope_1$ (%)	$Velocity_1$ (m/s)	$Slope_2$ (%)	$Velocity_2$ (m/s)	m	b
1	Forest (Heavy Litter) & Hay Meadow	0.6	0.060	15	0.30	0.500	-1.111
2	Woodland, Fallow, Contour or Strip Crop	0.1	0.048	40	0.96	0.500	-0.819
3	Pasture	0.1	0.068	20	0.96	0.500	-0.667
4	Cultivated Straight Row	0.1	0.088	30	1.52	0.500	-0.556
5	Nearly Bare Soil, Untilled	0.1	0.099	10	0.99	0.500	-0.504
6	Grassed Waterway	0.2	0.205	40	2.90	0.500	-0.339
7	Small Upland Gullies & Paved Areas	0.2	0.275	40	3.89	0.500	-0.211

Existing Cond SWMHYMO Input Parameters

Table A-2
Summary of Hydrologic Modelling Parameters

Subcatchment I.D.	Instantaneous Unit Hydrograph Classification	Drainage Area (ha)	Imperviousness (%)					SCS Curve Number	Initial Abstraction (mm)		Manning's 'n'		Time to Peak (hours)	Number of Linear Reservoirs	Flow Length (m)		Slope (%)	
			Direct	+	Indirect	=	Total		Pervious	Impervious	Pervious	Impervious			Pervious	Impervious	Pervious	Impervious
Existing Conditions																		
2-14	Nash	106.30	6	+	0	=	6	73	9.4	n/a	n/a	n/a	3.54	3	n/a	n/a	n/a	n/a
2-15	Standard	214.70	35	+	5	=	40	71	10.4	2.00	0.24	0.015	na	n/a	40	1,196	2	1
2-16	Nash	87.00	11	+	2	=	13	79	6.8	n/a	n/a	n/a	1.32	3	n/a	n/a	n/a	n/a
2-17	Nash	393.70	3	+	0	=	3	78	7.2	n/a	n/a	n/a	4.11	3	n/a	n/a	n/a	n/a
2-18	Nash	60.70	7	+	0	=	7	79	6.8	n/a	n/a	n/a	1.73	3	n/a	n/a	n/a	n/a
2-19	Nash	89.80	10	+	0	=	10	79	6.8	n/a	n/a	n/a	1.53	3	n/a	n/a	n/a	n/a
2-20	Nash	101.10	14	+	1	=	15	81	6.0	n/a	n/a	n/a	2.54	3	n/a	n/a	n/a	n/a
2-21	Nash	132.10	7	+	1	=	8	81	6.0	n/a	n/a	n/a	2.36	3	n/a	n/a	n/a	n/a
2-22	Nash	109.90	3	+	0	=	3	80	6.4	n/a	n/a	n/a	2.69	3	n/a	n/a	n/a	n/a
2-23	Nash	214.00	6	+	1	=	6	78	7.2	n/a	n/a	n/a	na	3	n/a	n/a	n/a	n/a
2-24	Nash	60.90	5	+	1	=	6	79	6.8	n/a	n/a	n/a	1.45	3	n/a	n/a	n/a	n/a
#REF!	#REF!	#REF!	#REF!	+	#REF!	=	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
#REF!	#REF!	#REF!	#REF!	+	#REF!	=	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Subtotal/Weighted Average =		**#REF!**	**#REF!**	**+**	**#REF!**	**=**	**#REF!**	**#REF!**	**#REF!**	-	-	-	-	-	-	-	-	-

64758: Hamilton Airport Employment Growth District - Welland River

Ultimate Runoff Coefficients as of Nov 10, 2007

COMMENTS

TABLE OF RUNOFF COEFFICIENTS (5 Year)							
Land Use	Hydrologic Soil Type						
	A	AB	B	BC	C	CD	D
Woodlot	0.08	0.14	0.19	0.25	0.28	0.32	0.35
Row Crop/Grain	0.22	0.26	0.31	0.35	0.42	0.48	0.55
Pasture	0.10	0.16	0.22	0.28	0.32	0.36	0.40
Rural Residential	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Builtup (L.D.)	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Builtup (M.D.)	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Commercial	0.10	0.12	0.14	0.16	0.18	0.20	0.22
School	0.10	0.12	0.14	0.16	0.18	0.20	0.22
Open Water	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Impervious	0.90	0.90	0.90	0.90	0.90	0.90	0.90

Subcatchment	Runoff Coefficients for Pervious Land Use													Weighted Runoff Coefficient ($f_{perv} x C_{perv}$ + $f_{imp} x C_{imp}$)			
	Woodlot	Row Crop	Pasture	Rural Res.	Builtup (L.D.)	Builtup (M.D.)	Comm.	Bedrock	Open Water	Pervious Runoff Coefficient < 10 Yr	25 Yr	50 Yr	100 Yr	< 10 Yr	25 Yr	50 Yr	100 Yr
Existing Conditions																	
2-14 (106.30 ha)	0.01	0.20	0.05		0.00		0.00			0.27	0.30	0.32	0.34	0.31	0.33	0.36	0.37
2-15 (214.70 ha)	0.02	0.12	0.04		0.03	0.02	0.00			0.23	0.25	0.28	0.29	0.50	0.51	0.53	0.53
2-16 (87.00 ha)	0.02	0.26	0.01		0.02					0.31	0.34	0.38	0.39	0.39	0.42	0.45	0.46
2-17 (393.70 ha)	0.06	0.29	0.01		0.00					0.36	0.39	0.43	0.44	0.37	0.41	0.44	0.46
2-18 (60.70 ha)	0.06	0.29	0.01		0.00		0.00			0.36	0.40	0.44	0.46	0.40	0.44	0.47	0.49
2-19 (89.80 ha)	0.05	0.24	0.03		0.00	0.00	0.00			0.34	0.37	0.40	0.42	0.39	0.42	0.45	0.47
2-20 (101.10 ha)	0.12	0.20	0.01		0.01		0.00			0.35	0.39	0.42	0.44	0.43	0.46	0.49	0.51
2-21 (132.10 ha)	0.03	0.24	0.07		0.01		0.00			0.36	0.39	0.43	0.45	0.40	0.43	0.47	0.48
2-22 (109.90 ha)	0.04	0.08	0.22		0.00	0.00				0.34	0.37	0.41	0.43	0.36	0.39	0.42	0.44
2-23 (214.00 ha)	0.05	0.29	0.00		0.00	0.00	0.00			0.35	0.39	0.42	0.44	0.39	0.42	0.45	0.47
2-24 (60.90 ha)	0.06	0.30			0.00					0.36	0.40	0.44	0.45	0.39	0.43	0.46	0.48
TOTAL = 1,570.20ha									**TOTAL =**	**0.33**	**0.36**	**0.39**	**0.41**	**0.40**	**0.43**	**0.46**	**0.47**

Existing Cond SWMHYMO Input Parameters

Table C.3
Rational Calculations

S / C I.D.	Contributing S/C's	Upstream Area (ha)	Composite Runoff Coefficients (C)				Time of Conc. (min)	Rainfall Intensity (mm/hr)						Peak Flow (Q) (m^3/s)					
			<10 Year	25 Year	50 Year	100 Year		2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
2-14		106.3	0.31	0.33	0.36	0.37	212	9.0	12.0	14.8	16.4	18.2	20.1	0.83	1.11	1.37	1.63	1.95	2.2
2-15		214.7	0.50	0.51	0.53	0.53	178	10.3	13.7	16.9	18.6	20.7	22.8	3.08	4.08	5.05	5.73	6.53	7.3
2-16		87.0	0.39	0.42	0.45	0.46	79	18.5	24.4	30.0	33.0	36.5	40.2	1.77	2.33	2.87	3.37	3.97	4.5
2-17		393.7	0.37	0.41	0.44	0.46	247	8.1	10.7	13.3	14.7	16.3	18.0	3.30	4.40	5.44	6.58	7.93	9.1
Sum	14+15+16+17	801.7	0.40	0.43	0.45	0.47	292	7.1	9.5	11.8	13.0	14.5	16.0	6.37	8.51	10.55	12.48	14.74	16.7
2-18		60.7	0.40	0.44	0.47	0.49	104	15.3	20.2	24.8	27.3	30.3	33.3	1.05	1.38	1.71	2.03	2.43	2.8
2-19		89.8	0.39	0.42	0.45	0.47	92	16.7	21.9	27.0	29.7	32.9	36.2	1.65	2.17	2.67	3.16	3.75	4.3
2-20		101.1	0.43	0.46	0.49	0.51	152	11.5	15.3	18.9	20.8	23.1	25.4	1.42	1.88	2.32	2.74	3.23	3.7
2-21		132.1	0.40	0.43	0.47	0.48	142	12.2	16.1	19.9	21.9	24.3	26.8	1.81	2.39	2.95	3.52	4.19	4.8
Sum	14+15+16+17+18+19+20+21	1,185.4	0.40	0.43	0.46	0.47	384	5.8	7.8	9.6	10.7	11.9	13.1	7.73	10.37	12.87	15.29	18.12	20.6
2-22		109.9	0.36	0.39	0.42	0.44	161	11.1	14.7	18.1	20.0	22.2	24.4	1.22	1.62	2.00	2.41	2.89	3.3
2-23		214.0	0.39	0.42	0.45	0.47	113	14.4	19.0	23.4	25.7	28.5	31.4	3.32	4.39	5.41	6.46	7.72	8.8
2-24		60.9	0.39	0.43	0.46	0.48	87	17.4	22.9	28.2	31.0	34.3	37.8	1.16	1.53	1.89	2.26	2.70	3.1
Sum	All	1,570.2	0.40	0.43	0.46	0.47	497	4.8	6.4	8.0	8.9	9.9	10.9	8.31	11.19	13.91	16.62	19.77	22.5

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	64758: Hamilton Airport Employment Growth District														
2	**Curve Numbers Calculations as of Feb 2, 2010**														
88	Area	S/C	Summary of Imperviousness by Land Use (% of Total Area)										Imperviousness		
89	(ha)	#	Woodlot	Row	Utilities	Airport	Prestige	Eco Prest	Roads	Builtup	Builtup	Imperv.	(% of Total Area)		
90				Crop	Open Spac	Area	Industrial	Industrial	Hwys	(L.D.)	(M.D.)		Total	Indirect	Direct
91		% Impervious	3	-	10	35	80	70	70	50	65	100	(TIMP)		(XIMP)
92	***Future Conditions***														
93	108.2	3-25			3		28	21	2				53	10	44
94	439.7	3-26	0				4			12	14	10	40	26	14
95	99.1	3-27	0		3		20	30	1				54	12	42
96	59.2	3-28	0		1		42	21					64	7	57
97	100.7	3-29	0		2		33	20	0				56	8	48
98	126.0	3-30	0		3		16	34	1				54	13	41
99	59.1	3-31	1				4			5		6	16	6	10
100	312.3	3-32	0		1	7	30	21	1				61	14	46
101	255.0	3-33	0		0	25	4	4	1				33	26	8
102	413.9	3-34	1				1			3		3	7	3	4
103	373.2	3-35	1							3		3	6	3	3
104	301.4	3-36	0							8		4	12	8	4
105	71.0	3-37	0			10	2	41	6				60	22	38
106															
107															
108															
109															
110															
111															
112															
113															
114															
115															
116															
117															
118															
119															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	64758: Hamilton Airport Employment Growth District - Sulpher Creek														
2	**Curve Numbers Calculations as of Feb 2, 2010**														
88	Area	S/C	Summary of Imperviousness by Land Use (% of Total Area)										Imperviousness		
89	(ha)	#	Woodlot	Row	Utilities	Airport	Prestige	Eco Prest	Roads	Residential	Open	Imperv.	(% of Total Area)		
90				Crop	Open Spac	Area	Industrial	Industrial	Hwys	ow Densit	Water		Total	Indirect	Direct
91		% Impervious	3	-	10	35	80	70	70	30	100	100	(TIMP)		(XIMP)
92	***Future Conditions***														
93	81.7	1-5	0		1			53	1				55	18	38
94	99.2	1-6	0		2			53	6				60	17	43
95	26.2	1-7			0			62	6				68	19	49
96	147.9	1-8	0		1		26	25	3	1			57	9	47
97	424.8	1-9	1				6		5	8			19	3	17
98	78.1	1-10	0				1		6	7			13	2	11
99	20.6	1-11	1						8	10			19	4	15
100	37.5	1-12					4		23	16			43	5	38
101	35.6	1-13A							22	18			39	5	34
102	200.9	1-13B					13		17	13			43	4	39
103															
104															
105															
106															
107															
108															
109															
110															
111															
112															
113															
114															
115															
116															
117															
118															
119															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	64758: Hamilton Airport Employment Growth District - Welland River														
2	**Curve Numbers Calculations as of Feb 2, 2010**														
88	Area	S/C	Summary of Imperviousness by Land Use (% of Total Area)										Imperviousness		
89	(ha)	#	Woodlot	Row	Utilities	Airport	Prestige	Eco Prest	Roads	Residential	Open	Imperv.	(% of Total Area)		
90			Valley	Crop	Open Spac	Area	Industrial	Industrial	Hwys	Low Density	Water		Total	Indirect	Direct
91		% Impervious	3	-	10	35	80	70	70	30	100	100	(TIMP)		(XIMP)
92	***Future Conditions***														
93	106.3	2-14			3	4	4	13	9				33	11	22
94	214.7	2-15	0		2	7	12	16	2				38	14	25
95	87.0	2-16			3		17	11	6				37	6	30
96	393.7	2-17	0		1	11	8	21	4				44	18	26
97	60.7	2-18	0		1	15		4	1				21	18	4
98	89.8	2-19			2		41	5	4				52	4	48
99	101.1	2-20			1	18		1	3				24	20	4
100	132.1	2-21	0		2	10		13	5				30	16	14
101	109.9	2-22	0		1	11		24	5				40	19	21
102	214.0	2-23	1				1		2	2			5	1	4
103	60.9	2-24	1						2	2			4	1	3
104															
105															
106															
107															
108															
109															
110															
111															
112															
113															
114															
115															
116															
117															
118															
119															

20 Mile Land Use

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-25	3%	23%	48%	25%	100%	1	Valley Segment	6.6%	7.2	OVL	OVLab	4101	4601	1.1
											OVLbc	4102	4602	2.6
											OVLcd	4103	4603	3.5
											AGTab	6201	6701	10.1
											AGTbc	6202	6702	24.0
											AGTcd	6203	6703	33.0
											OPLab	4001	4501	3.6
											OPLbc	4002	4502	8.6
											OPLcd	4003	4503	11.8
											RLD5ab	1013	1513	0.8
											RLD5bc	1014	1514	1.9
											RLD5cd	1015	1515	2.6
											RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
											RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
											CSMbc	2201	2701	0.0
											EISab	3001	3501	0.5
											EISbc	3002	3502	1.1
											EIScd	3003	3503	1.5
											IMP	8004	-	1.8
								100%	108.2	0.0				

20 Mile Land Use

Catchment			Soils			**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total		of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-26	20%	33%	47%	1%	100%	1 Valley Segment	5.8%	25.4	OVL	OVLab	4101	4601	9.1
										OVLbc	4102	4602	10.1
										OVLcd	4103	4603	6.2
						2 Agricultural Tilled	22.9%	100.5	AGT	AGTab	6201	6701	36.2
										AGTbc	6202	6702	40.0
										AGTcd	6203	6703	24.3
						3 Utility / Transportation	10.9%	47.9	OPL	OPLab	4001	4501	17.2
										OPLbc	4002	4502	19.1
										OPLcd	4003	4503	11.6
						4 Residential Low Density	24.4%	107.2	RLD	RLD5ab	1013	1513	38.6
										RLD5bc	1014	1514	42.7
										RLD5cd	1015	1515	25.9
						5 Medium Denisty residen	7.8%	34.1	RMD	RMD5ab	1113	1613	12.3
										RMD5bc	1114	1614	13.6
										RMD5cd	1115	1615	8.3
						6 High Density Residential	13.5%	59.5	RHD	RHD5ab	1213	1713	21.4
										RHD5bc	1214	1714	23.7
										RHD5cd	1215	1715	14.4
						7 Commercial	2.2%	9.5	CSM	CSMbc	2201	2701	9.5
						8 Institutional	2.5%	11.2	EIS	EISab	3001	3501	4.0
										EISbc	3002	3502	4.4
										EIScd	3003	3503	2.7
						9 Roads	10.1%	44.3	IMP	IMP	8004	-	44.3
							100%	439.7					

20 Mile Land Use

Catchment	Soils						**Majot land use**	%	Area	HSPF Landuse		WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)			Surface	Sub-surface	(ha)
3-27	4%	4%	55%	38%	100%	1	Valley Segment	7.7%	7.6	OVL	OVLab	4101	4601	0.4
											OVLbc	4102	4602	2.2
											OVLcd	4103	4603	4.9
						2	Agricultural Tilled	64.4%	63.8	AGT	AGTab	6201	6701	3.7
											AGTbc	6202	6702	18.6
											AGTcd	6203	6703	41.5
						3	Utility / Transportation	4.6%	4.6	OPL	OPLab	4001	4501	0.3
											OPLbc	4002	4502	1.3
											OPLcd	4003	4503	3.0
						4	Residential Low Density	19.9%	19.7	RLD	RLD5ab	1013	1513	1.1
											RLD5bc	1014	1514	5.7
											RLD5cd	1015	1515	12.8
						5	Medium Denisty residen	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
						6	High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
						7	Commercial	0.0%	0.0	CSM	CSMbc	2201	2701	0.0
						8	Institutional	0.0%	0.0	EIS	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
						9	Roads	3.5%	3.4	IMP	IMP	8004	-	3.4
								100%	99.1					

20 Mile Land Use

Catchment	Soils				
	%A	%B	%C	%D	Total
3-28	11%	11%	56%	23%	100%

	Majot land use	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
1	Valley Segment	21.6%	12.8	OVL	OVLab	4101	4601	2.1
					OVLbc	4102	4602	4.3
					OVLcd	4103	4603	6.5
2	Agricultural Tilled	72.4%	42.8	AGT	AGTab	6201	6701	6.9
					AGTbc	6202	6702	14.2
					AGTcd	6203	6703	21.6
3	Utility / Transportation	1.7%	1.0	OPL	OPLab	4001	4501	0.2
					OPLbc	4002	4502	0.3
					OPLcd	4003	4503	0.5
4	Residential Low Density	2.9%	1.7	RLD	RLD5ab	1013	1513	0.3
					RLD5bc	1014	1514	0.6
					RLD5cd	1015	1515	0.9
5	Medium Denisty residen	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0
					RMD5bc	1114	1614	0.0
					RMD5cd	1115	1615	0.0
6	High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0
					RHD5bc	1214	1714	0.0
					RHD5cd	1215	1715	0.0
7	Commercial	0.0%	0.0	CSM	CSMbc	2201	2701	0.0
8	Institutional	0.0%	0.0	EIS	EISab	3001	3501	0.0
					EISbc	3002	3502	0.0
					EIScd	3003	3503	0.0
9	Roads	1.4%	0.8	IMP	IMP	8004	-	0.8
		100%	59.2					

20 Mile Land Use

Catchment	Soils				
	%A	%B	%C	%D	Total
3-29	11%	11%	76%	3%	100%

Majot land use	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
1 Valley Segment	21.1%	21.2	OVL	OVLab	4101	4601	3.4
				OVLbc	4102	4602	9.2
				OVLcd	4103	4603	8.7
2 Agricultural Tilled	66.7%	67.2	AGT	AGTab	6201	6701	10.6
				AGTbc	6202	6702	29.0
				AGTcd	6203	6703	27.5
3 Utility / Transportation	2.2%	2.2	OPL	OPLab	4001	4501	0.3
				OPLbc	4002	4502	0.9
				OPLcd	4003	4503	0.9
4 Residential Low Density	3.0%	3.1	RLD	RLD5ab	1013	1513	0.5
				RLD5bc	1014	1514	1.3
				RLD5cd	1015	1515	1.3
5 Medium Denisty residen	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0
				RMD5bc	1114	1614	0.0
				RMD5cd	1115	1615	0.0
6 High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0
				RHD5bc	1214	1714	0.0
				RHD5cd	1215	1715	0.0
7 Commercial	5.9%	6.0	CSM	CSMbc	2201	2701	6.0
				EISab	3001	3501	0.0
				EISbc	3002	3502	0.0
				EIScd	3003	3503	0.0
				IMP	8004	-	1.1
	100%	100.7					

20 Mile Land Use

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-30	9%	9%	79%	2%	100%	1	Valley Segment	18.7%	23.5	OVL	OVLab	4101	4601	3.3
											OVLbc	4102	4602	10.4
											OVLcd	4103	4603	9.9
						2	Agricultural Tilled	56.8%	71.5	AGT	AGTab	6201	6701	10.0
											AGTbc	6202	6702	31.6
											AGTcd	6203	6703	30.0
						3	Utility / Transportation	10.5%	13.3	OPL	OPLab	4001	4501	1.9
											OPLbc	4002	4502	5.9
											OPLcd	4003	4503	5.6
						4	Residential Low Density	4.2%	5.3	RLD	RLD5ab	1013	1513	0.7
											RLD5bc	1014	1514	2.4
											RLD5cd	1015	1515	2.2
						5	Medium Denisty residen	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
						6	High Density Residential	0.1%	0.1	RHD	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
						7	Commercial	7.9%	9.9	CSM	CSMbc	2201	2701	9.9
						8	Institutional	0.0%	0.0	EIS	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
						9	Roads	1.8%	2.3	IMP	IMP	8004	-	2.3
								100%	126.0					

20 Mile Land Use

Catchment			Soils			Majot land use	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total		of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-31	18%	18%	64%	0%	100%	1 Valley Segment	36.5%	21.6	OVL	OVLab	4101	4601	5.9
										OVLbc	4102	4602	8.8
										OVLcd	4103	4603	6.9
						2 Agricultural Tilled	39.0%	23.1	AGT	AGTab	6201	6701	6.3
										AGTbc	6202	6702	9.4
										AGTcd	6203	6703	7.3
						3 Utility / Transportation	3.7%	2.2	OPL	OPLab	4001	4501	0.6
										OPLbc	4002	4502	0.9
										OPLcd	4003	4503	0.7
						4 Residential Low Density	9.0%	5.3	RLD	RLD5ab	1013	1513	1.5
										RLD5bc	1014	1514	2.2
										RLD5cd	1015	1515	1.7
						5 Medium Denisty residen	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0
										RMD5bc	1114	1614	0.0
										RMD5cd	1115	1615	0.0
						6 High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0
										RHD5bc	1214	1714	0.0
										RHD5cd	1215	1715	0.0
						7 Commercial	0.5%	0.3	CSM	CSMbc	2201	2701	0.3
						8 Institutional	4.7%	2.8	EIS	EISab	3001	3501	0.8
										EISbc	3002	3502	1.1
										EIScd	3003	3503	0.9
						9 Roads	6.7%	3.9	IMP	IMP	8004	-	3.9
							100%	59.1					

20 Mile Land Use

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-32	6%	10%	34%	50%	100%	1	Valley Segment	11.2%	34.9	OVL	OVLab	4101	4601	3.8
											OVLbc	4102	4602	7.8
											OVLcd	4103	4603	23.3
						2	Agricultural Tilled	53.8%	167.9	AGT	AGTab	6201	6701	18.2
											AGTbc	6202	6702	37.6
											AGTcd	6203	6703	112.2
						3	Utility / Transportation	21.3%	66.4	OPL	OPLab	4001	4501	7.2
											OPLbc	4002	4502	14.8
											OPLcd	4003	4503	44.4
						4	Residential Low Density	11.3%	35.3	RLD	RLD5ab	1013	1513	3.8
											RLD5bc	1014	1514	7.9
											RLD5cd	1015	1515	23.6
						5	Medium Denisty residen	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
						6	High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
						7	Commercial	0.1%	0.2	CSM	CSMbc	2201	2701	0.2
						8	Institutional	0.0%	0.0	EIS	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
						9	Roads	2.4%	7.5	IMP	IMP	8004	-	7.5
								100%	312.3					

20 Mile Land Use

Catchment			Soils			**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total		of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-33	6%	8%	71%	15%	100%	1 Valley Segment	12.2%	31.1	OVL	OVLab	4101	4601	3.1
										OVLbc	4102	4602	12.2
										OVLcd	4103	4603	15.8
						2 Agricultural Tilled	16.9%	43.2	AGT	AGTab	6201	6701	4.3
										AGTbc	6202	6702	16.9
										AGTcd	6203	6703	21.9
						3 Utility / Transportation	65.7%	167.6	OPL	OPLab	4001	4501	16.7
										OPLbc	4002	4502	65.8
										OPLcd	4003	4503	85.1
						4 Residential Low Density	3.5%	9.0	RLD	RLD5ab	1013	1513	0.9
										RLD5bc	1014	1514	3.6
										RLD5cd	1015	1515	4.6
						5 Medium Denisty residen	0.3%	0.7	RMD	RMD5ab	1113	1613	0.1
										RMD5bc	1114	1614	0.3
										RMD5cd	1115	1615	0.4
						6 High Density Residential	0.3%	0.8	RHD	RHD5ab	1213	1713	0.1
										RHD5bc	1214	1714	0.3
										RHD5cd	1215	1715	0.4
						7 Commercial	0.0%	0.0	CSM	CSMbc	2201	2701	0.0
						8 Institutional	0.0%	0.0	EIS	EISab	3001	3501	0.0
										EISbc	3002	3502	0.0
										EIScd	3003	3503	0.0
						9 Roads	1.0%	2.6	IMP	IMP	8004	-	2.6
							100%	255.0					

20 Mile Land Use

Catchment			Soils				Majot land use	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-34	9%	9%	80%	1%	100%	1	Valley Segment	19%	77.8	OVL	OVLab	4101	4601	11.0
											OVLbc	4102	4602	35.0
											OVLcd	4103	4603	31.9
						2	Agricultural Tilled	71.8%	297.2	AGT	AGTab	6201	6701	41.9
											AGTbc	6202	6702	133.6
											AGTcd	6203	6703	121.8
						3	Utility / Transportation	0.1%	0.3	OPL	OPLab	4001	4501	0.0
											OPLbc	4002	4502	0.1
											OPLcd	4003	4503	0.1
						4	Residential Low Density	5.4%	22.3	RLD	RLD5ab	1013	1513	3.1
											RLD5bc	1014	1514	10.0
											RLD5cd	1015	1515	9.1
						5	Medium Denisty residen	0.1%	0.4	RMD	RMD5ab	1113	1613	0.1
											RMD5bc	1114	1614	0.2
											RMD5cd	1115	1615	0.2
						6	High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
						7	Commercial	0.3%	1.4	CSM	CSMbc	2201	2701	1.4
						8	Institutional	0.9%	3.6	EIS	EISab	3001	3501	0.5
											EISbc	3002	3502	1.6
											EIScd	3003	3503	1.5
						9	Roads	2.6%	10.9	IMP	IMP	8004	-	10.9
								100%	413.9					

20 Mile Land Use

Catchment			Soils			**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total		of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
3-35	11%	11%	74%	4%	100%	1 Valley Segment	21%	78.8	OVL	OVLab	4101	4601	12.5
										OVLbc	4102	4602	33.5
										OVLcd	4103	4603	32.8
						2 Agricultural Tilled	71%	266.5	AGT	AGTab	6201	6701	42.2
										AGTbc	6202	6702	113.3
										AGTcd	6203	6703	111.0
						3 Utility / Transportation	0%	0.9	OPL	OPLab	4001	4501	0.1
										OPLbc	4002	4502	0.4
										OPLcd	4003	4503	0.4
						4 Residential Low Density	4%	16.6	RLD	RLD5ab	1013	1513	2.6
										RLD5bc	1014	1514	7.1
										RLD5cd	1015	1515	6.9
						5 Medium Denisty residen	0%	0.0	RMD	RMD5ab	1113	1613	0.0
										RMD5bc	1114	1614	0.0
										RMD5cd	1115	1615	0.0
						6 High Density Residential	0%	0.0	RHD	RHD5ab	1213	1713	0.0
										RHD5bc	1214	1714	0.0
										RHD5cd	1215	1715	0.0
						7 Commercial	0%	0.1	CSM	CSMbc	2201	2701	0.1
						8 Institutional	0%	0.0	EIS	EISab	3001	3501	0.0
										EISbc	3002	3502	0.0
										EIScd	3003	3503	0.0
						9 Roads	3%	10.2	IMP	IMP	8004	-	10.2
							100%	373.2					

20 Mile Land Use

Catchment			Soils			**Majot land use**	%	Area	HSPF Landuse		WDM	WDM	Area
	%A	%B	%C	%D	Total		of total	(ha)			Surface	Sub-surface	(ha)
3-36	3%	3%	93%	0%	100%	1 Valley Segment	7%	20.3	OVL	OVLab	4101	4601	1.0
										OVLbc	4102	4602	9.8
										OVLcd	4103	4603	9.5
						2 Agricultural Tilled	65%	196.7	AGT	AGTab	6201	6701	9.9
										AGTbc	6202	6702	95.0
										AGTcd	6203	6703	91.7
						3 Utility / Transportation	9%	27.5	OPL	OPLab	4001	4501	1.4
										OPLbc	4002	4502	13.3
										OPLcd	4003	4503	12.8
						4 Residential Low Density	14%	43.6	RLD	RLD5ab	1013	1513	2.2
										RLD5bc	1014	1514	21.1
										RLD5cd	1015	1515	20.3
						5 Medium Denisty residen	0%	0.0	RMD	RMD5ab	1113	1613	0.0
										RMD5bc	1114	1614	0.0
										RMD5cd	1115	1615	0.0
						6 High Density Residential	0%	0.1	RHD	RHD5ab	1213	1713	0.0
										RHD5bc	1214	1714	0.0
										RHD5cd	1215	1715	0.0
						7 Commercial	0%	0.2	CSM	CSMbc	2201	2701	0.2
						8 Institutional	0%	0.0	EIS	EISab	3001	3501	0.0
										EISbc	3002	3502	0.0
										EIScd	3003	3503	0.0
						9 Roads	4%	13.0	IMP	IMP	8004	-	13.0
							100%	301.4					

20 Mile Land Use

Catchment			Soils		
	%A	%B	%C	%D	Total
3-37	6%	6%	89%	0%	100%

	Majot land use	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
1	Valley Segment	11%	8.0	OVL	OVLab	4101	4601	0.7
					OVLbc	4102	4602	3.8
					OVLcd	4103	4603	3.5
2	Agricultural Tilled	44%	31.6	AGT	AGTab	6201	6701	2.7
					AGTbc	6202	6702	14.9
					AGTcd	6203	6703	14.0
3	Utility / Transportation	27%	19.2	OPL	OPLab	4001	4501	1.6
					OPLbc	4002	4502	9.1
					OPLcd	4003	4503	8.5
4	Residential Low Density	6%	4.0	RLD	RLD5ab	1013	1513	0.3
					RLD5bc	1014	1514	1.9
					RLD5cd	1015	1515	1.8
5	Medium Denisty residen	1%	0.4	RMD	RMD5ab	1113	1613	0.0
					RMD5bc	1114	1614	0.2
					RMD5cd	1115	1615	0.2
6	High Density Residential	0%	0.0	RHD	RHD5ab	1213	1713	0.0
					RHD5bc	1214	1714	0.0
					RHD5cd	1215	1715	0.0
7	Commercial	1%	1.0	CSM	CSMbc	2201	2701	1.0
8	Institutional	0%	0.0	EIS	EISab	3001	3501	0.0
					EISbc	3002	3502	0.0
					EIScd	3003	3503	0.0
9	Roads	10%	6.9	IMP	IMP	8004	-	6.9
		100%	71.0					

Sulphur Creek

Catchment	Soils %A	%B	%C	%D	Total	Majot land use	% of total	Area (ha)	HSPF Landuse	WDM Surface	WDM Sub-surface	Area (ha)
Catch 1-5	77.59%	12.42%	9.99%	0.00%	100.00%	Valley Segment	5.54%	4.53	OVLab	4101	4601	3.80
									OVLbc	4102	4602	0.73
									OVLcd	4103	4603	0.00
												4.53
						Agricultural Tilled	79%	64.40	AGTab	6201	6701	53.97
									AGTbc	6202	6702	10.43
									AGTcd	6203	6703	0.00
												64.40
						Utility / Transportation	13%	10.43	OPLab	4001	4501	8.74
									OPLbc	4002	4502	1.69
									OPLcd	4003	4503	0.00
												10.43
						Residential Low Density	2%	1.39	RLD5ab	1013	1513	1.17
									RLD5bc	1014	1514	0.23
									RLD5cd	1015	1515	0.00
												1.39
						Roads	1%	0.96	IMP	8004	-	**0.96**
							100%	81.72				81.72

Sulphur Creek

Catch 1-6	55.83%	5.11%	39.06%	0.00%	100.00%	Valley Segment	3.79%	4.03	OVLab	4101	4601	2.35
									OVLbc	4102	4602	1.68
									OVLcd	4103	4603	0.00
												4.03
						Agricultural Tilled	84%	82.49	AGTab	6201	6701	48.16
									AGTbc	6202	6702	34.33
									AGTcd	6203	6703	0.00
												82.49
						Utility / Transportation	6%	6.09	OPLab	4001	4501	3.56
									OPLbc	4002	4502	2.53
									OPLcd	4003	4503	0.00
												6.09
						Residential Low Density	4%	4.62	RLD5ab	1013	1513	2.70
									RLD5bc	1014	1514	1.92
									RLD5cd	1015	1515	0.00
												4.62
						Roads	2%	1.95	IMP	8004	-	**1.95**
							100%	99.18				99.18

Sulphur Creek

Catch 1-7	60.83%	1.69%	37.47%	0.00%	100.00%	Valley Segment	3.39%	0.89	OVLab	4101	4601	0.55
									OVLbc	4102	4602	0.34
									OVLcd	4103	4603	0.00
												0.89
						Agricultural Tilled	38%	10.00	AGTab	6201	6701	6.17
									AGTbc	6202	6702	3.83
									AGTcd	6203	6703	0.00
												10.00
						Commercial	41%	10.85	CSMbc	2201	2701	10.85
												10.85
						Roads	9%	2.25	8004	-		**2.25**
						Institutional	5%	1.25	EISab	3001	3501	0.77
									EISbc	3002	3502	0.48
									EIScd	3003	3503	0.00
												1.25
						Residential Low Density	4%	0.97	RLD5ab	1013	1513	0.60
									RLD5bc	1014	1514	0.37
									RLD5cd	1015	1515	0.00
												0.97
							100%	26.20				**26.20**

Sulphur Creek

Catch 1-8	35.67%	29.49%	33.85%	0.98%	100.00%	Valley Segment	12%	18.42	OVLab	4101	4601	9.29
									OVLbc	4102	4602	5.83
									OVLcd	4103	4603	3.30
												18.42
						Agricultural Tilled	53%	69.35	AGTab	6201	6701	34.97
									AGTbc	6202	6702	21.96
									AGTcd	6203	6703	12.42
												69.35
						Residential Low Density	10%	19.23	RLD5ab	1013	1513	9.70
									RLD5bc	1014	1514	6.09
									RLD5cd	1015	1515	3.44
												19.23
						Utility / Transportation	9%	12.88	OPLab	4001	4501	6.50
									OPLbc	4002	4502	4.08
									OPLcd	4003	4503	2.31
												12.88
						Institutional	5%	11.46	EISab	3001	3501	5.78
									EISbc	3002	3502	3.63
									EIScd	3003	3503	2.05
												11.46
						Commercial	6%	9.47	CSMbc	2201	2701	**9.47**
						Roads	5%	7.03	IMP	8004	-	**7.03**
							100%	147.9				147.9

Sulphur Creek

Catch 1-9	37.87%	40.64%	21.49%	0.00%	100.00%	Valley Segment	18%	75.14	OVLab	4101	4601	43.73
									OVLbc	4102	4602	31.42
									OVLcd	4103	4603	0.00
												75.14
						Agricultural Tilled	42%	178.26	AGTab	6201	6701	103.73
									AGTbc	6202	6702	74.53
									AGTcd	6203	6703	0.00
												178.26
						Residential Low Density	17%	70.19	RLD5ab	1013	1513	40.85
									RLD5bc	1014	1514	29.35
									RLD5cd	1015	1515	0.00
												70.19
						Utility / Transportation	8%	35.41	OPLab	4001	4501	20.61
									OPLbc	4002	4502	14.81
									OPLcd	4003	4503	0.00
												35.41
						Institutional	8%	32.45	EISab	3001	3501	18.88
									EISbc	3002	3502	13.57
									EIScd	3003	3503	0.00
												32.45
						Roads	7%	27.62	IMP	8004	-	**27.62**
						Commercial	0.5%	1.97	CSMbc	2201	2701	**1.97**
						High Density Residential	0.4%	1.80	RHD5ab	1213	1713	1.05
									RHD5bc	1214	1714	0.75
									RHD5cd	1215	1715	0.00
												1.80
						Medium Denisty residential	0.5%	2.00	RMD5ab	1113	1613	1.16
									RMD5bc	1114	1614	0.84
									RMD5cd	1115	1615	0.00
												2.00
							100%	424.83				424.83

Sulphur Creek

Catch 1-10	82.01%	15.61%	2.38%	0.00%	100.00%	Valley Segment	4.45%	3.47	OVLab	4101	4601	3.12
									OVLbc	4102	4602	0.35
									OVLcd	4103	4603	0.00
												3.47
						Agricultural Tilled	64%	49.71	AGTab	6201	6701	44.65
									AGTbc	6202	6702	5.06
									AGTcd	6203	6703	0.00
												49.71
						Residential Low Density	23%	17.81	RLD5ab	1013	1513	15.99
									RLD5bc	1014	1514	1.81
									RLD5cd	1015	1515	0.00
												17.81
						Roads	8%	5.93	IMP	8004	-	5.93
												5.93
						Commercial	1%	1.13	CSMbc	2201	2701	1.13
												1.13
							100%	78.1				78.1

Sulphur Creek

Catch 1-11	58.98%	41.02%	0.00%	0.00%	100.00%	Valley Segment	23%	4.68	OVLab	4101	4601	3.72
									OVLbc	4102	4602	0.96
									OVLcd	4103	4603	0.00
												4.68
						Agricultural Tilled	22%	2.43	AGTab	6201	6701	1.93
									AGTbc	6202	6702	0.50
									AGTcd	6203	6703	0.00
												2.43
						Residential Low Density	32%	6.60	RLD5ab	1013	1513	5.25
									RLD5bc	1014	1514	1.35
									RLD5cd	1015	1515	0.00
												6.60
						Roads	12%	2.47	IMP	8004	-	2.47
												2.47
						Agricultural Pasture/Forest	12%	4.44	AGPab	6301	6801	3.53
									AGPbc	6302	6802	0.91
									AGPcd	6303	6803	0.00
												4.44
							100%	20.6				20.6

Catch 1-12	77.35%	22.65%	0.00%	0.00%	100.00%	Residential Low Density	52%	19.52	RLD5ab	1013	1513	17.31
									RLD5bc	1014	1514	2.21
									RLD5cd	1015	1515	0.00
												19.52
						Roads	33%	12.48	IMP	8004	-	12.48
												12.48
						Open Space (Parks)	10%	3.58	OPLab	4001	4501	3.17
									OPLbc	4002	4502	0.40
									OPLcd	4003	4503	0.00
												3.58
						Institutional	5%	1.94	EISab	3001	3501	1.72
									EISbc	3002	3502	0.22
									EIScd	3003	3503	0.00
												1.94
							100%	37.5				37.5

Catch 1-13A	77.05%	22.69%	0.26%	0.00%	100.00%	Residential Low Density	59%	21.07	RLD5ab	1013	1513	18.63
									RLD5bc	1014	1514	2.45
									RLD5cd	1015	1515	0.00
												21.07
						Roads	31%	11.02	IMP	8004	-	11.02
												11.02
						Open Space (Parks)	10%	3.54	OPLab	4001	4501	3.13
									OPLbc	4002	4502	0.41
									OPLcd	4003	4503	0.00
												3.54
							100%	35.6				35.6

Sulphur Creek

Catch 1-13B	46.48%	37.60%	15.92%	0.00%	100.00%	Residential Low Density	35%	69.70	RLD5ab	1013	1513	45.50
									RLD5bc	1014	1514	24.20
									RLD5cd	1015	1515	0.00
												69.70
						Roads	24%	48.94	IMP	8004	-	48.94
												48.94
						Commercial	14%	29.11	CSMbc	2201	2701	29.11
												29.11
						Open Space (Parks)	17%	34.37	OPLab	4001	4501	22.44
									OPLbc	4002	4502	11.93
									OPLcd	4003	4503	0.00
												34.37
						Residential Medium Density	7%	14.96	RMD5ab	1113	1613	9.77
									RMD5bc	1114	1614	5.19
									RMD5cd	1115	1615	0.00
												14.96
						Institutional	2%	3.35	EISab	3001	3501	2.19
									EISbc	3002	3502	1.16
									EIScd	3003	3503	0.00
												3.35
						High Density Residential	0.2%	0.48	RHD5ab	1213	1713	0.31
									RHD5bc	1214	1714	0.17
									RHD5cd	1215	1715	0.00
												0.48
							100%	200.9				200.9

Welland River Landuse

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area	
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)	
2-14	31%	43%	26%	0%	100%	1	Valley Segment	20.6%	21.9	OVL	OVLab	4101	4601	11.6	
											OVLbc	4102	4602	7.5	
											OVLcd	4103	4603	2.8	
															21.9
						2	Agricultural Tilled	78.4%	83.3	AGT	AGTab	6201	6701	44.0	
											AGTbc	6202	6702	28.7	
											AGTcd	6203	6703	10.7	
															83.3
						3	Utility / Transportation	0.0%	0.0	OPL	OPLab	4001	4501	0.0	
											OPLbc	4002	4502	0.0	
											OPLcd	4003	4503	0.0	
															0.0
						4	Residential Low Density	0.7%	0.0	RLD	RLD5ab	1013	1513	0.0	
											RLD5bc	1014	1514	0.0	
											RLD5cd	1015	1515	0.0	
															0.0
						5	Medium Denisty residential	0.0%	0.0	RMD	RMD5ab	1113	1613	0.0	
											RMD5bc	1114	1614	0.0	
											RMD5cd	1115	1615	0.0	
															0.0
						6	High Density Residential	0.0%	0.0	RHD	RHD5ab	1213	1713	0.0	
											RHD5bc	1214	1714	0.0	
											RHD5cd	1215	1715	0.0	
															0.0
						7	Commercial	0.0%	0.0	CSM	CSMbc	2201	2701	0.0	
															0.0
						8	Institutional	0.0%	0.0	EIS	EISab	3001	3501	0.0	
											EISbc	3002	3502	0.0	
											EIScd	3003	3503	0.0	
															0.0
						9	Roads	1.0%	1.1	IMP	IMP	8004	-	1.1	
															1.1
								100%	106.3	0.0					106.3

Welland River Landuse

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-15	25%	41%	34%	0%	100%	1	Valley Segment	17.4%	37.3	OPL	OVLab	4101	4601	16.9
											OVLbc	4102	4602	14.0
											OVLcd	4103	4603	6.4
														37.3
						2	Agricultural Tilled	66.2%	142.2	RLD	AGTab	6201	6701	64.6
											AGTbc	6202	6702	53.3
											AGTcd	6203	6703	24.2
														142.2
						3	Utility / Transportation	11.4%	24.5	RMD	OPLab	4001	4501	11.1
											OPLbc	4002	4502	9.2
											OPLcd	4003	4503	4.2
														24.5
						4	Residential Low Density	2.8%	6.1	RHD	RLD5ab	1013	1513	2.8
											RLD5bc	1014	1514	2.3
											RLD5cd	1015	1515	1.0
														6.1
						5	Medium Denisty residential	0.0%	0.0	CSM	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	EIS	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.2%	0.3	IMP	CSMbc	2201	2701	0.3
														0.3
						8	Institutional	0.6%	1.3	0.0	EISab	3001	3501	0.6
											EISbc	3002	3502	0.5
											EIScd	3003	3503	0.2
														1.3
						9	Roads	1.4%	3.0	0.0	IMP	8004	-	3.0
														3.0
								100%	214.7	HSPF Landuse				214.7

Welland River Landuse

Catchment			Soils				Majot land use	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-16	10%	41%	49%	0%	100%	1	Valley Segment	21%	18.1	HSPF Landuse	OVLab	4101	4601	5.6
											OVLbc	4102	4602	8.1
											OVLcd	4103	4603	4.4
														18.1
						2	Agricultural Tilled	71.9%	62.5	OVL	AGTab	6201	6701	19.3
											AGTbc	6202	6702	28.0
											AGTcd	6203	6703	15.2
														62.5
						3	Utility / Transportation	0.0%	0.0	AGT	OPLab	4001	4501	0.0
											OPLbc	4002	4502	0.0
											OPLcd	4003	4503	0.0
														0.0
						4	Residential Low Density	3.4%	2.9	OPL	RLD5ab	1013	1513	0.9
											RLD5bc	1014	1514	1.3
											RLD5cd	1015	1515	0.7
														2.9
						5	Medium Denisty residential	0.0%	0.0	RLD	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	RMD	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0%	0.0	RHD	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	CSM	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	4.0%	3.4	EIS	IMP	8004	-	3.4
														3.4
								100%	87.0	IMP				87.0

Welland River Landuse

Catchment	%A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
			Soils											
2-17	8%	20%	63%	8%	100%	1	Valley Segment	16.3%	64.0	0.0	OVLab	4101	4601	11.7
											OVLbc	4102	4602	26.7
											OVLcd	4103	4603	25.6
														64.0
						2	Agricultural Tilled	36.6%	143.9	0.0	AGTab	6201	6701	26.4
											AGTbc	6202	6702	60.0
											AGTcd	6203	6703	57.6
														143.9
						3	Utility / Transportation	31.5%	124.2	HSPF Landuse	OPLab	4001	4501	22.8
											OPLbc	4002	4502	51.7
											OPLcd	4003	4503	49.7
														124.2
						4	Residential Low Density	9.1%	35.7	OVL	RLD5ab	1013	1513	6.5
											RLD5bc	1014	1514	14.9
											RLD5cd	1015	1515	14.3
														35.7
						5	Medium Denisty residential	0.0%	0.0	AGT	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	OPL	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	1.3%	5.2	RLD	CSMbc	2201	2701	5.2
														5.2
						8	Institutional	0.0%	0.0	RMD	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	5.3%	20.8	RHD	IMP	8004	-	20.8
														20.8
								100%	393.7	CSM				393.7

Welland River Landuse

Catchment	%A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
			Soils											
2-18	12%	12%	60%	15%	100%	1	Valley Segment	24.7%	15.0	RHD	OVLab	4101	4601	2.8
											OVLbc	4102	4602	5.5
											OVLcd	4103	4603	6.8
														15.0
						2	Agricultural Tilled	28.7%	17.4	CSM	AGTab	6201	6701	3.2
											AGTbc	6202	6702	6.3
											AGTcd	6203	6703	7.9
														17.4
						3	Utility / Transportation	43.5%	26.4	EIS	OPLab	4001	4501	4.9
											OPLbc	4002	4502	9.6
											OPLcd	4003	4503	11.9
														26.4
						4	Residential Low Density	0.0%	0.0	IMP	RLD5ab	1013	1513	0.0
											RLD5bc	1014	1514	0.0
											RLD5cd	1015	1515	0.0
														0.0
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0%	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	0.0	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	3.0%	1.8	0.0	IMP	8004	-	1.8
														1.8
								100%	60.7	0.0				60.7

Welland River Landuse

Catchment			Soils				Majot land use	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-19	11%	11%	78%	0%	100%	1	Valley Segment	21.5%	19.3	0.0	OVLab	4101	4601	3.1
											OVLbc	4102	4602	8.6
											OVLcd	4103	4603	7.6
														19.3
						2	Agricultural Tilled	71.9%	64.6	0.0	AGTab	6201	6701	10.4
											AGTbc	6202	6702	28.8
											AGTcd	6203	6703	25.3
														64.6
						3	Utility / Transportation	0.0%	0.0	0.0	OPLab	4001	4501	0.0
											OPLbc	4002	4502	0.0
											OPLcd	4003	4503	0.0
														0.0
						4	Residential Low Density	0.6%	0.6	0.0	RLD5ab	1013	1513	0.1
											RLD5bc	1014	1514	0.3
											RLD5cd	1015	1515	0.2
														0.6
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0%	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	0.0	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	5.9%	5.3	0.0	IMP	8004	-	5.3
														5.3
								100%	89.8	0.0				89.8

Welland River Landuse

Catchment	Soils %A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
2-20	5%	5%	64%	26%	100%	1	Valley Segment	10.0%	10.1	0.0	OVLab	4101	4601	0.8
											OVLbc	4102	4602	3.5
											OVLcd	4103	4603	5.9
														10.1
						2	Agricultural Tilled	36.6%	37.0	0.0	AGTab	6201	6701	2.8
											AGTbc	6202	6702	12.7
											AGTcd	6203	6703	21.5
														37.0
						3	Utility / Transportation	51.6%	52.1	0.0	OPLab	4001	4501	3.9
											OPLbc	4002	4502	17.9
											OPLcd	4003	4503	30.3
														52.1
						4	Residential Low Density	0.7%	0.7	0.0	RLD5ab	1013	1513	0.1
											RLD5bc	1014	1514	0.2
											RLD5cd	1015	1515	0.4
														0.7
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0%	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	0.0	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	1.1%	1.1	0.0	IMP	8004	-	1.1
														1.1
								100%	101.1	0.0				101.1

Welland River Landuse

Catchment	Soils %A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
2-21	6%	6%	78%	10%	100%	1	Valley Segment	11.6%	15.3	0.0	OVLab	4101	4601	1.3
											OVLbc	4102	4602	6.4
											OVLcd	4103	4603	7.5
														15.3
						2	Agricultural Tilled	54.2%	71.6	0.0	AGTab	6201	6701	6.2
											AGTbc	6202	6702	30.1
											AGTcd	6203	6703	35.3
														71.6
						3	Utility / Transportation	29.7%	39.2	0.0	OPLab	4001	4501	3.4
											OPLbc	4002	4502	16.5
											OPLcd	4003	4503	19.3
														39.2
						4	Residential Low Density	0.0%	0.0	0.0	RLD5ab	1013	1513	0.0
											RLD5bc	1014	1514	0.0
											RLD5cd	1015	1515	0.0
														0.0
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.1%	0.2	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.1
											RHD5cd	1215	1715	0.1
														0.2
						7	Commercial	0.0%	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	0.0	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	4.4%	5.8	0.0	IMP	8004	-	5.8
														5.8
								100%	132.1	0.0				132.1

Welland River Landuse

Catchment	Soils %A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
2-22	5%	5%	59%	31%	100%	1	Valley Segment	9.6%	10.5	0.0	OVLab	4101	4601	0.8
											OVLbc	4102	4602	3.4
											OVLcd	4103	4603	6.4
														10.5
						2	Agricultural Tilled	63.5%	69.8	0.0	AGTab	6201	6701	5.0
											AGTbc	6202	6702	22.3
											AGTcd	6203	6703	42.5
														69.8
						3	Utility / Transportation	19.3%	21.2	0.0	OPLab	4001	4501	1.5
											OPLbc	4002	4502	6.8
											OPLcd	4003	4503	12.9
														21.2
						4	Residential Low Density	0.3%	0.3	0.0	RLD5ab	1013	1513	0.0
											RLD5bc	1014	1514	0.1
											RLD5cd	1015	1515	0.2
														0.3
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0%	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	0.0	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	7.3%	8.1	0.0	IMP	8004	-	8.1
														8.1
								100%	109.9	0.0				109.9

Welland River Landuse

Catchment	Soils %A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
2-23	13%	13%	68%	6%	100%	1	Valley Segment	25.7%	54.9	0.0	OVLab	4101	4601	10.6
											OVLbc	4102	4602	22.2
											OVLcd	4103	4603	22.1
														54.9
						2	Agricultural Tilled	72.6%	155.4	0.0	AGTab	6201	6701	29.9
											AGTbc	6202	6702	62.9
											AGTcd	6203	6703	62.6
														155.4
						3	Utility / Transportation	0.0%	0.0	0.0	OPLab	4001	4501	0.0
											OPLbc	4002	4502	0.0
											OPLcd	4003	4503	0.0
														0.0
						4	Residential Low Density	0.7%	1.4	0.0	RLD5ab	1013	1513	0.3
											RLD5bc	1014	1514	0.6
											RLD5cd	1015	1515	0.6
														1.4
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0%	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	0.0%	0.0	0.0	EISab	3001	3501	0.0
											EISbc	3002	3502	0.0
											EIScd	3003	3503	0.0
														0.0
						9	Roads	1.0%	2.2	0.0	IMP	8004	-	2.2
														2.2
								100%	214.0	0.0				214.0

Welland River Landuse

Catchment	Soils %A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
2-24	9%	9%	74%	7%	100%	1	Valley Segment	18.9%	11.5	0.0	OVLab	4101	4601	1.6
											OVLbc	4102	4602	4.8
											OVLcd	4103	4603	5.1
														11.5
						2	Agricultural Tilled	55.2%	33.6	0.0	AGTab	6201	6701	4.8
											AGTbc	6202	6702	14.0
											AGTcd	6203	6703	14.8
														33.6
						3	Utility / Transportation	0.0%	0.0	0.0	OPLab	4001	4501	0.0
											OPLbc	4002	4502	0.0
											OPLcd	4003	4503	0.0
														0.0
						4	Residential Low Density	9.0%	5.5	0.0	RLD5ab	1013	1513	0.8
											RLD5bc	1014	1514	2.3
											RLD5cd	1015	1515	2.4
														5.5
						5	Medium Denisty residential	0.0%	0.0	0.0	RMD5ab	1113	1613	0.0
											RMD5bc	1114	1614	0.0
											RMD5cd	1115	1615	0.0
														0.0
						6	High Density Residential	0.0%	0.0	0.0	RHD5ab	1213	1713	0.0
											RHD5bc	1214	1714	0.0
											RHD5cd	1215	1715	0.0
														0.0
						7	Commercial	0.0	0.0	0.0	CSMbc	2201	2701	0.0
														0.0
						8	Institutional	3.8%	2.3	0.0	EISab	3001	3501	0.3
											EISbc	3002	3502	1.0
											EIScd	3003	3503	1.0
														2.3
						9	Roads	13.0%	7.9	0.0	IMP	8004	-	7.9
														7.9
								100%	60.9	0.0				60.9

Post Development Cond Landuses

Catchment	Soils						Majot land use	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-14	31%	43%	26%	0%	100%	1	Valley Segment	0.0%	0.0	OVL	OVLab	4101	4601	0.0
											OVLbc	4102	4602	0.0
											OVLcd	4103	4603	0.0
														0.0
						2	Educational/Institutional	10.8%	11.5	EIS	EISab	3001	3501	6.0
											EISbc	3002	3502	3.9
											EIScd	3003	3503	1.5
														11.5
						3	Prestige Industrial	5.3%	5.6	IPR	IPRab	6001	6501	2.9
											IPRbc	6002	6502	1.9
											IPRcd	6003	6503	0.7
														5.6
						4	Eco Pristege Industrial	19.2%	20.4	IPE	IPEab	6004	6504	10.8
											IPEbc	6005	6505	7.0
											IPEcd	6006	6506	2.6
														20.4
						5	Open Space	31.5%	33.5	OPL	OPLab	4001	4501	17.7
											OPLbc	4002	4502	11.5
											OPLcd	4003	4503	4.3
														33.5
						6	Agricultral Tilled		22.3	AGT	AGTab	6201	6701	11.8
											AGTbc	6202	6702	7.7
											AGTcd	6203	6703	2.9
														22.3
						7	Highway Coridors	1.0%	13.1	THC	THCab	5001	5501	6.9
											THCbc	5002	5502	4.5
											THCcd	5003	5503	1.7
														13.1
								100%	106.3	#REF!				106.3

Post Development Cond Landuses

Catchment			Soils				Majot land use	%	Area	HSPF Landuse		WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-15	25%	41%	34%	0%	100%	1	Valley Segment	1.4%	3.0	OVL	OVLab	4101	4601	1.4
											OVLbc	4102	4602	1.1
											OVLcd	4103	4603	0.5
														3.0
						2	Educational/Institutional	19.9%	42.8	EIS	EISab	3001	3501	19.5
											EISbc	3002	3502	16.1
											EIScd	3003	3503	7.3
														42.8
						3	Prestige Industrial	15.0%	32.2	IPR	IPRab	6001	6501	14.6
											IPRbc	6002	6502	12.1
											IPRcd	6003	6503	5.5
														32.2
						4	Eco Pristege Industrial	22.6%	48.6	IPE	IPEab	6004	6504	22.1
											IPEbc	6005	6505	18.2
											IPEcd	6006	6506	8.3
														48.6
						5	Open Space	18.6%	39.9	OPL	OPLab	4001	4501	18.1
											OPLbc	4002	4502	15.0
											OPLcd	4003	4503	6.8
														39.9
						6	Agricultral Tilled	20.0%	42.9	AGT	AGTab	6201	6701	19.5
											AGTbc	6202	6702	16.1
											AGTcd	6203	6703	7.3
														42.9
						7	Highway Coridors	2.5%	5.3	THC	THCab	5001	5501	2.4
											THCbc	5002	5502	2.0
											THCcd	5003	5503	0.9
														5.3
								100%	214.7	HSPF Landuse				214.7

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Post Development Cond Landuses

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-16	10%	41%	49%	0%	100%	1	Valley Segment	0%	0.0	OVL	OVLab	4101	4601	0.0
											OVLbc	4102	4602	0.0
											OVLcd	4103	4603	0.0
														0.0
						2	Prestige Industrial	21%	18.3	IPR	IPRab	6001	6501	5.7
											IPRbc	6002	6502	8.2
											IPRcd	6003	6503	4.4
														18.3
						3	Eco Pristege Industrial	15%	13.3	IPE	IPEab	6004	6504	4.1
											IPEbc	6005	6505	6.0
											IPEcd	6006	6506	3.2
														13.3
						4	Open Space	29%	25.3	OPL	OPLab	4001	4501	7.8
											OPLbc	4002	4502	11.3
											OPLcd	4003	4503	6.1
														25.3
						5	Agricultral Tilled	26%	22.5	AGT	AGTab	6201	6701	7.0
											AGTbc	6202	6702	10.1
											AGTcd	6203	6703	5.5
														22.5
						6	Highway Coridors	9%	7.5	THC	THCab	5001	5501	2.3
											THCbc	5002	5502	3.4
											THCcd	5003	5503	1.8
														7.5
								100%	86.9	IMP				86.9

Post Development Cond Landuses

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-17	8%	20%	63%	8%	100%	1	Valley Segment	1.2%	4.7	OVL	OVLab	4101	4601	0.9
											OVLbc	4102	4602	2.0
											OVLcd	4103	4603	1.9
														4.7
						2	Educational/Institutional	30.2%	119.0	EIS	EISab	3001	3501	21.8
											EISbc	3002	3502	49.6
											EIScd	3003	3503	47.6
														119.0
						3	Prestige Industrial	10.3%	40.7	IPR	IPRab	6001	6501	7.5
											IPRbc	6002	6502	17.0
											IPRcd	6003	6503	16.3
														40.7
						4	Eco Pristege Industrial	29.5%	116.0	IPE	IPEab	6004	6504	21.3
											IPEbc	6005	6505	48.3
											IPEcd	6006	6506	46.4
														116.0
						5	Open Space	8.8%	34.6	OPL	OPLab	4001	4501	6.3
											OPLbc	4002	4502	14.4
											OPLcd	4003	4503	13.8
														34.6
						6	Agricultral Tilled	14.5%	57.2	AGT	AGTab	6201	6701	10.5
											AGTbc	6202	6702	23.8
											AGTcd	6203	6703	22.9
														57.2
						7	Highway Coridors	5.4%	21.2	THC	THCab	5001	5501	3.9
											THCbc	5002	5502	8.8
											THCcd	5003	5503	8.5
														21.2
								100%	393.4	CSM				393.4

Post Development Cond Landuses

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-18	12%	12%	60%	15%	100%	1	Valley Segment	4.0%	2.4	OVL	OVLab	4101	4601	0.4
											OVLbc	4102	4602	0.9
											OVLcd	4103	4603	1.1
														2.4
						2	Educational/Institutional	43.9%	26.6	EIS	EISab	3001	3501	4.9
											EISbc	3002	3502	9.7
											EIScd	3003	3503	12.0
														26.6
						3	Open Space	10.1%	6.1	OPL	OPLab	4001	4501	1.1
											OPLbc	4002	4502	2.2
											OPLcd	4003	4503	2.7
														6.1
						4	Agricultral Tilled	35.3%	21.4	AGT	AGTab	6201	6701	4.0
											AGTbc	6202	6702	7.8
											AGTcd	6203	6703	9.7
														21.4
						5	Eco Pristege Industrial	5.6%	3.4	IPE	IPEab	6004	6504	0.6
											IPEbc	6005	6505	1.2
											IPEcd	6006	6506	1.5
														3.4
						6	Highway Coridors	1.2%	0.7	THC	THCab	5001	5501	0.1
											THCbc	5002	5502	0.3
											THCcd	5003	5503	0.3
														0.7
								100%	60.6	#REF!				60.6

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Post Development Cond Landuses

Catchment	Soils						Majot land use	%	Area	HSPF Landuse		WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)			Surface	Sub-surface	(ha)
2-19	11%	11%	78%	0%	100%	1	Valley Segment	0.0%	0.0	OVL	OVLab	4101	4601	0.0
											OVLbc	4102	4602	0.0
											OVLcd	4103	4603	0.0
														0.0
						2	Prestige Industrial	50.9%	45.7	IPR	IPRab	6001	6501	7.4
											IPRbc	6002	6502	20.4
											IPRcd	6003	6503	17.9
														45.7
						3	Open Space	23.5%	21.1	OPL	OPLab	4001	4501	3.4
											OPLbc	4002	4502	9.4
											OPLcd	4003	4503	8.3
														21.1
						4	Agricultral Tilled	12.7%	11.4	AGT	AGTab	6201	6701	1.8
											AGTbc	6202	6702	5.1
											AGTcd	6203	6703	4.5
														11.4
						5	Eco Pristege Industrial	6.7%	6.0	IPE	IPEab	6004	6504	1.0
											IPEbc	6005	6505	2.7
											IPEcd	6006	6506	2.4
														6.0
						6	Highway Coridors	6.2%	5.6	THC	THCab	5001	5501	0.9
											THCbc	5002	5502	2.5
											THCcd	5003	5503	2.2
														5.6
								100%	89.8	#REF!				89.8

Post Development Cond Landuses

Catchment	Soils %A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
2-20	5%	5%	64%	26%	100%	1	Valley Segment	0.0%	0.0	OVL	OVLab	4101	4601	0.0
											OVLbc	4102	4602	0.0
											OVLcd	4103	4603	0.0
														0.0
						2	Educational/Institutional	52.7%	53.22	EIS	EISab	3001	3501	4.0
											EISbc	3002	3502	18.3
											EIScd	3003	3503	30.9
														53.2
						3	Open Space	14.3%	14.43	OPL	OPLab	4001	4501	1.1
											OPLbc	4002	4502	5.0
											OPLcd	4003	4503	8.4
														14.4
						4	Agricultral Tilled	26.8%	27.06	AGT	AGTab	6201	6701	2.0
											AGTbc	6202	6702	9.3
											AGTcd	6203	6703	15.7
														27.1
						5	Eco Pristege Industrial	1.8%	1.82	IPE	IPEab	6004	6504	0.1
											IPEbc	6005	6505	0.6
											IPEcd	6006	6506	1.1
														1.8
						6	Highway Coridors	4.5%	4.50	THC	THCab	5001	5501	0.3
											THCbc	5002	5502	1.5
											THCcd	5003	5503	2.6
														4.5
								100%	101.03	#REF!				101.03

Post Development Cond Landuses

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-21	6%	6%	78%	10%	100%	1	Valley Segment	1.5%	2.0	OVL	OVLab	4101	4601	0.2
											OVLbc	4102	4602	0.8
											OVLcd	4103	4603	1.0
														2.0
						2	Educational/Institutional	29.5%	39.0	EIS	EISab	3001	3501	3.4
											EISbc	3002	3502	16.4
											EIScd	3003	3503	19.2
														39.0
						3	Open Space	16.7%	22.0	OPL	OPLab	4001	4501	1.9
											OPLbc	4002	4502	9.3
											OPLcd	4003	4503	10.8
														22.0
						4	Agricultral Tilled	27.1%	35.8	AGT	AGTab	6201	6701	3.1
											AGTbc	6202	6702	15.1
											AGTcd	6203	6703	17.6
														35.8
						5	Eco Pristege Industrial	18.3%	24.2	IPE	IPEab	6004	6504	2.1
											IPEbc	6005	6505	10.2
											IPEcd	6006	6506	11.9
														24.2
						6	Highway Coridors	6.8%	9.0	THC	THCab	5001	5501	0.8
											THCbc	5002	5502	3.8
											THCcd	5003	5503	4.4
														9.0
								100%	132.0	#REF!				132.0

Post Development Cond Landuses

Catchment	Soils						Majot land use	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
	%A	%B	%C	%D	Total									
2-22	5%	5%	59%	31%	100%	1	Valley Segment	2.6%	2.9	OVL	OVLab	4101	4601	0.2
											OVLbc	4102	4602	0.9
											OVLcd	4103	4603	1.8
														2.9
						2	Agricultural Tilled	18.7%	20.6	#REF!	AGTab	6201	6701	1.5
											AGTbc	6202	6702	6.6
											AGTcd	6203	6703	12.5
														20.6
						3	Open Space	6.8%	7.5	OPL	OPLab	4001	4501	0.5
											OPLbc	4002	4502	2.4
											OPLcd	4003	4503	4.6
														7.5
						4	Eco Pristege Industrial	33.7%	37.0	IPE	IPEab	6004	6504	2.7
											IPEbc	6005	6505	11.8
											IPEcd	6006	6506	22.5
														37.0
						5	Educational/Institutional	31.4%	34.5	EIS	EISab	3001	3501	2.5
											EISbc	3002	3502	11.0
											EIScd	3003	3503	21.0
														34.5
						6	Highway Coridors	6.7%	7.4	THC	THCab	5001	5501	0.5
											THCbc	5002	5502	2.4
											THCcd	5003	5503	4.5
														7.4
								100%	109.9	#REF!				109.9

Post Development Cond Landuses

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-24	9%	9%	74%	7%	100%	1	Valley Segment	0.0%	0.0	OVL	OVLab	4101	4601	0.0
											OVLbc	4102	4602	0.0
											OVLcd	4103	4603	0.0
														0.0
						2	Agricultural Tilled	45.6%	27.8	AGT	AGTab	6201	6701	3.9
											AGTbc	6202	6702	11.6
											AGTcd	6203	6703	12.3
														27.8
						3	Open Space	2.5%	1.5	OPL	OPLab	4001	4501	0.2
											OPLbc	4002	4502	0.6
											OPLcd	4003	4503	0.7
														1.5
						4	Eco Pristege Industrial	18.2%	11.1	IPE	IPEab	6004	6504	1.6
											IPEbc	6005	6505	4.6
											IPEcd	6006	6506	4.9
														11.1
						5	Residential Low Density	23.5%	14.3	RLD	RLD5ab	1013	1513	2.0
											RLD5bc	1014	1514	6.0
											RLD5cd	1015	1515	6.3
														14.3
						6	Highway Coridors	10.2%	6.2	THC	THCab	5001	5501	0.9
											THCbc	5002	5502	2.6
											THCcd	5003	5503	2.7
														6.2
								100%	60.9	#REF!				60.9

Post Development Cond Landuses

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-25	3%	23%	48%	25%	100%	1	Valley Segment	0.0%	0.0	OVL	OVLab	4101	4601	0.0
											OVLbc	4102	4602	0.0
											OVLcd	4103	4603	0.0
														0.0
						2	Eco Pristege Industrial	29.7%	32.1	IPE	IPEab	6004	6504	4.8
											IPEbc	6005	6505	11.5
											IPEcd	6006	6506	15.8
														32.1
						3	Open Space	33.3%	36.0	OPL	OPLab	4001	4501	5.4
											OPLbc	4002	4502	12.9
											OPLcd	4003	4503	17.7
														36.0
						4	Prestige Industrial	34.5%	37.3	IPR	IPRab	6001	6501	5.6
											IPRbc	6002	6502	13.4
											IPRcd	6003	6503	18.3
														37.3
						5	Highway Coridors	4.4%	2.7	THC	THCab	5001	5501	0.4
											THCbc	5002	5502	1.0
											THCcd	5003	5503	1.3
														2.7
								102%	108.1	#REF!				108.1

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Post Development Cond Landuses

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-27	4%	4%	55%	38%	100%	1	Valley Segment	3.6%	3.6	OVL	OVLab	4101	4601	0.2
											OVLbc	4102	4602	1.1
											OVLcd	4103	4603	2.3
														3.6
						2	Eco Pristege Industrial	42.6%	42.3	IPE	IPEab	6004	6504	2.4
											IPEbc	6005	6505	12.4
											IPEcd	6006	6506	27.5
														42.3
						3	Open Space	27.2%	27.0	OPL	OPLab	4001	4501	1.6
											OPLbc	4002	4502	7.9
											OPLcd	4003	4503	17.6
														27.0
						4	Prestige Industrial	25.0%	24.8	IPR	IPRab	6001	6501	1.4
											IPRbc	6002	6502	7.2
											IPRcd	6003	6503	16.1
														24.8
						5	Highway Coridors	1.5%	1.5	THC	THCab	5001	5501	0.1
											THCbc	5002	5502	0.4
											THCcd	5003	5503	1.0
														1.5
								100%	99.2	#REF!				99.2

Post Development Cond Landuses

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-28	11%	11%	56%	23%	100%	1	Valley Segment	8.9%	5.3	OVL	OVLab	4101	4601	0.9
											OVLbc	4102	4602	1.8
											OVLcd	4103	4603	2.7
														5.3
						2	Eco Pristege Industrial	29.9%	17.7	IPE	IPEab	6004	6504	2.9
											IPEbc	6005	6505	5.9
											IPEcd	6006	6506	8.9
														17.7
						3	Open Space	8.3%	4.9	OPL	OPLab	4001	4501	0.8
											OPLbc	4002	4502	1.6
											OPLcd	4003	4503	2.5
														4.9
						4	Prestige Industrial	52.8%	31.3	IPR	IPRab	6001	6501	5.1
											IPRbc	6002	6502	10.4
											IPRcd	6003	6503	15.8
														31.3
								100%	59.2	#REF!				59.2
[redacted]										[redacted]				

Post Development Cond Landuses

Catchment	Soils						Majot land use	%	Area	HSPF Landuse		WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)			Surface	Sub-surface	(ha)
2-29	11%	11%	76%	3%	100%	1	Valley Segment	7.0%	7.0	OVL	OVLab	4101	4601	1.1
											OVLbc	4102	4602	3.0
											OVLcd	4103	4603	2.9
														7.0
						2	Eco Pristege Industrial	28.7%	28.9	IPE	IPEab	6004	6504	4.6
											IPEbc	6005	6505	12.5
											IPEcd	6006	6506	11.9
														28.9
						3	Open Space	22.1%	22.3	OPL	OPLab	4001	4501	3.5
											OPLbc	4002	4502	9.6
											OPLcd	4003	4503	9.1
														22.3
						4	Prestige Industrial	41.5%	41.8	IPR	IPRab	6001	6501	6.6
											IPRbc	6002	6502	18.0
											IPRcd	6003	6503	17.1
														41.8
						5	Highway Coridors	0.7%	0.7	THC	THCab	5001	5501	0.1
											THCbc	5002	5502	0.3
											THCcd	5003	5503	0.3
														0.7
								100%	100.7	#REF!				100.7

Post Development Cond Landuses

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-30	9%	9%	79%	2%	100%	1	Valley Segment	1.3%	1.6	OVL	OVLab	4101	4601	0.2
											OVLbc	4102	4602	0.7
											OVLcd	4103	4603	0.7
														1.6
						2	Eco Pristege Industrial	48.2%	60.7	IPE	IPEab	6004	6504	8.5
											IPEbc	6005	6505	26.8
											IPEcd	6006	6506	25.4
														60.7
						3	Open Space	28.8%	36.3	OPL	OPLab	4001	4501	5.1
											OPLbc	4002	4502	16.0
											OPLcd	4003	4503	15.2
														36.3
						4	Prestige Industrial	19.7%	24.8	IPR	IPRab	6001	6501	3.5
											IPRbc	6002	6502	11.0
											IPRcd	6003	6503	10.4
														24.8
						5	Highway Coridors	2.1%	2.7	THC	THCab	5001	5501	0.4
											THCbc	5002	5502	1.2
											THCcd	5003	5503	1.1
														2.7
								100%	126.1	#REF!				126.1

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Post Development Cond Landuses

Catchment	%A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
			Soils											
2-32	6%	10%	34%	50%	100%	1	Valley Segment	2.6%	8.0	OVL	OVLab	4101	4601	0.9
											OVLbc	4102	4602	1.8
											OVLcd	4103	4603	5.3
														8.0
						2	Educational/Institutional	21.2%	66.3	EIS	EISab	3001	3501	7.2
											EISbc	3002	3502	14.8
											EIScd	3003	3503	44.3
														66.3
						3	Eco Pristege Industrial	29.5%	92.1	IPE	IPEab	6004	6504	10.0
											IPEbc	6005	6505	20.6
											IPEcd	6006	6506	61.6
														92.1
						4	Open Space	6.6%	20.5	OPL	OPLab	4001	4501	2.2
											OPLbc	4002	4502	4.6
											OPLcd	4003	4503	13.7
														20.5
						5	Prestige Industrial	38.0%	118.5	IPR	IPRab	6001	6501	12.8
											IPRbc	6002	6502	26.5
											IPRcd	6003	6503	79.2
														118.5
						6	Highway Coridors	2.1%	6.6	THC	THCab	5001	5501	0.7
											THCbc	5002	5502	1.5
											THCcd	5003	5503	4.4
														6.6
								100%	312.1	#REF!				312.1

Post Development Cond Landuses

Catchment	Soils						**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-33	6%	8%	71%	15%	100%	1	Valley Segment	1.4%	3.5	OVL	OVLab	4101	4601	0.4
											OVLbc	4102	4602	1.4
											OVLcd	4103	4603	1.8
														3.5
						2	Educational/Institutional	70.7%	180.0	EIS	EISab	3001	3501	17.9
											EISbc	3002	3502	70.6
											EIScd	3003	3503	91.5
														180.0
						3	Eco Pristege Industrial	5.2%	13.3	IPE	IPEab	6004	6504	1.3
											IPEbc	6005	6505	5.2
											IPEcd	6006	6506	6.8
														13.3
						4	Open Space	0.5%	1.3	OPL	OPLab	4001	4501	0.1
											OPLbc	4002	4502	0.5
											OPLcd	4003	4503	0.7
														1.3
						5	Prestige Industrial	4.9%	12.6	IPR	IPRab	6001	6501	1.3
											IPRbc	6002	6502	4.9
											IPRcd	6003	6503	6.4
														12.6
						6	Agricultural Tilled	15.8%	40.4	AGT	AGTab	6201	6701	4.0
											AGTbc	6202	6702	15.8
											AGTcd	6203	6703	20.5
														40.4
						7	Highway Coridors	1.4%	3.7	THC	THCab	5001	5501	0.4
											THCbc	5002	5502	1.4
											THCcd	5003	5503	1.9
														3.7
								100%	254.7	#REF!				254.7

Post Development Cond Landuses

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
2-37	6%	6%	89%	0%	100%	1	Valley Segment	1.1%	0.8	OVL	OVLab	4101	4601	0.1
											OVLbc	4102	4602	0.4
											OVLcd	4103	4603	0.4
														0.8
						2	Educational/Institutional	27.8%	19.7	EIS	EISab	3001	3501	1.7
											EISbc	3002	3502	9.3
											EIScd	3003	3503	8.7
														19.7
						3	Eco Pristege Industrial	59.0%	41.9	IPE	IPEab	6004	6504	3.5
											IPEbc	6005	6505	19.8
											IPEcd	6006	6506	18.6
														41.9
						4	Prestige Industrial	3.0%	2.1	IPR	IPRab	6001	6501	0.2
											IPRbc	6002	6502	1.0
											IPRcd	6003	6503	0.9
														2.1
						5	Highway Coridors	9.1%	6.5	THC	THCab	5001	5501	0.5
											THCbc	5002	5502	3.1
											THCcd	5003	5503	2.9
														6.5
								100%	71.0	#REF!				71.0

Post Development Cond Landuses

Catchment	Soils %A	%B	%C	%D	Total		Majot land use	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
1-5	77.59%	12.42%	9.99%	0.00%	100%	1	Valley Segment	10.8%	8.8	OVL	OVLab	4101	4601	7.4
											OVLbc	4102	4602	1.0
											OVLcd	4103	4603	0.4
														8.8
						2	Eco Pristege Industrial	76.1%	62.3	IPE	IPEab	6004	6504	52.2
											IPEbc	6005	6505	7.0
											IPEcd	6006	6506	3.1
														62.3
						3	Open Space	12.3%	10.1	OPL	OPLab	4001	4501	8.5
											OPLbc	4002	4502	1.1
											OPLcd	4003	4503	0.5
														10.1
						4	Highway Coridors	0.8%	0.7	THC	THCab	5001	5501	0.6
											THCbc	5002	5502	0.1
											THCcd	5003	5503	0.0
														0.7
								100%	81.9	#REF!				81.9

Post Development Cond Landuses

Catchment	Soils						Majot land use	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
	%A	%B	%C	%D	Total									
1-6	55.83%	5.11%	39.06%	0.00%	100%	1	Valley Segment	0.9%	1.0	OVL	OVLab	4101	4601	0.6
											OVLbc	4102	4602	0.2
											OVLcd	4103	4603	0.2
														1.0
						2	Eco Pristege Industrial	75.6%	80.1	IPE	IPEab	6004	6504	46.7
											IPEbc	6005	6505	17.7
											IPEcd	6006	6506	15.6
														80.1
						3	Open Space	15.5%	16.4	OPL	OPLab	4001	4501	9.6
											OPLbc	4002	4502	3.6
											OPLcd	4003	4503	3.2
														16.4
						4	Highway Coridors	8.0%	8.5	THC	THCab	5001	5501	5.0
											THCbc	5002	5502	1.9
											THCcd	5003	5503	1.7
														8.5
								100%	105.9	#REF!				105.9

[redacted] [redacted]

Post Development Cond Landuses

Catchment			Soils				**Majot land use**	%	Area			WDM	WDM	Area
	%A	%B	%C	%D	Total			of total	(ha)	HSPF Landuse		Surface	Sub-surface	(ha)
1-7	60.83%	1.69%	37.47%	0.00%	100%	1	Eco Pristege Industrial	88.3%	23.2	IPE	IPEab	6004	6504	14.3
											IPEbc	6005	6505	4.5
											IPEcd	6006	6506	4.4
														23.2
						2	Open Space	3.4%	0.9	OPL	OPLab	4001	4501	0.6
											OPLbc	4002	4502	0.2
											OPLcd	4003	4503	0.2
														0.9
						3	Highway Coridors	8.3%	2.2	THC	THCab	5001	5501	1.4
											THCbc	5002	5502	0.4
											THCcd	5003	5503	0.4
														2.2
								100%	26.3	#REF!				26.3

Post Development Cond Landuses

Catchment	Soils													
	%A	%B	%C	%D	Total		**Majot land use**	% of total	Area (ha)	HSPF Landuse		WDM Surface	WDM Sub-surface	Area (ha)
1-8	35.67%	29.49%	33.85%	0.98%	100%	1	Valley Segment	3.2%	4.7	OVL	OVLab	4101	4601	2.4
											OVLbc	4102	4602	1.5
											OVLcd	4103	4603	0.8
														4.7
						2	Agricultural Tilled	7.1%	10.5	AGT	AGTab	6201	6701	5.3
											AGTbc	6202	6702	3.3
											AGTcd	6203	6703	1.9
														10.5
						3	Eco Pristege Industrial	35.4%	52.3	IPE	IPEab	6004	6504	26.4
											IPEbc	6005	6505	16.6
											IPEcd	6006	6506	9.4
														52.3
						4	Prestige Industrial	33.0%	48.8	IPR	IPRab	6001	6501	24.6
											IPRbc	6002	6502	15.5
											IPRcd	6003	6503	8.7
														48.8
						5	Open Space	12.7%	18.7	OPL	OPLab	4001	4501	9.4
											OPLbc	4002	4502	5.9
											OPLcd	4003	4503	3.3
														18.7
						6	Residential Low Density	4.8%	7.1	RLD	RLD5ab	1013	1513	3.6
											RLD5bc	1014	1514	2.2
											RLD5cd	1015	1515	1.3
														7.1
						7	Highway Coridors	3.8%	5.7	THC	THCab	5001	5501	2.8
											THCbc	5002	5502	1.8
											THCcd	5003	5503	1.0
														5.7
								100%	147.8	#REF!				147.8

```
2
*******************************************************************************
*
* Hamilton Airport Employment Growth District                      JOB: 64758
*
*    Generate Pre Development Flows from study area and surrounding areas
*
*
*
*
*
* 25mm, 4hr and 2, 5, 10, 25, 50, 100 and hurricane hazel
storms,              *
* SCS 24 hour storm distribution
*
* - Rainfall depths estimated based on Hamilton Airport I-D-F data
*
*    for rainfall gauged by AES.
*
*
*
*
*
*                                                          As of: Dec 17, 2009
*
*******************************************************************************
*
*
* Hydrograph Numbering Conventions:
*
*   xxx_x       Local hydrograph for Subcatchment No. xxx.x
*  CNF-xx       Hydrograph added at confluence/node xx
*  CHN-xx       Hydrograph routed through channel reach xx
*  MIN-xx       Diverted minor system hydrograph number xx
*  MAJ-xx       Diverted major system hydrograph number xx
*  P_ab-c       Outflow hydrograph from Stormwater Management Basin a.b-c
*
START                TIME= 0   METOUT= 0  NSTORM=1  NRUN=001
                     SCS_002.HYT
*
READ STORM           STORM_FILENAME="STORM.001"
*
*******************************************************************************
*
*                              S/C 1 - 5
*
*******************************************************************************
*
*
CALIB NASHYD         ID=1  NHYD="1-5"  DT=5.0min  AREA=81.7ha  DWF=0.000
                     CN=68  IA=12.00mm  N=3  TP=2.2hrs  END=-1
*
*******************************************************************************
*
*
* Route 5 thought 12
```

```
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-12"  IDin=1
                    RDT=5min
                    CHLGTH=450m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           20.00
                              -0.030           22.00
                               0.050           42.00
                             DISTANCE       ELEVATION
                               0.000           0.500
                               20.00           0.300
                               20.45           0.000
                               21.55           0.000
                               22.00           0.300
                               42.00           0.500
*
******************************************************************************
*
*                               S/C 1 - 12
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-12"   DT=5.0min  AREA=37.5ha
                    XIMP=0.58  TIMP=0.63  DWF=0.000  LOSS=2  CN=61
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                    IMPERVIOUS AREA:   2.00   1.00     500 0.015  0.000
                    END=-1
*
ADD HYD             ID=3  NHYD="CNF-5&12"
                    IDone=   1; and
                    IDtwo=   2.
*
******************************************************************************
*
*                              S/C 1 - 6
*
******************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="1-6"  DT=5.0min  AREA=99.2ha  DWF=0.000
                    CN=73  IA=9.40mm  N=3  TP=1.6hrs  END=-1
*
******************************************************************************
*
*
* Route 6 through 11
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-11"  IDin=1
                    RDT=5min
                    CHLGTH=930m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
```

```
                           MANNING'S 'n'    DISTANCE
                               0.050           25.00
                              -0.030           27.00
                               0.050           50.00
                             DISTANCE       ELEVATION
                               0.000           1.000
                               25.00           0.500
                               25.45           0.000
                               26.55           0.000
                               27.00           0.500
                               50.00           1.000
*
******************************************************************************
*
*                              S/C 1 - 11
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-11"   DT=5.0min  AREA=20.6ha
                    XIMP=0.25  TIMP=0.28  DWF=0.000  LOSS=2  CN=61
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                    IMPERVIOUS AREA:   2.00   1.00     371 0.015  0.000
                    END=-1
*
ADD HYD             ID=4  NHYD="CNF-5&12"
                    IDone=   1; and
                    IDtwo=   2.
*
* Add 6 + 11 and 5 +12
*
ADD HYD             ID=1  NHYD="CNF-6&11"
                    IDone=   3; and
                    IDtwo=   4.
*
******************************************************************************
*
*                              S/C 1 - 7
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="1-7"   DT=5.0min  AREA=26.2ha
                    XIMP=0.47  TIMP=0.47  DWF=0.000  LOSS=2  CN=70
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   10.9   2.00     40  0.170  0.000
                    IMPERVIOUS AREA:   2.00   1.00     418 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 7 through 10
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-10"  IDin=2
```

```
                    RDT=5min
                    CHLGTH=1125m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           25.00
                              -0.030           27.00
                               0.050           50.00
                             DISTANCE       ELEVATION
                               0.000           1.000
                               25.00           0.500
                               25.45           0.000
                               26.55           0.000
                               27.00           0.500
                               50.00           1.000
*
******************************************************************************
*
*                              S/C 1 - 10
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="1-10"  DT=5.0min  AREA=78.1ha  DWF=0.000
                    CN=72  IA=9.90mm  N=3  TP=1.5hrs  END=-1
*
* Add 7 + 10
*
ADD HYD             ID=4  NHYD="CNF-7&10"
                    IDone=   2; and
                    IDtwo=   3.
*
******************************************************************************
*
*
* Route total flows at outlet of 10 through 11
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-11"  IDin=4
                    RDT=5min
                    CHLGTH=460m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           25.00
                              -0.030           27.00
                               0.050           50.00
                             DISTANCE       ELEVATION
                               0.000           1.000
                               25.00           0.500
                               25.45           0.000
                               26.55           0.000
                               27.00           0.500
                               50.00           1.000
*
* Add 6 + 11 and 5 +12 and 7 + 10
*
```

```
ADD HYD             ID=3  NHYD="CNF-END"
                    IDone=   1; and
                    IDtwo=   2.
*
******************************************************************************
*
*                              S/C 1 - 8
*
******************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="1-8"  DT=5.0min  AREA=147.9ha  DWF=0.000
                    CN=77  IA=7.60mm  N=3  TP=2.5hrs  END=-1
*
******************************************************************************
*
*
* Route 8 through 9
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-9"  IDin=1
                    RDT=5min
                    CHLGTH=4075m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           25.00
                              -0.030           27.00
                               0.050           50.00
                             DISTANCE       ELEVATION
                               0.000           1.000
                               25.00           0.500
                               25.45           0.000
                               26.55           0.000
                               27.00           0.500
                               50.00           1.000
*
******************************************************************************
*
*                              S/C 1 - 9
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-9"   DT=5.0min  AREA=424.8ha
                    XIMP=0.20  TIMP=0.23  DWF=0.000  LOSS=2  CN=69
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   11.4   2.00     40  0.220  0.000
                    IMPERVIOUS AREA:   2.00   1.00   1683  0.015  0.000
                    END=-1
*
* Add 8 and 9
*
ADD HYD             ID=3  NHYD="CNF-8&9"
                    IDone=   1; and
                    IDtwo=   2.
*
```

```
*****************************************************************************
*
*                              S/C 1 - 13B
*
*****************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-13B"   DT=5.0min  AREA=200.9ha
                    XIMP=0.20  TIMP=0.24  DWF=0.000  LOSS=2  CN=66
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   13.1   2.00     40  0.290  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1157 0.015  0.000
                    END=-1
*
*****************************************************************************
*
*
* Route 8 and 9 through 13b
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-13B"  IDin=3
                    RDT=5min
                    CHLGTH=1225m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           40.00
                              -0.030           46.00
                               0.050           86.00
                             DISTANCE       ELEVATION
                               0.000           2.000
                               40.00           1.000
                               41.00           0.000
                               45.40           0.000
                               46.00           1.000
                               86.00           2.000
*
ADD HYD             ID=3  NHYD="CNF-END"
                    IDone=   1; and
                    IDtwo=   2.
*
*****************************************************************************
*
*                              S/C 1 - 13A
*****************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-13A"   DT=5.0min  AREA=35.6ha
                    XIMP=0.55  TIMP=0.61  DWF=0.000  LOSS=2  CN=61
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                    IMPERVIOUS AREA:   2.00   1.00     487 0.015  0.000
                    END=-1
*
*****************************************************************************
*
*                              S/C 2 - 14
```

```
*
*********************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="2-14"  DT=5.0min  AREA=106.3ha  DWF=0.000
                    CN=83  IA=4.70mm  N=3  TP=0.9hrs  END=-1
*
*********************************************************************************
*
*
*********************************************************************************
*
*                              S/C 2 - 15
*
*********************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="2-15"   DT=5.0min  AREA=214.7ha
                    XIMP=0.35  TIMP=0.40  DWF=0.000  LOSS=2  CN=71
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   10.4   2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1196 0.015  0.000
                    END=-1
*********************************************************************************
*
*
* Add 14  + 15
*
ADD HYD             ID=3  NHYD="CNF-14 & 15"
                    IDone=   1;
                    IDtwo=   2;
*
* Route 14 and 15 through 16
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-16"  IDin=3
                    RDT=5min
                    CHLGTH=1000m,  CHSLOPE=0.8(%),
                                   FPSLOPE=0.01(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*********************************************************************************
*
*                              S/C 2 - 17
*
*********************************************************************************
```

```
*
*
CALIB NASHYD        ID=3  NHYD="2-17"  DT=5.0min  AREA=393.7ha  DWF=0.000
                    CN=88  IA=3.60mm  N=3  TP=1.1hrs  END=-1
*
******************************************************************************
*
*                               S/C 2 - 16
*
******************************************************************************
*
*
CALIB NASHYD        ID=4  NHYD="2-16"  DT=5.0min  AREA=87.0ha  DWF=0.000
                    CN=89  IA=4.76mm  N=3  TP=0.60hrs  END=-1
*
* Add 14, 15, 16 and 17
*
ADD HYD             ID=5  NHYD="CNF-14,15,17,&16"
                    IDone=   1;
                    IDtwo=   3; and
                    IDthree= 4.
*
******************************************************************************
*
*
* Route 14, 15, 16 & 17 through 19
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-19"  IDin=5
                    RDT=5min
                    CHLGTH=1365m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.01(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.150           80.00
                              -0.025           86.00
                               0.150          166.00
                             DISTANCE       ELEVATION
                               0.000           2.300
                               80.00           1.000
                               82.50           0.000
                               83.50           0.000
                               86.00           1.000
                              166.00           2.300
*
******************************************************************************
*
*                               S/C 2 - 18
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-18"  DT=5.0min  AREA=60.7ha  DWF=0.000
                    CN=89  IA=3.4mm  N=3  TP=0.6hrs  END=-1
*
******************************************************************************
*
```

```
*
* Route 18 through a portion of 19 to the outlet of 19
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-19"  IDin=2
                    RDT=5min
                    CHLGTH=375m,   CHSLOPE=0.4(%),
                                   FPSLOPE=0.01(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.150           80.00
                              -0.025           86.00
                               0.150          166.00
                             DISTANCE       ELEVATION
                               0.000           2.300
                               80.00           1.000
                               82.50           0.000
                               83.50           0.000
                               86.00           1.000
                              166.00           2.300
*
*
******************************************************************************
*
*                              S/C 2 - 20
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-20"  DT=5.0min  AREA=101.1ha  DWF=0.000
                    CN=91  IA=3.40mm  N=3  TP=0.6hrs  END=-1
*
******************************************************************************
*
*                              S/C 2 - 19
*
******************************************************************************
*
*
CALIB NASHYD        ID=4  NHYD="2-19"  DT=5.0min  AREA=89.8ha  DWF=0.000
                    CN=89  IA=3.40mm  N=3  TP=0.9hrs  END=-1
*
*ADD - the routed flows from 14, 15, 16, 17, 18 and the flows from 19 & 20
*      to get total flow at the outlet of 19
*
ADD HYD             ID=5  NHYD="CNF-16,18,20,19"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3; and
                    IDfour=  4.
*
******************************************************************************
*
*
* Route the added flows at the outlet of 19 through 23
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-23"  IDin=5
```

```
                    RDT=5min
                    CHLGTH=2130m,   CHSLOPE=0.4(%),
                                    FPSLOPE=0.01(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.150           80.00
                              -0.025           86.00
                               0.150          166.00
                             DISTANCE       ELEVATION
                               0.000           3.300
                               80.00           2.000
                               82.50           0.000
                               83.50           0.000
                               86.00           2.000
                              166.00           3.300
*
*
******************************************************************************
*
*                              S/C 2 - 21
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-21"  DT=5.0min  AREA=132.1ha  DWF=0.000
                    CN=91  IA=3.00mm  N=3  TP=1.0hrs  END=-1
*
******************************************************************************
*
*
* Route 21 through a portion of 23
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-23"  IDin=2
                    RDT=5min
                    CHLGTH=1713m,   CHSLOPE=0.4(%),
                                    FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 2 - 22
*
******************************************************************************
*
```

```
*
CALIB NASHYD        ID=2  NHYD="2-22"  DT=5.0min  AREA=109.9ha  DWF=0.000
                    CN=90  IA=3.20mm  N=3  TP=0.8hrs  END=-1
*
******************************************************************************
*
*
* Route 22 through a portion of 23
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-23"  IDin=2
                    RDT=5min
                    CHLGTH=1713m,   CHSLOPE=0.4(%),
                                    FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           5.00
                              -0.030           7.00
                               0.050          12.00
                             DISTANCE       ELEVATION
                               0.000          5.000
                               5.000          1.000
                               5.450          0.000
                               6.550          0.000
                               7.000          1.000
                               12.00          5.000
*
*
******************************************************************************
*
*                              S/C 2 - 24
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-24"  DT=5.0min  AREA=60.9ha  DWF=0.000
                    CN=89  IA=3.40mm  N=3  TP=0.6hrs  END=-1
*
******************************************************************************
*
*                              S/C 2 - 23
*
******************************************************************************
*
*
CALIB NASHYD        ID=5  NHYD="2-23"  DT=5.0min  AREA=214.0ha  DWF=0.000
                    CN=88  IA=3.40mm  N=3  TP=0.8hrs  END=-1
*
* All the catchments to the Welland River
*
ADD HYD             ID=6  NHYD="CNF-END"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3;
                    IDfour=  4; and
                    IDfive=  5.
*
```

```
*****************************************************************************
*
*                              S/C 3 - 25
*
*****************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="3-25"  DT=5.0min  AREA=108.2ha  DWF=0.000
                    CN=80  IA=6.40mm  N=3  TP=1.7hrs  END=-1
*
*****************************************************************************
*
*
* Route 25 through 26
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-26"  IDin=1
                    RDT=5min
                    CHLGTH=5650m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*****************************************************************************
*
*                              S/C 3 - 27
*
*****************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="3-27"  DT=5.0min  AREA=99.1ha  DWF=0.000
                    CN=84  IA=4.80mm  N=3  TP=1.3hrs  END=-1
*
*****************************************************************************
*
*
* Route 27 through 26
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-26"  IDin=1
                    RDT=5min
                    CHLGTH=4070m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
```

```
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 3 - 28
*
******************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="3-28"  DT=5.0min  AREA=59.2ha  DWF=0.000
                    CN=79  IA=6.80mm  N=3  TP=2.6hrs  END=-1
*
******************************************************************************
*
*
* Route 28 through 26
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-26"  IDin=1
                    RDT=5min
                    CHLGTH=1940m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 3 - 29
*
******************************************************************************
*
*
CALIB NASHYD        ID=1  NHYD="100"  DT=5.0min  AREA=100.7ha  DWF=0.000
                    CN=79  IA=6.80mm  N=3  TP=2.3hrs  END=-1
*
******************************************************************************
*
*                              S/C 3 - 26
*
******************************************************************************
*
```

```
*
CALIB STANDHYD      ID=5  NHYD="3-26"   DT=5.0min  AREA=439.7ha
                    XIMP=0.35  TIMP=0.40  DWF=0.000  LOSS=2  CN=73
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   9.40   2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1712 0.015  0.000
                    END=-1
*
* Add total flows to confluence of 29 + 26
*
ADD HYD             ID=6  NHYD="CNF-25,27,28,29,& 26"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3;
                    IDfour=  4; and
                    IDfive=  5.
*
* Route added flows at confluence of 29 + 26 through 31
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-31"  IDin=6
                    RDT=5min
                    CHLGTH=1145m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=5
                           MANNING'S 'n'    DISTANCE
                               0.090           20.00
                               0.050           23.75
                              -0.030           26.75
                               0.050           30.50
                               0.090           50.50
                             DISTANCE       ELEVATION
                               0.000           5.000
                               20.00           4.000
                               23.75           1.000
                               24.75           0.000
                               25.75           0.000
                               26.75           1.000
                               30.50           4.000
                               50.50           5.000
*
*
******************************************************************************
*
*                              S/C 3 - 30
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-30"  DT=5.0min  AREA=126.0ha  DWF=0.000
                    CN=79  IA=6.80mm  N=3  TP=1.8hrs  END=-1
*
* Route 30 through 31
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-31"  IDin=2
                    RDT=5min
                    CHLGTH=925m,  CHSLOPE=0.4(%),
```

```
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 31
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-31"  DT=5.0min  AREA=59.1ha  DWF=0.000
                    CN=77  IA=7.60mm  N=3  TP=1.2hrs  END=-1
*
* Add 30 + 31
*
ADD HYD             ID=9  NHYD="CNF-30 & 31"
                    IDone=   2; and
                    IDtwo=   3.
*
* Add total flows to outlet of 31
*
ADD HYD             ID=4  NHYD="CNF-26,30 & 31"
                    IDone=   1; and
                    IDtwo=   9.
*
* Route total flows to outlet of 31 through 35
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-35"  IDin=4
                    RDT=5min
                    CHLGTH=8020m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
```

```
*
******************************************************************************
*
*                              S/C 3 - 37
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-37"  DT=5.0min  AREA=71.0ha  DWF=0.000
                    CN=81  IA=6.00mm  N=3  TP=1.0hrs  END=-1
*
* Route 37 through 35
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-35"  IDin=2
                    RDT=5min
                    CHLGTH=10125m, CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 36
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-36"  DT=5.0min  AREA=301.4ha  DWF=0.000
                    CN=82  IA=5.60mm  N=3  TP=3.1hrs  END=-1
*
* Route 36 through a portion of 35
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-35"  IDin=2
                    RDT=5min
                    CHLGTH=1020m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
```

```
                              51.55           0.000
                              52.00           1.000
                             100.00           3.500
*
*******************************************************************************
*
*                             S/C 3 - 35
*
*******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-35"  DT=5.0min  AREA=373.2ha  DWF=0.000
                    CN=78 IA=7.20mm  N=3  TP=4.8hrs  END=-1
*
* Add total flows at outlet of 35
*
ADD HYD             ID=5  NHYD="CNF-31,37,36,& 35"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3; and
                    IDfour=  4.
*
* Route total flows at outlet of 35 through a portion of 34
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-34"  IDin=5
                    RDT=5min
                    CHLGTH=1204m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                              50.00            1.000
                              50.45            0.000
                              51.55            0.000
                              52.00            1.000
                             100.00            3.500
*
*
*******************************************************************************
*
*                             S/C 3 - 32
*
*******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-32"  DT=5.0min  AREA=312.3ha  DWF=0.000
                    CN=82  IA=5.60mm  N=3  TP=2.3hrs  END=-1
*
* Route 32 through 33
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-33"  IDin=2
                    RDT=5min
```

```
                    CHLGTH=2590m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050          50.00
                              -0.030          52.00
                               0.050         100.00
                             DISTANCE       ELEVATION
                               0.000          3.500
                               50.00          1.000
                               50.45          0.000
                               51.55          0.000
                               52.00          1.000
                              100.00          3.500
*
*
******************************************************************************
*
*                              S/C 3 - 33
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-33"  DT=5.0min  AREA=255.0ha  DWF=0.000
                    CN=78  IA=7.20mm  N=3  TP=3.5hrs  END=-1
*
* Add total flows at outlet of 33
*
ADD HYD             ID=4  NHYD="CNF-32 & 33"
                    IDone=   2; and
                    IDtwo=   3.

*
* Route total flows at outlet of 33 through 34
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-34"  IDin=4
                    RDT=5min
                    CHLGTH=7410m,  CHSLOPE=0.4(%),
                                   FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050          50.00
                              -0.030          52.00
                               0.050         100.00
                             DISTANCE       ELEVATION
                               0.000          3.500
                               50.00          1.000
                               50.45          0.000
                               51.55          0.000
                               52.00          1.000
                              100.00          3.500
*
*
******************************************************************************
*
*                              S/C 3 - 34
```

```
*
******************************************************************************
*
*
*
CALIB NASHYD        ID=3  NHYD="3-34"  DT=5.0min  AREA=413.9ha  DWF=0.000
                    CN=79  IA=6.80mm  N=3  TP=4.5hrs  END=-1
*
ADD HYD             ID=4  NHYD="CNF-32+33+34"
                    IDone=   2; and
                    IDtwo=   3.
*
* Add total flows for Twenty mile Creek Catchments
*
ADD HYD             ID=5  NHYD="CNF-END"
                    IDone=   1; and
                    IDtwo=   4.
*
******************************************************************************
*
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=005
                    SCS_005.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=010
                    SCS_010.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=025
                    SCS_025.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=050
                    SCS_050.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=100
                    SCS_100.HYT
*
FINISH
```

```
2
*********************************************************************************
*
* Hamilton Airport Employment Growth District                          JOB: 64758
*
*    Generate Pre Development Flows from study area and surrounding areas
*
*
*
*
*
* 25mm, 4hr and 2, 5, 10, 25, 50, 100 and hurricane hazel
storms,              *
* SCS 24 hour storm distribution
*
* - Rainfall depths estimated based on Hamilton Airport I-D-F data
*
*    for rainfall gauged by AES.
*
*
*
*
*
*                                                       As of: Dec 17, 2009
*
*********************************************************************************
*
*
* Hydrograph Numbering Conventions:
*
*   xxx_x       Local hydrograph for Subcatchment No. xxx.x
*  CNF-xx       Hydrograph added at confluence/node xx
*  CHN-xx       Hydrograph routed through channel reach xx
*  MIN-xx       Diverted minor system hydrograph number xx
*  MAJ-xx       Diverted major system hydrograph number xx
*  P_ab-c       Outflow hydrograph from Stormwater Management Basin a.b-c
*
START                   TIME= 0   METOUT= 0  NSTORM=1  NRUN=001
                        SCS_002.HYT
*
READ STORM              STORM_FILENAME="STORM.001"
*
*********************************************************************************
*
*                                S/C 1 - 5
*
*********************************************************************************
*
*
CALIB STANDHYD          ID=1  NHYD="1-5"   DT=5.0min  AREA=81.7ha
                        XIMP=0.38  TIMP=0.55  DWF=0.000  LOSS=2  CN=60
                                          STORE  SLOPE% LENGTH  'N'    SCP
                          PERVIOUS AREA:   16.9   2.00     40  0.310  0.000
                        IMPERVIOUS AREA:   2.00   1.00    738 0.015  0.000
                        END=-1
```

```
*
*******************************************************************************
*
*
* Route 5 thought 12
*
ROUTE CHANNEL        IDout=2  NHYD="CHN-12"  IDin=1
                     RDT=5min
                     CHLGTH=450m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                                0.040           50.00
                               -0.030           52.00
                                0.040          100.00
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
*
*******************************************************************************
*
*                                S/C 1 - 12
*
*******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="1-12"   DT=5.0min  AREA=37.5ha
                     XIMP=0.58  TIMP=0.63  DWF=0.000  LOSS=2  CN=61
                                       STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                     IMPERVIOUS AREA:   2.00   1.00     500 0.015  0.000
                     END=-1
*
ADD HYD              ID=3  NHYD="CNF-5&12"
                     IDone=   1; and
                     IDtwo=   2.
*
*******************************************************************************
*
*                               S/C 1 - 6
*
*******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="1-6"   DT=5.0min  AREA=99.2ha
                     XIMP=0.43  TIMP=0.60  DWF=0.000  LOSS=2  CN=68
                                       STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   12.0   2.00     40  0.290  0.000
                     IMPERVIOUS AREA:   2.00   1.00     813 0.015  0.000
                     END=-1
*
```

```
*****************************************************************************
*
*
* Route 6 through 11
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-11"  IDin=1
                    RDT=5min
                    CHLGTH=930m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.040           40.00
                              -0.030           46.00
                               0.040           86.00
                             DISTANCE       ELEVATION
                               0.000           2.000
                               40.00           1.000
                               41.00           0.000
                               45.40           0.000
                               46.00           1.000
                               86.00           2.000
*
*****************************************************************************
*
*                              S/C 1 - 11
*
*****************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-11"   DT=5.0min  AREA=20.6ha
                    XIMP=0.25  TIMP=0.28  DWF=0.000  LOSS=2  CN=61
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                    IMPERVIOUS AREA:   2.00   1.00     371 0.015  0.000
                    END=-1
*
ADD HYD             ID=4  NHYD="CNF-5&12"
                    IDone=   1; and
                    IDtwo=   2.
*
* Add 6 + 11 and 5 +12
*
ADD HYD             ID=1  NHYD="CNF-6&11"
                    IDone=   3; and
                    IDtwo=   4.
*
*****************************************************************************
*
*                              S/C 1 - 7
*
*****************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="1-7"   DT=5.0min  AREA=26.2ha
                    XIMP=0.49  TIMP=0.68  DWF=0.000  LOSS=2  CN=68
                                      STORE  SLOPE% LENGTH  'N'    SCP
```

```
                      PERVIOUS AREA:   12.0   2.00     40  0.260  0.000
                    IMPERVIOUS AREA:   2.00   1.00     418 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 7 through 10
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-10"  IDin=2
                    RDT=5min
                    CHLGTH=1125m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.030           25.00
                              -0.025           27.00
                               0.030           50.00
                             DISTANCE       ELEVATION
                               0.000           1.500
                               25.00           1.000
                               25.45           0.000
                               26.55           0.000
                               27.00           1.000
                               50.00           1.500
*
******************************************************************************
*
*                              S/C 1 - 10
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="1-10"  DT=5.0min  AREA=78.1ha  DWF=0.000
                    CN=72  IA=9.90mm  N=3  TP=1.5hrs  END=-1
*
* Add 7 + 10
*
ADD HYD             ID=4  NHYD="CNF-7&10"
                    IDone=   2; and
                    IDtwo=   3.
*
******************************************************************************
*
*
* Route total flows at outlet of 10 through 11
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-11"  IDin=4
                    RDT=5min
                    CHLGTH=460m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           25.00
                              -0.030           27.00
                               0.050           50.00
```

```
                             DISTANCE       ELEVATION
                               0.000           1.000
                               25.00           0.500
                               25.45           0.000
                               26.55           0.000
                               27.00           0.500
                               50.00           1.000
*
* Add 6 + 11 and 5 +12 and 7 + 10
*
ADD HYD              ID=3  NHYD="CNF-END"
                     IDone=   1; and
                     IDtwo=   2.
*
******************************************************************************
*
*                              S/C 1 - 8
*
******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="1-8"   DT=5.0min  AREA=147.9ha
                     XIMP=0.47  TIMP=0.57  DWF=0.000  LOSS=2  CN=70
                                       STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   10.9   2.00     40  0.270  0.000
                     IMPERVIOUS AREA:   2.00   1.00     993 0.015  0.000
                     END=-1
*
******************************************************************************
*
*
* Route 8 through 9
*
ROUTE CHANNEL        IDout=2  NHYD="CHN-9"  IDin=1
                     RDT=5min
                     CHLGTH=4075m,  CHSLOPE=2.0(%),
                                    FPSLOPE=2.0(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                               0.010           50.00
                              -0.010           52.00
                               0.010          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 1 - 9
*
******************************************************************************
*
```

```
*
CALIB STANDHYD       ID=1  NHYD="1-9"   DT=5.0min  AREA=424.8ha
                     XIMP=0.20  TIMP=0.23  DWF=0.000  LOSS=2  CN=69
                                      STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   11.4   2.00     40  0.220  0.000
                     IMPERVIOUS AREA:   2.00   1.00   1683  0.015  0.000
                     END=-1
*
* Add 8 and 9
*
ADD HYD              ID=3  NHYD="CNF-8&9"
                     IDone=   1; and
                     IDtwo=   2.
*
******************************************************************************
*
*                               S/C 1 - 13B
*
******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="1-13B"   DT=5.0min  AREA=200.9ha
                     XIMP=0.20  TIMP=0.24  DWF=0.000  LOSS=2  CN=66
                                      STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   13.1   2.00     40  0.290  0.000
                     IMPERVIOUS AREA:   2.00   1.00    1157 0.015  0.000
                     END=-1
*
******************************************************************************
*
*
* Route 8 and 9 through 13b
*
ROUTE CHANNEL        IDout=2  NHYD="CHN-13B"  IDin=3
                     RDT=5min
                     CHLGTH=1225m,  CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                                0.045           50.00
                               -0.020           52.00
                                0.045          100.00
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
ADD HYD              ID=3  NHYD="CNF-END"
                     IDone=   1; and
                     IDtwo=   2.
*
******************************************************************************
*
```

```
*                                S/C 1 - 13A
*******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-13A"   DT=5.0min  AREA=35.6ha
                    XIMP=0.55  TIMP=0.61  DWF=0.000  LOSS=2  CN=61
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                    IMPERVIOUS AREA:   2.00   1.00     487 0.015  0.000
                    END=-1
*
*******************************************************************************
*
*                                S/C 2 - 14
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="2-14"   DT=5.0min  AREA=106.3ha
                    XIMP=0.22  TIMP=0.33  DWF=0.000  LOSS=2  CN=69
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   11.4   2.00     40  0.250  0.000
                    IMPERVIOUS AREA:   2.00   1.00     842 0.015  0.000
                    END=-1
*
*******************************************************************************
*
*
*******************************************************************************
*
*                                S/C 2 - 15
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="2-15"   DT=5.0min  AREA=214.7ha
                    XIMP=0.25  TIMP=0.38  DWF=0.000  LOSS=2  CN=72
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   9.9    2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1196 0.015  0.000
                    END=-1
*******************************************************************************
*
*
* Add 14  + 15
*
ADD HYD             ID=3  NHYD="CNF-14 & 15"
                    IDone=   1;
                    IDtwo=   2;
*
* Route 14 and 15 through 16
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-16"  IDin=3
                    RDT=5min
                    CHLGTH=1000m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
```

```
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.045           50.00
                              -0.030           52.00
                               0.045          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 2 - 17
*
******************************************************************************
*
*
CALIB STANDHYD      ID=3  NHYD="2-17"   DT=5.0min  AREA=393.7ha
                    XIMP=0.26  TIMP=0.44  DWF=0.000  LOSS=2  CN=78
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.2    2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1620 0.015  0.000
                    END=-1
*
******************************************************************************
*
*                              S/C 2 - 16
*
******************************************************************************
*
*
CALIB STANDHYD      ID=4  NHYD="2-16"   DT=5.0min  AREA=87.0ha
                    XIMP=0.30  TIMP=0.37  DWF=0.000  LOSS=2  CN=74
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   8.9    2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00     762 0.015  0.000
                    END=-1
*
* Add 14, 15, 16 and 17
*
ADD HYD             ID=5  NHYD="CNF-14,15,17,&16"
                    IDone=   1;
                    IDtwo=   3; and
                    IDthree= 4.
*
******************************************************************************
*
*
* Route 14, 15, 16 & 17 through 19
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-19"  IDin=5
                    RDT=5min
                    CHLGTH=1365m,  CHSLOPE=1.0(%),
```

```
                               FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           80.00
                              -0.025           86.00
                               0.050          166.00
                             DISTANCE       ELEVATION
                               0.000           4.300
                               80.00           1.000
                               82.50           0.000
                               83.50           0.000
                               86.00           1.000
                              166.00           4.300
*
******************************************************************************
*
*                              S/C 2 - 18
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-18"  DT=5.0min  AREA=60.7ha  DWF=0.000
                    CN=83  IA=5.20mm  N=3  TP=1.62hrs  END=-1
*
******************************************************************************
*
*
* Route 18 through a portion of 19 to the outlet of 19
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-19"  IDin=2
                    RDT=5min
                    CHLGTH=375m,   CHSLOPE=0.4(%),
                                   FPSLOPE=0.01(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.150           80.00
                              -0.025           86.00
                               0.150          166.00
                             DISTANCE       ELEVATION
                               0.000           2.300
                               80.00           1.000
                               82.50           0.000
                               83.50           0.000
                               86.00           1.000
                              166.00           2.300
*
*
******************************************************************************
*
*                              S/C 2 - 20
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-20"  DT=5.0min  AREA=101.1ha  DWF=0.000
                    CN=86  IA=4.10mm  N=3  TP=2.31hrs  END=-1
```

```
*
*******************************************************************************
*
*                              S/C 2 - 19
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=4  NHYD="2-19"   DT=5.0min  AREA=89.8ha
                    XIMP=0.48  TIMP=0.52  DWF=0.000  LOSS=2  CN=77
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.6    2.00     40  0.260  0.000
                    IMPERVIOUS AREA:   2.00   1.00     774 0.015  0.000
                    END=-1
*
*ADD - the routed flows from 14, 15, 16, 17, 18 and the flows from 19 & 20
*      to get total flow at the outlet of 19
*
ADD HYD             ID=5  NHYD="CNF-16,18,20,19"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3; and
                    IDfour=  4.
*
*******************************************************************************
*
*
* Route the added flows at the outlet of 19 through 23
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-23"  IDin=5
                    RDT=5min
                    CHLGTH=2130m,   CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           80.00
                              -0.025           86.00
                               0.050          166.00
                             DISTANCE       ELEVATION
                               0.000           4.300
                               80.00           2.000
                               82.50           0.000
                               83.50           0.000
                               86.00           2.000
                              166.00           4.300
*
*
*******************************************************************************
*
*                              S/C 2 - 21
*
*******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-21"  DT=5.0min  AREA=132.1ha  DWF=0.000
                    CN=85  IA=4.50mm  N=3  TP=2.19hrs  END=-1
```

```
*
********************************************************************************
*
*
* Route 21 through a portion of 23
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-23"  IDin=2
                    RDT=5min
                    CHLGTH=1713m,   CHSLOPE=0.4(%),
                                    FPSLOPE=0.4(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
********************************************************************************
*
*                              S/C 2 - 22
*
********************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="2-22"   DT=5.0min  AREA=109.9ha
                    XIMP=0.21  TIMP=0.40  DWF=0.000  LOSS=2  CN=82
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   5.6    2.00     40  0.230  0.000
                    IMPERVIOUS AREA:   2.00   1.00     856 0.015  0.000
                    END=-1
*
********************************************************************************
*
*
* Route 22 through a portion of 23
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-23"  IDin=2
                    RDT=5min
                    CHLGTH=1713m,   CHSLOPE=1.0(%),
                                    FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050            5.00
                              -0.030            7.00
                               0.050           12.00
                             DISTANCE       ELEVATION
                               0.000           5.000
                               5.000           1.000
                               5.450           0.000
```

```
                               6.550           0.000
                               7.000           1.000
                               12.00           5.000
*
*
******************************************************************************
*
*                              S/C 2 - 24
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="2-24"   DT=5.0min  AREA=60.9ha
                    XIMP=0.21  TIMP=0.27  DWF=0.000  LOSS=2  CN=80
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   6.4    2.00     40  0.180  0.000
                    IMPERVIOUS AREA:   2.00   1.00     637 0.015  0.000
                    END=-1
*
******************************************************************************
*
*                              S/C 2 - 23
*
******************************************************************************
*
*
CALIB NASHYD        ID=5  NHYD="2-23"  DT=5.0min  AREA=214.0ha  DWF=0.000
                    CN=88  IA=3.40mm  N=3  TP=0.8hrs  END=-1
*
* All the catchments to the Welland River
*
ADD HYD             ID=6  NHYD="CNF-END"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3;
                    IDfour=  4; and
                    IDfive=  5.
*
******************************************************************************
*
*                              S/C 3 - 25
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="2-25"   DT=5.0min  AREA=108.2ha
                    XIMP=0.44  TIMP=0.53  DWF=0.000  LOSS=2  CN=78
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.2    2.00     40  0.310  0.000
                    IMPERVIOUS AREA:   2.00   1.00     849 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 25 through 26
```

```
*
ROUTE CHANNEL        IDout=2  NHYD="CHN-26"  IDin=1
                     RDT=5min
                     CHLGTH=5650m,  CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                                0.015           50.00
                               -0.005           52.00
                                0.015          100.00
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
*******************************************************************************
*
*                               S/C 3 - 27
*
*******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="2-27"   DT=5.0min  AREA=99.1ha
                     XIMP=0.42  TIMP=0.54  DWF=0.000  LOSS=2  CN=81
                                         STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   6.0    2.00     40  0.310  0.000
                     IMPERVIOUS AREA:   2.00   1.00     813 0.015  0.000
                     END=-1
*
*******************************************************************************
*
*
* Route 27 through 26
*
ROUTE CHANNEL        IDout=3  NHYD="CHN-26"  IDin=1
                     RDT=5min
                     CHLGTH=4070m,  CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                                0.015           50.00
                               -0.005           52.00
                                0.015          100.00
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
*******************************************************************************
*
```

```
*                              S/C 3 - 28
*
******************************************************************************
*
*
CALIB STANDHYD         ID=1  NHYD="2-28"   DT=5.0min  AREA=59.2ha
                       XIMP=0.57  TIMP=0.64  DWF=0.000  LOSS=2  CN=77
                                            STORE  SLOPE% LENGTH  'N'    SCP
                         PERVIOUS AREA:    7.6    2.00     40  0.310  0.000
                       IMPERVIOUS AREA:    2.00   1.00     628 0.015  0.000
                       END=-1
*
******************************************************************************
*
*
* Route 28 through 26
*
ROUTE CHANNEL          IDout=4  NHYD="CHN-26"  IDin=1
                       RDT=5min
                       CHLGTH=1940m,  CHSLOPE=1.5(%),
                                      FPSLOPE=1.5(%),
                       SECNUM=1       NSEG=3
                              MANNING'S 'n'    DISTANCE
                                  0.015           50.00
                                 -0.005           52.00
                                  0.015          100.00
                                DISTANCE       ELEVATION
                                  0.000           3.500
                                  50.00           1.000
                                  50.45           0.000
                                  51.55           0.000
                                  52.00           1.000
                                 100.00           3.500
*
******************************************************************************
*
*                              S/C 3 - 29
*
******************************************************************************
*
*
CALIB STANDHYD         ID=1  NHYD="100"   DT=5.0min  AREA=100.7ha
                       XIMP=0.48  TIMP=0.56  DWF=0.000  LOSS=2  CN=76
                                            STORE  SLOPE% LENGTH  'N'    SCP
                         PERVIOUS AREA:    8.0    2.00     40  0.320  0.000
                       IMPERVIOUS AREA:    2.00   1.00     819 0.015  0.000
                       END=-1
*
******************************************************************************
*
*                              S/C 3 - 26
*
******************************************************************************
*
*
CALIB STANDHYD         ID=5  NHYD="3-26"   DT=5.0min  AREA=439.7ha
```

```
                    XIMP=0.35  TIMP=0.40  DWF=0.000  LOSS=2  CN=73
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   9.40   2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1712 0.015  0.000
                    END=-1
*
* Add total flows to confluence of 29 + 26
*
ADD HYD             ID=6  NHYD="CNF-25,27,28,29,& 26"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3;
                    IDfour=  4; and
                    IDfive=  5.
*
* Route added flows at confluence of 29 + 26 through 31
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-31"  IDin=6
                    RDT=5min
                    CHLGTH=1145m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=5
                           MANNING'S 'n'    DISTANCE
                               0.090           20.00
                               0.050           23.75
                              -0.030           26.75
                               0.050           30.50
                               0.090           50.50
                             DISTANCE       ELEVATION
                               0.000           5.000
                               20.00           4.000
                               23.75           1.000
                               24.75           0.000
                               25.75           0.000
                               26.75           1.000
                               30.50           4.000
                               50.50           5.000
*
*
******************************************************************************
*
*                              S/C 3 - 30
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="3-30"   DT=5.0min  AREA=126.0ha
                    XIMP=0.41  TIMP=0.54  DWF=0.000  LOSS=2  CN=77
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.6    2.00     40  0.310  0.000
                    IMPERVIOUS AREA:   2.00   1.00     917 0.015  0.000
                    END=-1
*
* Route 30 through 31
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-31"  IDin=2
```

```
                    RDT=5min
                    CHLGTH=925m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.020           50.00
                              -0.010           52.00
                               0.020          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 31
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-31"  DT=5.0min  AREA=59.1ha  DWF=0.000
                    CN=77  IA=7.60mm  N=3  TP=1.2hrs  END=-1
*
* Add 30 + 31
*
ADD HYD             ID=9  NHYD="CNF-30 & 31"
                    IDone=   2; and
                    IDtwo=   3.
*
* Add total flows to outlet of 31
*
ADD HYD             ID=4  NHYD="CNF-26,30 & 31"
                    IDone=   1; and
                    IDtwo=   9.
*
* Route total flows to outlet of 31 through 35
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-35"  IDin=4
                    RDT=5min
                    CHLGTH=8020m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.005           50.00
                              -0.004           52.00
                               0.005          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
```

```
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 37
*
******************************************************************************
*
*
CALIB STANDHYD       ID=2  NHYD="3-37"   DT=5.0min  AREA=71.0ha
                     XIMP=0.38  TIMP=0.60  DWF=0.000  LOSS=2  CN=81
                                       STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   6.0    2.00     40  0.250  0.000
                     IMPERVIOUS AREA:   2.00   1.00     688 0.015  0.000
                     END=-1
*
* Route 37 through 35
*
ROUTE CHANNEL        IDout=3  NHYD="CHN-35"  IDin=2
                     RDT=5min
                     CHLGTH=10125m, CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                               0.010           50.00
                              -0.003           52.00
                               0.010          100.00
                              DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 36
*
******************************************************************************
*
*
CALIB NASHYD         ID=2  NHYD="3-36"  DT=5.0min  AREA=301.4ha  DWF=0.000
                     CN=82  IA=5.60mm  N=3  TP=3.1hrs  END=-1
*
* Route 36 through a portion of 35
*
ROUTE CHANNEL        IDout=4  NHYD="CHN-35"  IDin=2
                     RDT=5min
                     CHLGTH=1020m,  CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                               0.015           50.00
```

```
                                -0.005           52.00
                                 0.015          100.00
                               DISTANCE       ELEVATION
                                 0.000           3.500
                                 50.00           1.000
                                 50.45           0.000
                                 51.55           0.000
                                 52.00           1.000
                                100.00           3.500
*
******************************************************************************
*
*                                S/C 3 - 35
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-35"  DT=5.0min  AREA=373.2ha  DWF=0.000
                    CN=78 IA=7.20mm  N=3  TP=4.8hrs  END=-1
*
* Add total flows at outlet of 35
*
ADD HYD             ID=5  NHYD="CNF-31,37,36,& 35"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3; and
                    IDfour=  4.
*
* Route total flows at outlet of 35 through a portion of 34
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-34"  IDin=5
                    RDT=5min
                    CHLGTH=1204m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                                 0.050           50.00
                                -0.025           52.00
                                 0.050          100.00
                               DISTANCE       ELEVATION
                                 0.000           3.500
                                 50.00           1.000
                                 50.45           0.000
                                 51.55           0.000
                                 52.00           1.000
                                100.00           3.500
*
*
******************************************************************************
*
*                                S/C 3 - 32
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="3-32"   DT=5.0min  AREA=312.3ha
```

```
                    XIMP=0.46  TIMP=0.61  DWF=0.000  LOSS=2  CN=82
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   5.6    2.00     40  0.270  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1443 0.015  0.000
                    END=-1
*
* Route 32 through 33
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-33"  IDin=2
                    RDT=5min
                    CHLGTH=2590m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.005           52.00
                               0.015          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 33
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-33"  DT=5.0min  AREA=255.0ha  DWF=0.000
                    CN=87  IA=3.80mm  N=3  TP=2.32hrs  END=-1
*
* Add total flows at outlet of 33
*
ADD HYD             ID=4  NHYD="CNF-32 & 33"
                    IDone=   2; and
                    IDtwo=   3.

*
* Route total flows at outlet of 33 through 34
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-34"  IDin=4
                    RDT=5min
                    CHLGTH=7410m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.003           52.00
                               0.015          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
```

```
                               50.00            1.000
                               50.45            0.000
                               51.55            0.000
                               52.00            1.000
                              100.00            3.500
*
*
******************************************************************************
*
*                              S/C 3 - 34
*
******************************************************************************
*
*
*
CALIB NASHYD        ID=3  NHYD="3-34"  DT=5.0min  AREA=413.9ha  DWF=0.000
                    CN=79  IA=6.80mm  N=3  TP=4.5hrs  END=-1
*
ADD HYD             ID=4  NHYD="CNF-32+33+34"
                    IDone=   2; and
                    IDtwo=   3.
*
* Add total flows for Twenty mile Creek Catchments
*
ADD HYD             ID=5  NHYD="CNF-END"
                    IDone=   1; and
                    IDtwo=   4.
*
******************************************************************************
*
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=005
                    SCS_005.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=010
                    SCS_010.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=025
                    SCS_025.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=050
                    SCS_050.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=100
                    SCS_100.HYT
*
FINISH
```

```
2
*****************************************************************************
*
* Hamilton Airport Employment Growth District                      JOB: 64758
*
*    Generate Post Development Flows with SWM PONDs from study area
*
*    and surrounding areas
*
*
*
*
*
* 25mm, 4hr and 2, 5, 10, 25, 50, 100 and hurricane hazel storms,
*
* SCS 24 hour storm distribution
*
* - Rainfall depths estimated based on Hamilton Airport I-D-F data
*
*    for rainfall gauged by AES.
*
*
*
*
*
*                                                        As of: Feb 11, 2010
*
*****************************************************************************
*
*
* Hydrograph Numbering Conventions:
*
*   xxx_x       Local hydrograph for Subcatchment No. xxx.x
*  CNF-xx       Hydrograph added at confluence/node xx
*  CHN-xx       Hydrograph routed through channel reach xx
*  MIN-xx       Diverted minor system hydrograph number xx
*  MAJ-xx       Diverted major system hydrograph number xx
*  P_ab-c       Outflow hydrograph from Stormwater Management Basin a.b-c
*
START                TIME= 0   METOUT= 0  NSTORM=1  NRUN=001
                     SCS_002.HYT
*
READ STORM           STORM_FILENAME="STORM.001"
*
*****************************************************************************
*
*                               S/C 1 - 5
*
*****************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="1-5"   DT=5.0min  AREA=81.7ha
                     XIMP=0.38  TIMP=0.55  DWF=0.000  LOSS=2  CN=60
                                       STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   16.9   2.00     40  0.310  0.000
                     IMPERVIOUS AREA:   2.00   1.00     738 0.015  0.000
```

```
                    END=-1
*
* Inflow to Detention Pond #S5
*
ROUTE RESERVOIR     ID=9  NHYD="S5"  IDin=1  DT=5.0
                    OUTFLOW     STORAGE
                     (cms)      (ha.m)
                    0.00000     0.00000
                    0.02611     0.09295
                    0.03692     0.18700
                    0.04522     0.28216
                    0.06278     0.37844
                    0.08654     0.47584
                    0.10235     0.57436
                    0.11550     0.67403
                    0.70483     1.01976
                    1.02094     1.37875
                    1.24297     1.75121
                    1.42983     2.13735
                    1.59446     2.53739
                    1.74338     2.95153
                    1.88041     3.38000
                    END=-1
*
******************************************************************************
*
*
* Route 5 thought 12
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-12"  IDin=9
                    RDT=5min
                    CHLGTH=450m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.040           50.00
                              -0.030           52.00
                               0.040          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                               S/C 1 - 12
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-12"   DT=5.0min  AREA=37.5ha
                    XIMP=0.58  TIMP=0.63  DWF=0.000  LOSS=2  CN=61
```

```
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                    IMPERVIOUS AREA:   2.00   1.00     500 0.015  0.000
                    END=-1
*
ADD HYD             ID=3  NHYD="CNF-5&12"
                    IDone=   1; and
                    IDtwo=   2.
*
******************************************************************************
*
*                              S/C 1 - 6
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-6"   DT=5.0min  AREA=99.2ha
                    XIMP=0.43  TIMP=0.60  DWF=0.000  LOSS=2  CN=68
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   12.0   2.00     40  0.290  0.000
                    IMPERVIOUS AREA:   2.00   1.00     813 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 6 through 11
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-11"  IDin=1
                    RDT=5min
                    CHLGTH=930m,  CHSLOPE=1.0(%),
                                  FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.040           40.00
                              -0.030           46.00
                               0.040           86.00
                             DISTANCE       ELEVATION
                               0.000           2.000
                               40.00           1.000
                               41.00           0.000
                               45.40           0.000
                               46.00           1.000
                               86.00           2.000
*
******************************************************************************
*
*                              S/C 1 - 11
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-11"   DT=5.0min  AREA=20.6ha
                    XIMP=0.25  TIMP=0.28  DWF=0.000  LOSS=2  CN=61
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
```

```
                    IMPERVIOUS AREA:   2.00   1.00     371 0.015  0.000
                    END=-1
*
ADD HYD             ID=4  NHYD="CNF-5&12"
                    IDone=   1; and
                    IDtwo=   2.
*
* Add 6 + 11 and 5 +12
*
ADD HYD             ID=1  NHYD="CNF-6&11"
                    IDone=   3; and
                    IDtwo=   4.
*
******************************************************************************
*
*                              S/C 1 - 7
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="1-7"   DT=5.0min  AREA=26.2ha
                    XIMP=0.49  TIMP=0.68  DWF=0.000  LOSS=2  CN=68
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   12.0   2.00      40  0.260  0.000
                    IMPERVIOUS AREA:   2.00   1.00     418 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 7 through 10
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-10"  IDin=2
                    RDT=5min
                    CHLGTH=1125m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.030           25.00
                              -0.025           27.00
                               0.030           50.00
                             DISTANCE       ELEVATION
                               0.000           1.500
                               25.00           1.000
                               25.45           0.000
                               26.55           0.000
                               27.00           1.000
                               50.00           1.500
*
******************************************************************************
*
*                              S/C 1 - 10
*
******************************************************************************
*
*
```

```
CALIB NASHYD        ID=2  NHYD="1-10"  DT=5.0min  AREA=78.1ha  DWF=0.000
                    CN=72  IA=9.90mm  N=3  TP=1.5hrs  END=-1
*
* Add 7 + 10
*
ADD HYD             ID=4  NHYD="CNF-7&10"
                    IDone=   2; and
                    IDtwo=   3.
*
*******************************************************************************
*
*
* Route total flows at outlet of 10 through 11
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-11"  IDin=4
                    RDT=5min
                    CHLGTH=460m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           25.00
                              -0.030           27.00
                               0.050           50.00
                             DISTANCE       ELEVATION
                               0.000           1.000
                               25.00           0.500
                               25.45           0.000
                               26.55           0.000
                               27.00           0.500
                               50.00           1.000
*
* Add 6 + 11 and 5 +12 and 7 + 10
*
ADD HYD             ID=3  NHYD="CNF-END"
                    IDone=   1; and
                    IDtwo=   2.
*
*******************************************************************************
*
*                              S/C 1 - 8
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-8"   DT=5.0min  AREA=147.9ha
                    XIMP=0.47  TIMP=0.57  DWF=0.000  LOSS=2  CN=70
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   10.9   2.00     40  0.270  0.000
                    IMPERVIOUS AREA:   2.00   1.00     993 0.015  0.000
                    END=-1
*
*******************************************************************************
*
*
* Route 8 through 9
*
```

```
ROUTE CHANNEL       IDout=2  NHYD="CHN-9"  IDin=1
                    RDT=5min
                    CHLGTH=4075m,  CHSLOPE=2.0(%),
                                   FPSLOPE=2.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.010           50.00
                              -0.010           52.00
                               0.010          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 1 - 9
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-9"   DT=5.0min  AREA=424.8ha
                    XIMP=0.20  TIMP=0.23  DWF=0.000  LOSS=2  CN=69
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   11.4   2.00     40  0.220  0.000
                    IMPERVIOUS AREA:   2.00   1.00   1683  0.015  0.000
                    END=-1
*
* Add 8 and 9
*
ADD HYD             ID=3  NHYD="CNF-8&9"
                    IDone=   1; and
                    IDtwo=   2.
*
******************************************************************************
*
*                              S/C 1 - 13B
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="1-13B"   DT=5.0min  AREA=200.9ha
                    XIMP=0.20  TIMP=0.24  DWF=0.000  LOSS=2  CN=66
                                  STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   13.1   2.00     40  0.290  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1157 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 8 and 9 through 13b
*
```

```
ROUTE CHANNEL        IDout=2  NHYD="CHN-13B"  IDin=3
                     RDT=5min
                     CHLGTH=1225m,  CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                     SECNUM=1       NSEG=3
                            MANNING'S 'n'    DISTANCE
                                0.045           50.00
                               -0.020           52.00
                                0.045          100.00
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
ADD HYD              ID=3  NHYD="CNF-END"
                     IDone=   1; and
                     IDtwo=   2.
*
******************************************************************************
*
*                               S/C 1 - 13A
******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="1-13A"   DT=5.0min  AREA=35.6ha
                     XIMP=0.55  TIMP=0.61  DWF=0.000  LOSS=2  CN=61
                                      STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   16.2   2.00     40  0.280  0.000
                     IMPERVIOUS AREA:   2.00   1.00     487 0.015  0.000
                     END=-1
*
******************************************************************************
*
*                               S/C 2 - 14
*
******************************************************************************
*
*
CALIB STANDHYD       ID=1  NHYD="2-14"   DT=5.0min  AREA=106.3ha
                     XIMP=0.22  TIMP=0.33  DWF=0.000  LOSS=2  CN=69
                                      STORE  SLOPE% LENGTH  'N'    SCP
                       PERVIOUS AREA:   11.4   2.00     40  0.250  0.000
                     IMPERVIOUS AREA:   2.00   1.00     842 0.015  0.000
                     END=-1
*
******************************************************************************
*
*
******************************************************************************
*
*                               S/C 2 - 15
*
******************************************************************************
```

```
*
*
CALIB STANDHYD      ID=2  NHYD="2-15"   DT=5.0min  AREA=214.7ha
                    XIMP=0.25  TIMP=0.38  DWF=0.000  LOSS=2  CN=72
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   9.9    2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1196 0.015  0.000
                    END=-1
*******************************************************************************
*
*
* Add 14  + 15
*
ADD HYD             ID=3  NHYD="CNF-14 & 15"
                    IDone=   1;
                    IDtwo=   2;
*
* Route 14 and 15 through 16
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-16"  IDin=3
                    RDT=5min
                    CHLGTH=1000m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.045           50.00
                              -0.030           52.00
                               0.045          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*******************************************************************************
*
*                              S/C 2 - 17
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=3  NHYD="2-17"   DT=5.0min  AREA=393.7ha
                    XIMP=0.26  TIMP=0.44  DWF=0.000  LOSS=2  CN=78
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.2    2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1620 0.015  0.000
                    END=-1
*
*
* Inflow to Detention Pond #W17
*
ROUTE RESERVOIR     ID=9  NHYD="W17"  IDin=3  DT=5.0
                    OUTFLOW     STORAGE
                     (cms)      (ha.m)
```

```
                    0.00000     0.00000
                    0.02570     0.44032
                    0.03635     0.88290
                    0.04452     1.32775
                    0.05674     1.77487
                    0.08373     2.22427
                    0.09970     2.67595
                    0.11284     3.12992
                    0.75665     4.74715
                    2.42319     6.39304
                    5.31359     8.06780
                    9.68118     9.77166
                    16.4235     11.5048
                    25.0732     13.2675
                    27.9300     15.0600
                    END=-1
*
******************************************************************************
*
*                              S/C 2 - 16
*
******************************************************************************
*
*
CALIB STANDHYD      ID=4  NHYD="2-16"   DT=5.0min  AREA=87.0ha
                    XIMP=0.30  TIMP=0.37  DWF=0.000  LOSS=2  CN=74
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   8.9    2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00     762 0.015  0.000
                    END=-1
*
* Add 14, 15, 16 and 17
*
ADD HYD             ID=5  NHYD="CNF-14,15,17,&16"
                    IDone=   1;
                    IDtwo=   9; and
                    IDthree= 4.
*
******************************************************************************
*
*
* Route 14, 15, 16 & 17 through 19
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-19"  IDin=5
                    RDT=5min
                    CHLGTH=1365m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           80.00
                              -0.025           86.00
                               0.050          166.00
                             DISTANCE       ELEVATION
                               0.000           4.300
                               80.00           1.000
                               82.50           0.000
```

```
                              83.50           0.000
                              86.00           1.000
                             166.00           4.300
*
******************************************************************************
*
*                             S/C 2 - 18
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-18"  DT=5.0min  AREA=60.7ha  DWF=0.000
                    CN=83  IA=5.20mm  N=3  TP=1.62hrs  END=-1
*
******************************************************************************
*
*
* Route 18 through a portion of 19 to the outlet of 19
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-19"  IDin=2
                    RDT=5min
                    CHLGTH=375m,   CHSLOPE=0.4(%),
                                   FPSLOPE=0.01(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.150           80.00
                              -0.025           86.00
                               0.150          166.00
                             DISTANCE       ELEVATION
                               0.000           2.300
                              80.00            1.000
                              82.50            0.000
                              83.50            0.000
                              86.00            1.000
                             166.00            2.300
*
*
******************************************************************************
*
*                             S/C 2 - 20
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-20"  DT=5.0min  AREA=101.1ha  DWF=0.000
                    CN=86  IA=4.10mm  N=3  TP=2.31hrs  END=-1
*
******************************************************************************
*
*                             S/C 2 - 19
*
******************************************************************************
*
*
CALIB STANDHYD      ID=4  NHYD="2-19"   DT=5.0min  AREA=89.8ha
                    XIMP=0.48  TIMP=0.52  DWF=0.000  LOSS=2  CN=77
```

```
                                        STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.6    2.00     40  0.260  0.000
                    IMPERVIOUS AREA:   2.00   1.00     774 0.015  0.000
                    END=-1
*
*ADD - the routed flows from 14, 15, 16, 17, 18 and the flows from 19 & 20
*      to get total flow at the outlet of 19
*
ADD HYD             ID=5  NHYD="CNF-16,18,20,19"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3; and
                    IDfour=  4.
*
******************************************************************************
*
*
* Route the added flows at the outlet of 19 through 23
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-23"  IDin=5
                    RDT=5min
                    CHLGTH=2130m,   CHSLOPE=1.5(%),
                                    FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           80.00
                              -0.025           86.00
                               0.050          166.00
                             DISTANCE       ELEVATION
                               0.000           4.300
                               80.00           2.000
                               82.50           0.000
                               83.50           0.000
                               86.00           2.000
                              166.00           4.300
*
*
******************************************************************************
*
*                              S/C 2 - 21
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="2-21"  DT=5.0min  AREA=132.1ha  DWF=0.000
                    CN=85  IA=4.50mm  N=3  TP=2.19hrs  END=-1
*
******************************************************************************
*
*
* Route 21 through a portion of 23
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-23"  IDin=2
                    RDT=5min
                    CHLGTH=1713m,   CHSLOPE=0.4(%),
                                    FPSLOPE=0.4(%),
```

```
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.030           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 2 - 22
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="2-22"   DT=5.0min  AREA=109.9ha
                    XIMP=0.21  TIMP=0.40  DWF=0.000  LOSS=2  CN=82
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   5.6    2.00     40  0.230  0.000
                    IMPERVIOUS AREA:   2.00   1.00     856 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 22 through a portion of 23
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-23"  IDin=2
                    RDT=5min
                    CHLGTH=1713m,   CHSLOPE=1.0(%),
                                    FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050            5.00
                              -0.030            7.00
                               0.050           12.00
                             DISTANCE       ELEVATION
                               0.000           5.000
                               5.000           1.000
                               5.450           0.000
                               6.550           0.000
                               7.000           1.000
                               12.00           5.000
*
*
******************************************************************************
*
*                              S/C 2 - 24
*
******************************************************************************
```

```
*
*
CALIB STANDHYD      ID=2  NHYD="2-24"   DT=5.0min  AREA=60.9ha
                    XIMP=0.21  TIMP=0.27  DWF=0.000  LOSS=2  CN=80
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   6.4    2.00     40  0.180  0.000
                    IMPERVIOUS AREA:   2.00   1.00     637 0.015  0.000
                    END=-1
*
******************************************************************************
*
*                              S/C 2 - 23
*
******************************************************************************
*
*
CALIB NASHYD        ID=5  NHYD="2-23"  DT=5.0min  AREA=214.0ha  DWF=0.000
                    CN=88  IA=3.40mm  N=3  TP=0.8hrs  END=-1
*
* All the catchments to the Welland River
*
ADD HYD             ID=6  NHYD="CNF-END"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3;
                    IDfour=  4; and
                    IDfive=  5.
*
******************************************************************************
*
*                              S/C 3 - 25
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="2-25"   DT=5.0min  AREA=108.2ha
                    XIMP=0.44  TIMP=0.53  DWF=0.000  LOSS=2  CN=78
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.2    2.00     40  0.310  0.000
                    IMPERVIOUS AREA:   2.00   1.00     849 0.015  0.000
                    END=-1
*
******************************************************************************
*
*
* Route 25 through 26
*
ROUTE CHANNEL       IDout=2  NHYD="CHN-26"  IDin=1
                    RDT=5min
                    CHLGTH=5650m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.005           52.00
                               0.015          100.00
```

```
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
*******************************************************************************
*
*                               S/C 3 - 27
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="2-27"   DT=5.0min  AREA=99.1ha
                    XIMP=0.42  TIMP=0.54  DWF=0.000  LOSS=2  CN=81
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   6.0    2.00     40  0.310  0.000
                    IMPERVIOUS AREA:   2.00   1.00     813 0.015  0.000
                    END=-1
*
*******************************************************************************
*
*
* Route 27 through 26
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-26"  IDin=1
                    RDT=5min
                    CHLGTH=4070m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                                0.015           50.00
                               -0.005           52.00
                                0.015          100.00
                              DISTANCE       ELEVATION
                                0.000           3.500
                                50.00           1.000
                                50.45           0.000
                                51.55           0.000
                                52.00           1.000
                               100.00           3.500
*
*******************************************************************************
*
*                               S/C 3 - 28
*
*******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="2-28"   DT=5.0min  AREA=59.2ha
                    XIMP=0.57  TIMP=0.64  DWF=0.000  LOSS=2  CN=77
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.6    2.00     40  0.310  0.000
                    IMPERVIOUS AREA:   2.00   1.00     628 0.015  0.000
```

```
                    END=-1
*
******************************************************************************
*
*
* Route 28 through 26
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-26"  IDin=1
                    RDT=5min
                    CHLGTH=1940m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.005           52.00
                               0.015          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 3 - 29
*
******************************************************************************
*
*
CALIB STANDHYD      ID=1  NHYD="100"   DT=5.0min  AREA=100.7ha
                    XIMP=0.48  TIMP=0.56  DWF=0.000  LOSS=2  CN=76
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   8.0    2.00     40  0.320  0.000
                    IMPERVIOUS AREA:   2.00   1.00     819 0.015  0.000
                    END=-1
*
* Inflow to Detention Pond #T29
*
ROUTE RESERVOIR     ID=9  NHYD="T29"  IDin=1  DT=5.0
                    OUTFLOW     STORAGE
                     (cms)      (ha.m)
                    0.00000     0.00000
                    0.02401     0.12860
                    0.03396     0.25820
                    0.04159     0.38881
                    0.04802     0.52043
                    0.07008     0.65307
                    0.08789     0.78673
                    0.10124     0.92141
                    0.42471     1.49574
                    0.78163     2.08825
                    1.63724     2.69918
                    2.13010     3.32877
                    2.52277     3.97728
```

```
                    2.85988     4.64494
                    3.16019     5.33200
                    END=-1
*
******************************************************************************
*
*                              S/C 3 - 26
*
******************************************************************************
*
*
CALIB STANDHYD      ID=5  NHYD="3-26"   DT=5.0min  AREA=439.7ha
                    XIMP=0.35  TIMP=0.40  DWF=0.000  LOSS=2  CN=73
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   9.40   2.00     40  0.240  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1712 0.015  0.000
                    END=-1
*
* Add total flows to confluence of 29 + 26
*
ADD HYD             ID=6  NHYD="CNF-25,27,28,29,& 26"
                    IDone=   9;
                    IDtwo=   2;
                    IDthree= 3;
                    IDfour=  4; and
                    IDfive=  5.
*
* Route added flows at confluence of 29 + 26 through 31
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-31"  IDin=6
                    RDT=5min
                    CHLGTH=1145m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=5
                           MANNING'S 'n'    DISTANCE
                               0.090           20.00
                               0.050           23.75
                              -0.030           26.75
                               0.050           30.50
                               0.090           50.50
                             DISTANCE       ELEVATION
                               0.000           5.000
                               20.00           4.000
                               23.75           1.000
                               24.75           0.000
                               25.75           0.000
                               26.75           1.000
                               30.50           4.000
                               50.50           5.000
*
*
******************************************************************************
*
*                              S/C 3 - 30
*
******************************************************************************
```

```
*
*
CALIB STANDHYD      ID=2  NHYD="3-30"   DT=5.0min  AREA=126.0ha
                    XIMP=0.41  TIMP=0.54  DWF=0.000  LOSS=2  CN=77
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   7.6    2.00     40  0.310  0.000
                    IMPERVIOUS AREA:   2.00   1.00     917 0.015  0.000
                    END=-1
*
* Route 30 through 31
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-31"  IDin=2
                    RDT=5min
                    CHLGTH=925m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.020           50.00
                              -0.010           52.00
                               0.020          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 31
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-31"  DT=5.0min  AREA=59.1ha  DWF=0.000
                    CN=77  IA=7.60mm  N=3  TP=1.2hrs  END=-1
*
* Add 30 + 31
*
ADD HYD             ID=9  NHYD="CNF-30 & 31"
                    IDone=   2; and
                    IDtwo=   3.
*
* Add total flows to outlet of 31
*
ADD HYD             ID=4  NHYD="CNF-26,30 & 31"
                    IDone=   1; and
                    IDtwo=   9.
*
* Route total flows to outlet of 31 through 35
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-35"  IDin=4
                    RDT=5min
                    CHLGTH=8020m,  CHSLOPE=1.5(%),
```

```
                              FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.005          50.00
                              -0.004          52.00
                               0.005         100.00
                             DISTANCE       ELEVATION
                               0.000          3.500
                               50.00          1.000
                               50.45          0.000
                               51.55          0.000
                               52.00          1.000
                              100.00          3.500
*
*
******************************************************************************
*
*                              S/C 3 - 37
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="3-37"   DT=5.0min  AREA=71.0ha
                    XIMP=0.38  TIMP=0.60  DWF=0.000  LOSS=2  CN=81
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   6.0    2.00     40  0.250  0.000
                    IMPERVIOUS AREA:   2.00   1.00     688 0.015  0.000
                    END=-1
*
* Route 37 through 35
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-35"  IDin=2
                    RDT=5min
                    CHLGTH=10125m, CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.010          50.00
                              -0.003          52.00
                               0.010         100.00
                             DISTANCE       ELEVATION
                               0.000          3.500
                               50.00          1.000
                               50.45          0.000
                               51.55          0.000
                               52.00          1.000
                              100.00          3.500
*
*
******************************************************************************
*
*                              S/C 3 - 36
*
******************************************************************************
*
*
```

```
CALIB NASHYD        ID=2  NHYD="3-36"  DT=5.0min  AREA=301.4ha  DWF=0.000
                    CN=82  IA=5.60mm  N=3  TP=3.1hrs  END=-1
*
* Route 36 through a portion of 35
*
ROUTE CHANNEL       IDout=4  NHYD="CHN-35"  IDin=2
                    RDT=5min
                    CHLGTH=1020m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.005           52.00
                               0.015          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
******************************************************************************
*
*                              S/C 3 - 35
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-35"  DT=5.0min  AREA=373.2ha  DWF=0.000
                    CN=78 IA=7.20mm  N=3  TP=4.8hrs  END=-1
*
* Add total flows at outlet of 35
*
ADD HYD             ID=5  NHYD="CNF-31,37,36,& 35"
                    IDone=   1;
                    IDtwo=   2;
                    IDthree= 3; and
                    IDfour=  4.
*
* Route total flows at outlet of 35 through a portion of 34
*
ROUTE CHANNEL       IDout=1  NHYD="CHN-34"  IDin=5
                    RDT=5min
                    CHLGTH=1204m,  CHSLOPE=1.0(%),
                                   FPSLOPE=1.0(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.050           50.00
                              -0.025           52.00
                               0.050          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
```

```
                              52.00           1.000
                             100.00           3.500
*
*
******************************************************************************
*
*                             S/C 3 - 32
*
******************************************************************************
*
*
CALIB STANDHYD      ID=2  NHYD="3-32"   DT=5.0min  AREA=312.3ha
                    XIMP=0.46  TIMP=0.61  DWF=0.000  LOSS=2  CN=82
                                      STORE  SLOPE% LENGTH  'N'    SCP
                      PERVIOUS AREA:   5.6    2.00     40  0.270  0.000
                    IMPERVIOUS AREA:   2.00   1.00    1443 0.015  0.000
                    END=-1
*
* Route 32 through 33
*
ROUTE CHANNEL       IDout=3  NHYD="CHN-33"  IDin=2
                    RDT=5min
                    CHLGTH=2590m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.005           52.00
                               0.015          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                             S/C 3 - 33
*
******************************************************************************
*
*
CALIB NASHYD        ID=2  NHYD="3-33"  DT=5.0min  AREA=255.0ha  DWF=0.000
                    CN=87  IA=3.80mm  N=3  TP=2.32hrs  END=-1
*
* Add total flows at outlet of 33
*
ADD HYD             ID=4  NHYD="CNF-32 & 33"
                    IDone=   2; and
                    IDtwo=   3.
*
* Route total flows at outlet of 33 through 34
*
```

```
ROUTE CHANNEL       IDout=2  NHYD="CHN-34"  IDin=4
                    RDT=5min
                    CHLGTH=7410m,  CHSLOPE=1.5(%),
                                   FPSLOPE=1.5(%),
                    SECNUM=1       NSEG=3
                           MANNING'S 'n'    DISTANCE
                               0.015           50.00
                              -0.003           52.00
                               0.015          100.00
                             DISTANCE       ELEVATION
                               0.000           3.500
                               50.00           1.000
                               50.45           0.000
                               51.55           0.000
                               52.00           1.000
                              100.00           3.500
*
*
******************************************************************************
*
*                              S/C 3 - 34
*
******************************************************************************
*
*
*
CALIB NASHYD        ID=3  NHYD="3-34"  DT=5.0min  AREA=413.9ha  DWF=0.000
                    CN=79  IA=6.80mm  N=3  TP=4.5hrs  END=-1
*
ADD HYD             ID=4  NHYD="CNF-32+33+34"
                    IDone=   2; and
                    IDtwo=   3.
*
* Add total flows for Twenty mile Creek Catchments
*
ADD HYD             ID=5  NHYD="CNF-END"
                    IDone=   1; and
                    IDtwo=   4.
*
******************************************************************************
*
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=005
                    SCS_005.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=010
                    SCS_010.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=025
                    SCS_025.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=050
                    SCS_050.HYT
*
START               TIME= 0   METOUT= 0  NSTORM=1  NRUN=100
                    SCS_100.HYT
```

```
*
FINISH
```

Relevant flows- AEGD Summary

Welland River

NPCA watershed Hydrology Study, Marshall Macklin and Monaghan, 1989

- QUALHYMO used in "quasi-continuous simulation" followed by frequency analysis to determine 2 to 100 yr flows. Continuous data set 1940-1985 (46 years record), used 1977-1981, 1976-1980, 1981-1984 for calibration and 1985-1986, 1981-1985 for verification for respective locations.
- Model was partially calibrated, i.e. calibration was done on two representative subcatchments within selected watershed and modified parameters were then applied to all watersheds. Also no reservoir routing was used.

Welland River Floodplain Mapping Study, Phillips Planning and Engineering Ltd., 1999

- Used the NPCA, 1989 QUALHYMO model.
- All return periods and regional flows were directly abstracted from the 1989 study.
- Influence of Binbrook dam was incorporated and downstream subcatchments were calibrated to Water Survey of Canada Guages.

Location	2yr	5yr	10yr	20yr	50yr	100yr	Reg.
Node 1 – Butter Rd.	40.40	51.70	8.90	65.70	74.40	80.80	164.18
Node 2 – Airport Rd	40.40	51.70	8.90	65.70	74.40	80.80	164.18
Node 3 – Glancaster Rd.	40.40	51.70	8.90	65.70	74.40	80.80	164.18
Node 4 – Whitechurch Rd	40.40	51.70	8.90	65.70	74.40	80.80	164.18
Node 5 – Hwy6 & Chippewa Rd	40.40	51.70	8.90	65.70	74.40	80.80	164.18

20 Mile Creek

NPCA Twenty Mile Creek Floodplain Mapping , Aug 2005 (revised Aug 2007)

- Digital Elevation Model (DEM) generated
- Meteorological data obtained from 100yr IDF curves (for our study area, City of Hamilton IDF used).
- Storms 2000 used the Chicago method to generate 1hr, 12hr and 24hr rainfall totals (mm) for the 100yr event, this was then converted to AES 1hr (urban catchments), 12hr (rural catchments) and SCS II 24hr (mixed use catchments) rainfall hyetographs.
- HEC-HMS used to generate flows using an AES 12hr storm. 12hr AES was selected as it best matched previous results of the MMM, 1989 and the NPCA, 2005 studies.

Location	2yr		5yr		100yr	
	Flow (cms)	Vol (m^3)	Flow (cms)	Vol (m^3)	Flow (cms)	Vol (m^3)
TwCK 57 – Upper James, South of Twenty Mile Rd.	0.75	25.14	1.31	43.84	3.20	160.66
TwCK-60 – D/s of Upper James	1.12	39.27	2.16	75.25	5.72	200.99
ThCK 3 – Upper James, South of English Church Rd.	0.80	17.36	1.36	30.55	3.93	69.91

Sulphur Creek

Garner Neighbourhood Master Drainage Plan, Phillips Engineering, 2005

- Used OTTHYMO89 model (24hr SCS design storms from 1992)
- Ran the continuous QUALHYMO model from the Spencer Creek Watershed Hydrology Study (MacLaren PLansearch, 1990) for sub-areas of the Garner Neighbourhood Watershed.
- No water balance provided.

Future Land use flows without SWM

OTTHYMO Nodes	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr	Reg
101.1	0.71	1.33	1.81	2.47	3.01	3.58	8.5
102.1	1.43	1.62	1.89	2.48	2.99	3.54	10.77
105.2	3.04	4.88	6.38	8.63	10.42	12.37	33.42
103.1	1.43	1.62	1.89	2.48	2.999	3.54	10.77
104A.1	1.93	3.39	4.5	6.2	7.54	9.03	26.28
104C.1	1.36	2.57	3.51	4.85	5.97	7.12	17.17
108.1	0.87	1.16	1.36	1.61	18.1	20.1	2.27

*For future controlled flows see table below.

Garner Neighbourhood Stormwater Management System Investigation (July 23, 2009)

- Existing OTTHYMO model from Garner Neighbourhood Master Drainage Plan(2005) was converted to SWMHYMO and ran using the updated City of Hamilton SCS 24hr design storms, based on the 2004 IDF curve update

Future Controlled Scenario Peak Flows

Nodes	Model Scenario	2 yr	5 yr	10 yr	25 yr	50 yr	100 yr	Reg
104C.1	OTTHYMO Original	1.34	2.53	3.45	4.71	5.77	6.82	16.65
	SWMHYMO w IDF update	1.61	3.16	4.35	6.02	7.36	8.73	17.24
	As above with 55% IMP inc.	1.61	3.16	4.36	6.03	7.36	8.74	17.26
104A.1	OTTHYMO Original	1.20	2.40	3.45	4.83	6.04	7.22	20.57
	SWMHYMO w IDF update	1.51	3.18	4.43	6.29	7.71	9.34	20.86
	As above with 55% IMP inc.	1.68	3.48	4.82	6.87	8.52	10.33	21.00
102.1	OTTHYMO Original	1.34	1.60	1.86	2.45	2.963	3.50	10.53
	SWMHYMO w IDF update	1.47	1.76	2.35	2.99	3.64	4.35	10.28
	As above with 55% IMP inc.	1.49	1.76	2.36	3.00	3.65	4.36	10.28
105.2	OTTHYMO Original	1.96	3.90	5.36	7.32	9.05	10.70	29.12
	SWMHYMO w IDF update	2.43	4.98	6.82	9.31	11.32	13.59	28.89
	As above with 55% IMP inc.	2.60	5.28	7.21	9.90	12.14	14.60	28.93

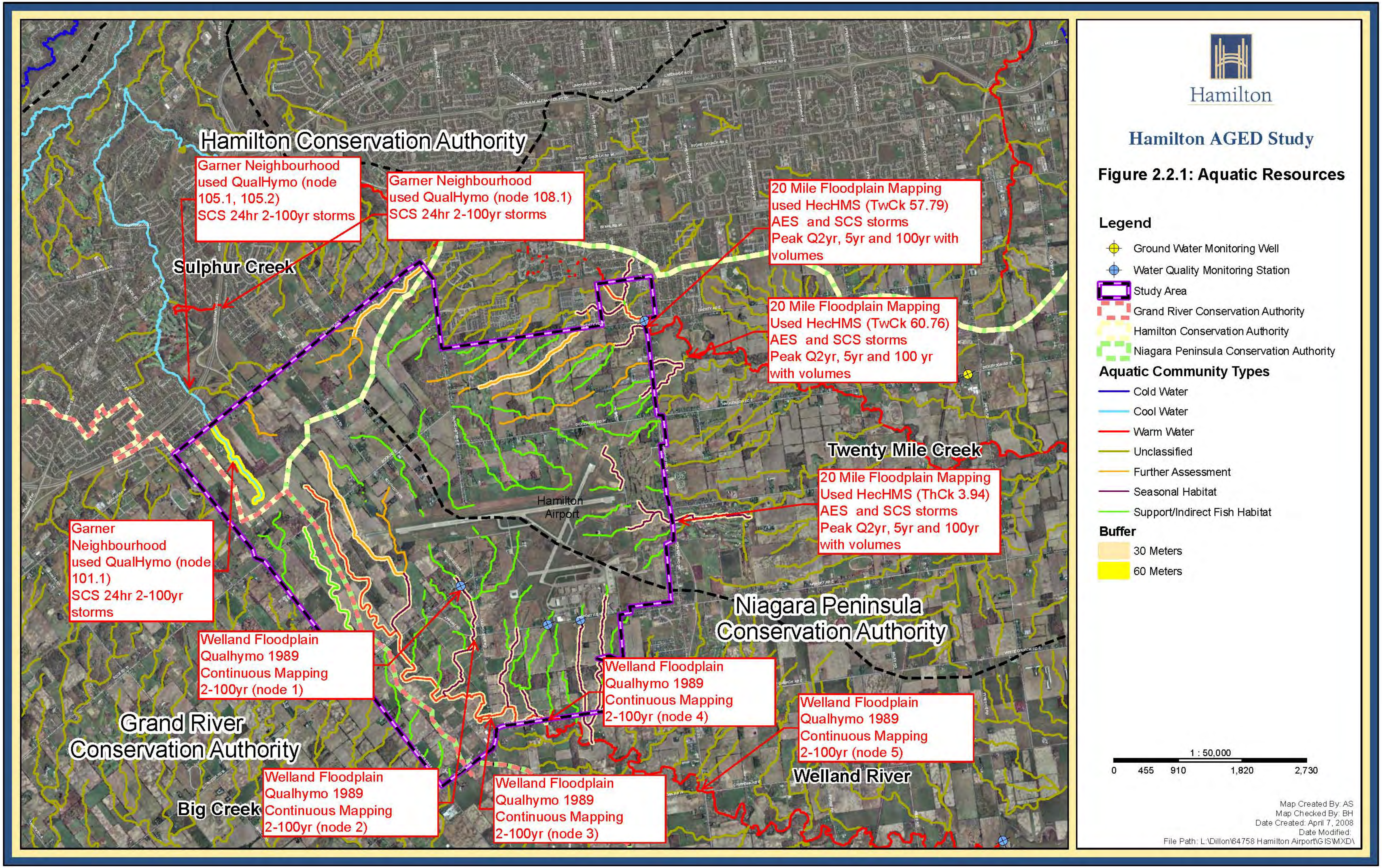

Figure 2.2.1: Aquatic Resources

Preliminary Basin Stage-Storage Rating Curve

Feb 11, 2010

Basin S5 to Serve Lands within Sulphur Creek (Storage for W.Q.+Er.Ctrl+Att)

Summary of Conceptual Stage-Storage Rating Curve

Elevation (m)	Discharge (m^3/s)	Storage (m^3)	Storage (ha.m)	Comments
Passive/Dead Storage-Permanent Pool including Forebay				
84.50	-	0	0.00000	<- Bottom of pond (average)
84.50	-	0	0.00000	
84.50	-	0	0.00000	
84.50	-	0	0.00000	
84.50	-	0	0.00000	<- Top of Perm Pool - Required Perm Pool Storage=m^3
Active Storage-Extended Detention Zone+Attenuation Zone+Freeboard				
84.50	0.00000	0	0.00000	<- Bottom of Extended Detention Zone
84.61	0.03390	889	0.08886	
84.72	0.04794	1,801	0.18015	
84.83	0.08757	2,739	0.27390	
84.94	0.11231	3,701	0.37013	
85.05	0.12790	4,689	0.46888	
85.16	0.14011	5,702	0.57017	
85.27	0.15134	6,740	0.67402	<- Top of Extended Detention Zone - Required Storage=6,740m^3
85.59	0.74437	9,900	0.98999	
85.91	1.03055	13,284	1.32842	
86.23	1.24924	16,899	1.68994	
86.54	1.43382	20,752	2.07522	
86.86	1.59671	24,849	2.48489	
87.18	1.74419	29,196	2.91960	
87.50	1.88000	33,800	3.38000	<- Top of Attenuation Zone - Required Storage=33,800m^3
87.65	3.53251	36,058	3.60578	
87.80	6.81449	38,375	3.83745	<- Top of Freeboard = Top of Pond

Preliminary Basin Stage-Storage Rating Curve

Feb 11, 2010

Basin S5 to Serve Lands within Sulphur Creek (Storage for W.Q.+Er.Ctrl+Att)

Calculation of Storage Using Stage-Area Relationship

Stage (m) Depth	Elevation	Side Slope (H:V)	Length to Width Ratio	Dimensions (m) Length	Width	Surface Area (m^2)	Volume (m^3) Increment	S	Comments
Permanent Pool: Passive/Dead Storage for Water Quality Enhancement									
0.00	84.50	5 :1	2.6 :1	143.9	55.4	7,977	0	0	<- Bottom of pond (average)
0.00	84.50	5 :1	2.6 :1	143.9	55.4	7,977	0	0	
0.00	84.50	5 :1	2.6 :1	143.9	55.4	7,977	0	0	
0.00	84.50	5 :1	2.6 :1	143.9	55.4	7,977	0	0	
0.00	84.50		2.6 :1	143.9	55.4	7,977	0	0	<- Top of Perm Pool - Required Perm Pool Storage=m^3
Extended Detention Zone: Active Storage for Water Quality Enhancement and Erosion Control									
0.00	84.50	5 :1	2.6 :1	143.9	55.4	7,977	0	0	<- Bottom of Extended Detention Zone
0.11	84.61	5 :1	2.6 :1	145.0	56.5	8,197	889	889	
0.22	84.72	5 :1	2.5 :1	146.1	57.6	8,420	913	1,801	
0.33	84.83	5 :1	2.5 :1	147.2	58.7	8,645	938	2,739	
0.44	84.94	5 :1	2.5 :1	148.3	59.8	8,872	962	3,701	
0.55	85.05	5 :1	2.5 :1	149.4	60.9	9,102	987	4,689	
0.66	85.16	5 :1	2.4 :1	150.5	62.0	9,334	1,013	5,702	
0.77	85.27		2.4 :1	151.6	63.1	9,569	1,039	6,740	<- Top of Extended Detention Zone - Required Storage=6,740m^3
Attenuation Zone: Active Storage for Flood Control									
0.77	85.27	5 :1	2.4 :1	151.6	63.1	9,569	0	0	<- Bottom of Attenuation Zone
1.09	85.59	5 :1	2.3 :1	154.8	66.3	10,264	3,160	3,160	
1.41	85.91	5 :1	2.3 :1	157.9	69.5	10,978	3,384	6,544	
1.73	86.23	5 :1	2.2 :1	161.1	72.7	11,713	3,615	10,159	
2.04	86.54	5 :1	2.2 :1	164.3	75.9	12,469	3,853	14,012	
2.36	86.86	5 :1	2.1 :1	167.5	79.1	13,244	4,097	18,109	
2.68	87.18	5 :1	2.1 :1	170.7	82.3	14,040	4,347	22,456	
3.00	87.50		2.0 :1	173.9	85.4	14,856	4,604	27,060	<- Top of Attenuation Zone - Required Storage=27,060m^3
Freeboard: Active Storage for Emergency Relief Overflow									
3.00	87.50	5 :1	2.0 :1	173.9	85.4	14,856	0	0	<- Bottom of Freeboard
3.15	87.65	5 :1	2.0 :1	175.4	86.9	15,248	2,258	2,258	
3.30	87.80		2.0 :1	176.9	88.4	15,643	2,317	4,575	<- Top of Freeboard = Top of Pond
						Total Active Storage (excluding Freeboard) =		33,800	<- Required Active Storage=33,800m^3
						Total Storage (excluding Freeboard) =		33,800	<- Total Required Storage=33,800m^3
						Total Storage (including Freeboard) =		38,375	

Total Area x 1.3 = 1.9 ha

Preliminary Basin Stage-Storage Rating Curve

Feb 11, 2010

Basin S5 to Serve Lands within Sulphur Creek (Storage for W.Q.+Er.Ctrl+Att)

Calculation of Extended Detention Zone Stage-Discharge Rating Curve

Linear Regression of (Extended Detention Surface Area)$^{0.5}$ vs (Depth over Orifice)

- used to estimate orifice size (A_o) required to provide a given drain down time

Constant = C3 = 89.32 m

X Coefficient(s) = C2 = 11.06

Therefore, Ap = (h x C2 + C3)^2 = (h x 11.06 + 89.32)^2

where A_p = Pond Surface Area in m^2

h = Depth Over Orifice in m

Depth (mAMSL)	Depth Over Orifice (m)	Surface Area Measured (m^2)	Measured$^{0.5}$ (m)	Calculated (m^2)
84.50	0.00	7,977	89.31	7,979
84.61	0.11	8,197	90.54	8,197
84.72	0.22	8,420	91.76	8,419
84.83	0.33	8,645	92.98	8,643
84.94	0.44	8,872	94.19	8,871
85.05	0.55	9,102	95.40	9,101
85.16	0.66	9,334	96.61	9,335
85.27	0.77	9,569	97.82	9,571

SUMMARY OUTPUT

Regression Statisti	
Multiple R	
R Square	
Adjusted R Square	
Standard Error	
Observations	

ANOVA

Regression	
Residual	
Total	

Intercept	
X Variable 1	

Extended Detention Zone Characteristics

Available Storage = 6,740 m^3

Drain Down Time (t) = 24 hours

Top of E.D. Zone = 85.269 m

Max. Depth (h) = 0.77 m

Orifice Characteristics

Centreline Elev. = 84.50 mAMSL

$$\text{Required Orifice Area} = A_o = \frac{2 \cdot h^{0.5}}{(2 \cdot g)^{0.5} \cdot C \cdot t} \times \left(\frac{C2^2 \cdot h^2}{5} + \frac{2 \cdot C2 \cdot C3 \cdot h}{3} + C3^2 \right)$$

= 0.065 m^2

Required Diameter = 288 mm

Orifice Coefficient (C) = 0.60

Perimeter = 0.903 m

Area = 0.065 m^2

Schedule of Holes on CSP Riser

Holes Obstructed = 0 -percent

Row No	Centreline Elevation (mAMSL)	Holes per Row	Hole Diameter (mm)
1	84.50	40	35
2	84.75	40	35
3	85.00	40	35
4	85.25	40	35
5	85.50	40	35

Calculation of Extended Detention Zone Stage-Discharge Rating Curve cont'd

Extended Detention Zone Stage-Discharge Relationship

Depth (m)	Discharge (m^3/s) Through Orifice (Q_O)	Through Holes in CSP (Q_H) Row 1 (El.=84.50)	Row 2 (El.=84.75)	Row 3 (El.=85.00)	Row 4 (El.=85.25)	Row 5 (El.=85.50)	Total	Control min(Q_O,Q_H)
84.50	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84.61	0.0572	0.034	0.000	0.000	0.000	0.000	0.034	0.034
84.72	0.0809	0.048	0.000	0.000	0.000	0.000	0.048	0.048
84.83	0.0991	0.059	0.029	0.000	0.000	0.000	0.088	0.088
84.94	0.1144	0.068	0.045	0.000	0.000	0.000	0.112	0.112
85.05	0.1279	0.076	0.056	0.023	0.000	0.000	0.154	0.128
85.16	0.1401	0.083	0.065	0.041	0.000	0.000	0.189	0.140
85.27	0.1513	0.090	0.074	0.053	0.014	0.000	0.231	0.151
85.59	0.1800	0.107	0.094	0.078	0.059	0.030	0.368	0.180
85.91	0.2046	0.121	0.110	0.097	0.083	0.065	0.477	0.205
86.23	0.2267	0.134	0.124	0.113	0.101	0.087	0.560	0.227
86.54	0.2467	0.146	0.137	0.127	0.116	0.104	0.631	0.247
86.86	0.2652	0.157	0.149	0.140	0.130	0.119	0.695	0.265
87.18	0.2826	0.167	0.159	0.151	0.142	0.133	0.753	0.283
87.50	0.2989	0.177	0.170	0.162	0.153	0.145	0.806	0.299
87.65	0.3063	0.181	0.174	0.166	0.158	0.150	0.830	0.306
87.80	0.3135	0.186	0.179	0.171	0.163	0.155	0.854	0.313

Preliminary Basin Stage-Storage Rating Curve

Feb 11, 2010

Basin S5 to Serve Lands within Sulphur Creek (Storage for W.Q.+Er.Ctrl+Att)

Calculation of Attenuation Zone and Freeboard Stage-Discharge Rating Curve

Weir/Drop Inlet Characteristics

Structure Description	Crest Elevation (mAMSL)	Dimensions (m) Width	Length	Side/Grate Slope (H:V - ?:1)	Effective Area (%)
Ditch Inlet 1	85.27	1.0	0.5	6	80
Ditch Inlet 2					
Relief	87.50	15.0		10	

Calculation of Weir/Ditch Inlet Outflows

Elevation (m)	Discharge (m^3/s) Ditch Inlet 1 Weir	Ditch Inlet 1 Orifice	Ditch Inlet 1 Control	Ditch Inlet 2 Weir	Ditch Inlet 2 Orifice	Ditch Inlet 2 Control	Relief
85.27	0.000	-	0.000	-	-	-	-
85.59	0.985	0.564	0.564	-	-	-	-
85.91	4.287	0.826	0.826	-	-	-	-
86.23	10.432	1.023	1.023	-	-	-	-
86.54	19.916	1.187	1.187	-	-	-	-
86.86	33.174	1.331	1.331	-	-	-	-
87.18	50.598	1.462	1.462	-	-	-	-
87.50	72.545	1.581	1.581	-	-	-	0.000
87.65	84.537	1.634	1.634	-	-	-	1.592
87.80	97.637	1.686	1.686	-	-	-	4.815

Allowable Peak Outflow from Attenuation Zone

S/C Area = 81.7 hectares

	($m^3/s/ha$)	(m^3/s)	
Peak Outflow =	0.023	1.88	<- Existing 100 year peak flow as deterimined by hydrologic modeling.

```
RUN
***          NON-RESIDENTIAL LAND USES
*** TEST CATCHMENT SCALE ANALSIS FOR THE TWWF STUDY ***
*** Note #1: This version simulates unit area response functions
(URFs)
***          for runoff from standard sized (10 hectare)
***          parcels of land within the City.  Only non-residential
is
***          represented with eleven land use designations, on
***          three general soil types.
*** Note #2: Land parcel runoff is separated into surface and subsurface
***          components and these are routed to separate reaches.
***MAXIMUM EFFORT SOURCE CONTROL***************************************

GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPT LEVELS    3
  RESUME     0 RUN     1                         Units     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   Hamilton Airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF2sc3-5.ech
           23   PER2sc3-5.out
           24   IMP2sc3-5.out
           25   RCH2sc3-5.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP                INDELT 00:15
      <OPTYP AND ##>      ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      RCHRES     201
      RCHRES     202
      RCHRES     203
      RCHRES     204
      RCHRES     216
      RCHRES     219
      RCHRES     301
      RCHRES     302
      RCHRES     303
      RCHRES     319
      RCHRES     252
      RCHRES     253
      RCHRES     266
      RCHRES     269
      PERLND       1
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      PERLND       2
      PERLND       3
      PERLND       4
      PERLND       5
      PERLND       6
      PERLND       7
      PERLND       8
      PERLND       9
      PERLND      10
      PERLND      11
      PERLND      12
      PERLND     102
***
      IMPLND       1
      IMPLND       2
      IMPLND       3
      IMPLND       4
      IMPLND       5
      IMPLND       6
      IMPLND       7
      IMPLND       8
      IMPLND       9
      IMPLND      10
      IMPLND      11
      IMPLND      12
      IMPLND      13
      IMPLND      14
      IMPLND      15
      RCHRES     205
      RCHRES     352
      RCHRES     353
      RCHRES     369
****
      PERLND      13
      PERLND      14
      PERLND      15
      PERLND      16
      PERLND      17
      PERLND      18
      PERLND      19
      PERLND      20
      PERLND      21
      PERLND      22
      PERLND      23
      PERLND      24
      PERLND      25
      PERLND      26
      PERLND      27
      PERLND      28
***  Roads must be simulated after
PERLNDS
      IMPLND      16
      IMPLND      17
      IMPLND      18
      IMPLND      19
      IMPLND      20
```

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IMPLND      21
IMPLND      22
RCHRES     317
RCHRES     318
RCHRES       1
RCHRES       2
RCHRES       3
RCHRES       4
RCHRES       5
RCHRES       6
RCHRES       7
RCHRES       8
RCHRES       9
RCHRES      10
RCHRES      11
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RCHRES      21
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RCHRES      23
RCHRES      24
RCHRES      25
RCHRES      26
RCHRES      27
RCHRES      28
RCHRES     101
RCHRES     102
RCHRES     103
RCHRES     104
RCHRES     105
RCHRES     106
RCHRES     107
RCHRES     108
RCHRES     109
RCHRES     110
RCHRES     111
RCHRES     112
RCHRES     113
RCHRES     114
RCHRES     115
RCHRES     116
RCHRES     117
RCHRES     118
RCHRES     119
RCHRES     120
RCHRES     121
RCHRES     122
RCHRES     123
RCHRES     124
```

```
      RCHRES     125
      RCHRES     126
      RCHRES     127
      RCHRES     128
      GENER        1
      GENER        2
      GENER        3
    END INGRP
END OPN SEQUENCE


***
==============================================================================
=====

PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
    1  102         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1  102         4    4         4    4
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
***  COMMERCIAL  LAND USES                                     ****
    1     DNTWN COMM B-C SOIL              2    2        23
    2     BIG BOX COMM B-C                 2    2        23
    3     STRIP COMM B-C SOIL              2    2        23
***  INST/GOV'T  LAND USES                             ****
    4     SMALL INST A-B SOIL              2    2        23
    5     SMALL INST B-C SOIL              2    2        23
    6     SMALL INST D SOIL                2    2        23
***  OPEN SPACE LAND USES                              ****
    7     PARK/OPEN A-B SOIL               2    2        23
    8     PARK/OPEN B-C SOIL               2    2        23
    9     PARK/OPEN D  SOIL                2    2        23
   10     VALLEYS ON A-B SOIL              2    2        23
   11     VALLEYS ON B-C SOIL              2    2        23
   12     VALLEYS ON D SOIL                2    2        23
***  TRANSPORTATION RELATED LAND USES                  ****
   13     HIGHWAY ON A-B SOIL              2    2        23
   14     HIGHWAY ON B-C SOIL              2    2        23
   15     HIGHWAY ON D SOIL                2    2        23
***  INDUSTRIAL LAND USES                 ****
   16     PRESTIGE ON A-B SOIL             2    2        23
   17     PRESTIGE ON B-C SOIL             2    2        23
   18     PRESTIGE ON D SOIL               2    2        23
   19     BIG BOX IND B-C SOIL             2    2        23
***  AGRICULTURAL LAND USES               ****
   20     TILLED A-B SOIL                  2    2        23
   21     TILLED B-C SOIL                  2    2        23
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   22     TILLED C-D SOIL                    2    2        23
   23     PASTURE ON A-B SOIL                2    2        23
   24     PASTURE ON B-C SOIL                2    2        23
   25     PASTURE ON C-D SOIL                2    2        23
***  Eco INDUSTRIAL LAND USES                   ****
   26     Eco PRESTIGE ON A-B SOIL           2    2        23
   27     Eco PRESTIGE ON B-C SOIL           2    2        23
   28     Eco PRESTIGE ON D SOIL             2    2        23
***  PERVIOUS PARKING                                  ****
  102     PERVIOUS PARKING                   2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #               ELEV                                ***
***  COMMERCIAL     *****
    1    3     43.50       90.      0.75      1.00       100.
*** INSTITUTIONAL  *****
    4    6     43.50       90.      0.75      1.00       100.
***  OPEN SPACES   *****
    7   12     43.50       90.      0.25      1.00       100.
***  TRANSPORTATION*****
   13   15     43.50       90.      0.40      1.00       100.
*** INDUSTRIAL     *****
   16   19     43.50       90.      0.75      1.00       100.
*** AGRICULTURAL   *****
   20   25     43.50      125.      0.05      1.00       100.
*** Eco INDUSTRIAL     *****
   26   28     43.50       90.      0.75      1.00       100.
***  PERVIOUS PARKING
  102          43.50      125.      0.05      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1  102      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
  *** Woodlots start with more snow pack    ***
    1  102      10.0        0.       0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1  102      100.       0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
```

```
***
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1  102    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                          ***  A-B   SOILS   ***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4          0.25      300.     15.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    7          0.25      300.     15.0      150.0    0.02         0.0
.995
   10          0.60      300.     15.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   13          0.25      300.     15.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   16          0.25      300.     15.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   20          0.05      300.     15.0      200.0    0.02         0.0
.995
   23          0.20      300.     15.0      200.0    0.02         0.0
.995
***  Eco INDUSTRIAL     ***
   26          0.25      300.     15.0        5.0    0.02         0.0
.995
***
***
                                          ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3     0.25      200.      8.0        5.0    0.02         0.0
.995
***  INSTITUTIONAL ***
    5          0.25      200.      8.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    8          0.25      200.      8.0      150.0    0.02         0.0
.995
   11          0.60      200.      8.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   14          0.25      200.      8.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   17          0.25      200.      8.0        5.0    0.02         0.0
.995
```

```
   19           0.25      200.      8.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   21           0.05      200.      8.0      200.0    0.02        0.0
.995
   24           0.20      200.      8.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   27           0.25      200.      8.0        5.0    0.02        0.0
.995
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6           0.25      100.      4.0       75.0    0.02        0.0
.995
***  OPEN SPACES   ***
    9           0.25      100.      4.0      150.0    0.02        0.0
.995
   12           0.60      100.      4.0      150.0    0.15        0.0
.995
***  TRANSPORTATION ***
   15           0.25      100.      4.0       20.0    0.02        0.0
.995
***  INDUSTRIAL     ***
   18           0.25      100.      4.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   22           0.05      100.      4.0      200.0    0.02        0.0
.995
   25           0.20      100.      4.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   28           0.25      100.      4.0        5.0    0.02        0.0
.995
***  PERVIOUS PARKING
  102           0.05      200.     10.0      100.0    0.02        0.0
.995
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1  102  4.5        1.7         2.0      2.0         0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                      ***  A-B   SOILS   ***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            5.0      30.0     0.25        1.0     0.85
```

```
0.30
***  OPEN SPACES   ***
    7            5.0      30.0     0.25        1.0     0.85
0.30
   10            5.0      30.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   13            5.0      30.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL      ***
   16            5.0      30.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   20            4.0      30.0     0.40        1.0     0.85
0.20
   23            2.5      30.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   26            5.0      30.0     0.25        1.0     0.85
0.30
***
***
                                      ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3       5.0      16.0     0.25        1.0     0.85
0.30
***  INSTITUTIONAL ***
    5            5.0      16.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    8            5.0      16.0     0.25        1.0     0.85
0.30
   11            5.0      16.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   14            5.0      16.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL      ***
   17            5.0      16.0     0.25        1.0     0.85
0.30
   19            5.0      16.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   21            4.0      16.0     0.40        1.0     0.85
0.20
   24            2.5      16.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   27            5.0      16.0     0.25        1.0     0.85
0.30
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
```

```
    6            5.0       6.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    9            5.0       6.0     0.25        1.0     0.85
0.30
   12            5.0       6.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   15            5.0       6.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   18            5.0       6.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   22            4.0       6.0     0.40        1.0     0.85
0.20
   25            2.5       6.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   28            5.0       6.0     0.25        1.0     0.85     0.30
***  PERVIOUS PARKING
  102            2.5      16.0     0.25        1.0     0.85
0.20
  END PWAT-PARM4
  PWAT-PARM5
  < RANGE>       FZG      FZGL
***
    1  102       1.0
0.1
  END PWAT-PARM5
  ***
  MON-INTERCEP
    <PLS>   Only required if VCSFG=1 in PWAT-PARM1                   ***
    # -  #  Interception storage capacity at start of each month     ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
***Open space increased by 75% May-Oct
    7   12  2.0  2.0  2.0  3.0  7.0 8.75 8.75 8.75 8.75  7.0  3.0  2.0
***Institutional and Industrial increased by 25% May-Oct
    4    6  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   16   19  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   26   28  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
***highways increased by 10% May-Oct
   13   15  2.0  2.0  2.0  3.0  4.4  5.5  5.5  5.5  5.5  4.4  3.0  2.0
    1    3  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
   20   25  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  102       2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  END MON-INTERCEP

  MON-UZSN
    <PLS>   Only required if VUZFG=1 in PWAT-PARM1                   ***
    # -  #  Upper zone storage at start of each month                ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
```

```
  20      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
  23      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

   1    3  9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  19       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  21       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  24       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

   6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  18       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  22       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  25       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 102       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
END MON-UZSN

***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
MON-MANNING
  <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
  # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
  ***   LOW DENSITY RESIDENTIAL   ****
  1    3 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   MEDIUM DENSITY RESIDENTIAL   ****
  4    6 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH DENSITY RESIDENTIAL   ****
  7    9 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH RISE    RESIDENTIAL   ****
 10   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  DOWNTOWN COMMERCIAL        ****
 13      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   BIG BOX COMMERCIAL        ****
 14      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   STRIP MALL COMMERCIAL     ****
 15      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  SMALL INSTITUTIONAL        ****
 16   18 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PARK LAND                 ****
 19   21 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  VALLEY LAND                ****
 22   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   HIGHWAYS   ***
 25   27 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PRESTIGE INDUSTRIAL       ****
 28   30 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   LARGE INDUSTRIAL  ****
 31      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   TILLED AGRICULTURAL       ****
 32   34 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PASTURE/FALLOW AGRICULTURAL ***
```

```
   35   37 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  END MON-MANNING
  MON-INTERFLW
    <PLS >  Interflow Inflow Parameter for Start of Each Month ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
  END MON-INTERFLW
  MON-IRC
    <PLS >  INTERFLOW RECESSION CONSTANT ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
  END MON-IRC
***

  MON-LZETPARM
    <PLS >  ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1  102 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
  END MON-LZETPARM

  PWAT-STATE1
    <PLS >***
    # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  OPEN SPACES   ***
    7            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   10            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  TRANSPORTATION ***
   13            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  INDUSTRIAL     ***
   16            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  AGRICULTURAL   ***
   20            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   23            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   26            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***
***
                                          ***  B-C   SOILS   ***
***
***
***  COMMERCIAL    ***
    1    3       0.0       0.0      16.0       0.0     200.0      10.0
0.0
***  INSTITUTIONAL ***
```

```
    5            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  OPEN SPACES   ***
    8            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   11            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  TRANSPORTATION ***
   14            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  INDUSTRIAL     ***
   17            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   19            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  AGRICULTURAL   ***
   21            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   24            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***Eco  INDUSTRIAL     ***
   27            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***
***
                                  ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  OPEN SPACES   ***
    9            0.0       0.0       6.0       0.0      100.0      10.0
0.0
   12            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  TRANSPORTATION ***
   15            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  INDUSTRIAL     ***
   18            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  AGRICULTURAL   ***
   22            0.0       0.0       6.0       0.0      100.0      10.0
0.0
   25            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   28            0.0       0.0       6.0       0.0      100.0      10.0
0.0
  102            0.0       0.0      16.0       0.0      200.0      10.0
0.0
  END PWAT-STATE1

  ***
```

```
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1  102    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1  102        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)   ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1  102  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1  102       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1  102    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1  102      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1  102       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1  102
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
    1   22         1    1         1
  101  102         1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   22         4    4         4             12
  101  102         4    4         4             12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     CDT1bc                       2    2        24
    2     CBB1bc                       2    2        24
    3     CSM1bc                       2    2        24
    4     EIS1ab                       2    2        24
```

```
    5      EIS1bc                        2    2         24
    6      EIS1cd                        2    2         24
    7      OPL0ab                        2    2         24
    8      OPL0bc                        2    2         24
    9      OPL0cd                        2    2         24
   10      OVL0ab                        2    2         24
   11      OVL0bc                        2    2         24
   12      OVL0cd                        2    2         24
   13      THC0ab                        2    2         24
   14      THC0bc                        2    2         24
   15      THC0cd                        2    2         24
   16      IPR1ab                        2    2         24
   17      IPR1bc                        2    2         24
   18      IPR1cd                        2    2         24
   19      IBB1bc                        2    2         24
   20      IPE1ab                        2    2         24
   21      IPE1bc                        2    2         24
   22      IPE1cd                        2    2         24
  101      FLAT ROOFS                    2    2         24
  102      INDUST/COMM PARKING           2    2         24
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   22    1
  101  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                               ***
*** 1-Flat roof,2-Ind/Comm Parking, 11 - 35 local roads ***
    1         43.50       90.       0.10      1.00      100.
    2         43.50       90.       0.10      1.00      100.
    3         43.50       90.       0.10      1.00      100.
    4         43.50       90.       0.10      1.00      100.
    5         43.50       90.       0.10      1.00      100.
    6         43.50       90.       0.10      1.00      100.
    7         43.50       90.       0.10      1.00      100.
    8         43.50       90.       0.10      1.00      100.
    9         43.50       90.       0.10      1.00      100.
   10         43.50       90.       0.10      1.00      100.
   11         43.50       90.       0.10      1.00      100.
   12         43.50       90.       0.10      1.00      100.
   13         43.50       90.       0.10      1.00      100.
   14         43.50       90.       0.10      1.00      100.
   15         43.50       90.       0.10      1.00      100.
   16         43.50       90.       0.10      1.00      100.
   17         43.50       90.       0.10      1.00      100.
   18         43.50       90.       0.10      1.00      100.
   19         43.50       90.       0.10      1.00      100.
   20         43.50       90.       0.10      1.00      100.
   21         43.50       90.       0.10      1.00      100.
   22         43.50       90.       0.10      1.00      100.
  101         43.50       90.       0.10      1.00      100.
  102         43.50       90.       0.10      1.00      100.
```

```
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   22      0.15     -0.99      0.20      1.50      .250      0.00
  101  102      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   22       0.0       0.0       0.0       0.2      500.       0.0
  101  102       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   22      100.       0.5       1.0
  101  102      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   22    1    1    0    0    0
  101  102    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
    1   22       50.    0.02        0.10       2.0
  101            20.    0.01        0.10       3.0
  102            25.    0.02        0.10       2.5
  END IWAT-PARM2
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   22       4.5       1.7
  101  102       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   22       0.0       0.0
  101  102       0.0       0.0
  END IWAT-STATE1

  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO          ***
    1  102    0    1
  END IWT-PARM1
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  102      150.       1.0       0.8
  END IWT-PARM2
  IWT-INIT
```

```
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  102       0.5
  END IWT-INIT
END IMPLND
                                 ***                    *****
                                 ***     RCHRES         *****
                                 ***                    *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  369    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  369    4    4         4                                      12
  END PRINT-INFO

***

  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX        IN  OUT ENGL METR LKFG ***
***   The first set of 25 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 25 RCHRESs (101-125) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   COMMERCIAL  CONFIGURATIONS    *****
    1     DOWNTOWN COMM ON BC     1         2    2        25    0
    2     BIG BOX  COMM ON BC     1         2    2        25    0
    3     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
    4     SMALL INSTIT. ON AB     1         2    2        25    0
    5     SMALL INSTIT. ON BC     1         2    2        25    0
    6     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
    7     PARK LAND ON AB         1         2    2        25    0
    8     PARK LAND ON BC         1         2    2        25    0
    9     PARK LAND ON CD         1         2    2        25    0
   10     VALLEY LAND ON AB       1         2    2        25    0
   11     VALLEY LAND ON BC       1         2    2        25    0
   12     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
   13     ROADS/HIGHWAYS AB       1         2    2        25    0
   14     ROADS/HIGHWAYS BC       1         2    2        25    0
   15     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
   16     PRESTIGE IND  AB        1         2    2        25    0
   17     PRESTIGE IND  BC        1         2    2        25    0
   18     PRESTIGE IND  CD        1         2    2        25    0
   19     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURAL CONFIGURATIONS    *****
   20     TILLED LAND   AB        1         2    2        25    0
   21     TILLED LAND   BC        1         2    2        25    0
   22     TILLED LAND   CD        1         2    2        25    0
```

```
   23     PASTURE/FALLOW AB      1         2    2        25    0
   24     PASTURE/FALLOW BC      1         2    2        25    0
   25     PASTURE/FALLOW CD      1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
   26     Eco PRESTIGE IND  AB   1         2    2        25    0
   27     Eco PRESTIGE IND  BC   1         2    2        25    0
   28     Eco PRESTIGE IND  CD   1         2    2        25    0
***   SUBSURFACE RCHRESs           *****
***   COMMERCIAL  CONFIGURATIONS   *****
  101     DOWNTOWN COMM ON BC    1         2    2        25    0
  102     BIG BOX  COMM ON BC    1         2    2        25    0
  103     STRIP MALLS   ON BC    1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
  104     SMALL INSTIT. ON AB    1         2    2        25    0
  105     SMALL INSTIT. ON BC    1         2    2        25    0
  106     SMALL INSTIT. ON CD    1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS   *****
  107     PARK LAND ON AB        1         2    2        25    0
  108     PARK LAND ON BC        1         2    2        25    0
  109     PARK LAND ON CD        1         2    2        25    0
  110     VALLEY LAND ON AB      1         2    2        25    0
  111     VALLEY LAND ON BC      1         2    2        25    0
  112     VALLEY LAND ON CD      1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
  113     ROADS/HIGHWAYS AB      1         2    2        25    0
  114     ROADS/HIGHWAYS BC      1         2    2        25    0
  115     ROADS/HIGHWAYS CD      1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS   *****
  116     PRESTIGE IND  AB       1         2    2        25    0
  117     PRESTIGE IND  BC       1         2    2        25    0
  118     PRESTIGE IND  CD       1         2    2        25    0
  119     BIG BOX  IND  BC       1         2    2        25    0
***   AGRICULTURE CONFIGURATIONS   *****
  120     TILLED LAND   AB       1         2    2        25    0
  121     TILLED LAND   BC       1         2    2        25    0
  122     TILLED LAND   CD       1         2    2        25    0
  123     PASTURE/FALLOW AB      1         2    2        25    0
  124     PASTURE/FALLOW BC      1         2    2        25    0
  125     PASTURE/FALLOW CD      1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
  126     Eco PRESTIGE IND  AB   1         2    2        25    0
  127     Eco PRESTIGE IND  BC   1         2    2        25    0
  128     Eco PRESTIGE IND  CD   1         2    2        25    0
***  ROOF AND PARKING RESTRICTORS *****
  201     CDT ROOF RESTRICTOR    1         2    2        25    0
  202     CBB ROOF RESTRICTOR    1         2    2        25    0
  203     CSM ROOF RESTRICTOR    1         2    2        25    0
  216     IPR ROOF RESTRICTOR    1         2    2        25    0
  219     IBB ROOF RESTRICTOR    1         2    2        25    0
  252     CBB PARKING RESTRICT   1         2    2        25    0
  253     CSM PARKING RESTRICT   1         2    2        25    0
  266     IPR PARKING RESTRICT   1         2    2        25    0
  269     IBB PARKING RESTRICT   1         2    2        25    0
***  ROOFTOP GARDENS *****
  301     CDT ROOF GARDEN        2         2    2        25    0
  302     CBB ROOF GARDEN        2         2    2        25    0
```

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  303     CSM ROOF GARDEN         2         2    2        25    0
  317     IPR ROOF INFILTRATIO    2         2    2        25    0
  318     IPE ROOF INFILTRATIO    2         2    2        25    0
  319     IBB ROOF GARDEN         2         2    2        25    0
  204     EIS WETLAND             1         2    2        25    0
  205     EIS BIORETENTION        2         2    2        25    0
  352     CBB BIORETENTION        2         2    2        25    0
  353     CSM BIORETENTION        2         2    2        25    0
  369     IBB BIORETENTION        2         2    2        25    0
  END GEN-INFO
                                ***                    ***
                                ***   HYDR SECTION     ***
                                ***                    ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1  204      1  1  1    4                                         3
  206  269      1  1  1    4                                         3
  205           1  1  1    4  5                                      3
  301  369      1  1  1    4  5                                      3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   19    0   11    0.3000  6.000         0.0      0.5      1.00
   20   25    0   12    0.3000  6.000         0.0      0.5      1.00
   26   28    0   11    0.3000  6.000         0.0      0.5      1.00
  101  119    0   13    0.3000  6.000         0.0      0.5      1.00
  120  125    0   12    0.3000  6.000         0.0      0.5      1.00
  126  128    0   13    0.3000  6.000         0.0      0.5      1.00
  201         0   14    0.3000  6.000         0.0      0.5      1.00
  202         0   15    0.3000  6.000         0.0      0.5      1.00
  203         0   16    0.3000  6.000         0.0      0.5      1.00
  216         0   17    0.3000  6.000         0.0      0.5      1.00
  219         0   18    0.3000  6.000         0.0      0.5      1.00
  252         0   19    0.3000  6.000         0.0      0.5      1.00
  253         0   20    0.3000  6.000         0.0      0.5      1.00
  266         0   21    0.3000  6.000         0.0      0.5      1.00
  269         0   22    0.3000  6.000         0.0      0.5      1.00
  301         0   23    0.3000  6.000         0.0      0.5      1.00
  302         0   24    0.3000  6.000         0.0      0.5      1.00
  303         0   25    0.3000  6.000         0.0      0.5      1.00
  319         0   27    0.3000  6.000         0.0      0.5      1.00
  204         0   30    0.3000  6.000         0.0      0.5      1.00
  205         0   31    0.3000  6.000         0.0      0.5      1.00
  317         0   32    0.3000  6.000         0.0      0.5      1.00
  318         0   37    0.3000  6.000         0.0      0.5      1.00
  352         0   33    0.3000  6.000         0.0      0.5      1.00
  353         0   34    0.3000  6.000         0.0      0.5      1.00
  369         0   36    0.3000  6.000         0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   19 0.00001        4.3
```

```
   20   25 0.00001        4.3
   26   28 0.00001        4.3
  101  119 0.000001       4.3
  120  125 0.00001        4.3
  126  128 0.000001       4.3
  129  204 0.00001        4.3
  205      0.000001       4.3   5.3
  206  269 0.000001       4.3
  301  369 0.000001       4.3   5.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT       VOL  ****
    1  369
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
    # -  # BDFG TGFG TSTP ***
    1  369    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                         ***
    1  369      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   28      0.50       0.0
  101  369      4.50       0.0
  END HEAT-INIT
END RCHRES


***
============================================================================


FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
  FTABLE     11
  ROW  COL  ***
    5    4
    <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
```

```
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    0.50     0.015  0.00008     0.820
    0.75     0.255  0.00071     9.910
    1.00     0.255  0.00135    27.830
END FTABLE 11
FTABLE     12
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    1.00     0.060  0.00032     5.000
END FTABLE12
FTABLE     13
ROW  COL  ***
  2    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    1.00     0.001  0.00015     100.00
END FTABLE13

FTABLE     14
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.90  0.00195     0.164
    0.50      4.10  0.00300     5.000
END FTABLE 14
FTABLE     15
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.90  0.001088    0.0914
    0.50      3.10  0.00200     5.000
END FTABLE 15
FTABLE     16
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      1.70  0.000638    0.0536
    0.50      1.90  0.00100     5.000
END FTABLE 16
FTABLE     17
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.25  0.001125    0.0945
    0.50      2.50  0.00200     5.000
END FTABLE 17
FTABLE     18
ROW  COL  ***
```

```
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.38  0.001688    0.142
    0.50      3.50  0.00250     5.000
END FTABLE 18

FTABLE     19
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.00  0.00135     0.299
    1.00      2.50  0.00200     5.000
END FTABLE 19
FTABLE     20
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.17  0.001465    0.326
    1.00      2.50  0.00200     5.000
END FTABLE 20
FTABLE     21
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.08  0.000726    0.161
    1.00      2.00  0.00100     5.000
END FTABLE 21
FTABLE     22
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.47  0.000992    0.221
    1.00      2.00  0.00150     5.000
END FTABLE 22

FTABLE     23
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.05      1.10  0.000650   0.00021   0.0
    0.10      1.20  0.001300   0.00023   0.0
    0.15      1.30  0.001950   0.00025   0.0
    0.20      1.40  0.002500   0.00026   5.0
END FTABLE 23

FTABLE     24
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
```

```
    0.05      0.71  0.000363  0.000138    0.0
    0.10      0.72  0.000725  0.000139    0.0
    0.15      0.73  0.001088  0.000140    0.0
    0.20      1.00  0.002000  0.000141    5.0
END FTABLE 24

FTABLE     25
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
    0.05      0.41  0.000213  0.000080    0.0
    0.10      0.42  0.000425  0.000081    0.0
    0.15      0.43  0.000638  0.000082    0.0
    0.20      0.60  0.001000  0.000083    5.0
END FTABLE 25

FTABLE     27
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000      0.0
    0.05      1.11  0.000562   0.00020    0.0
    0.10      1.12  0.001125   0.00021    0.0
    0.15      1.13  0.001688   0.00022    0.0
    0.20      1.30  0.002000   0.00023    5.0
END FTABLE 27

FTABLE     30
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000      0.000
    0.50      .036  0.00018      0.00104
    1.00      .050  0.00100      5.000
END FTABLE 30

FTABLE     31
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.20      0.07  0.000140   0.00194   0.0
    0.50      0.10  0.000300   0.00194   5.0
END FTABLE 31

FTABLE     32
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00     0.000  0.00000    0.00000   0.00000
    1.50     0.188  0.00040    0.00521   0.00000
    2.00     0.250  0.00300    0.00521   100.000
END FTABLE 32

FTABLE     33
```

```
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.29  0.000570   0.00790   0.0
      0.50      0.35  0.000650   0.00790   5.0
  END FTABLE 33

  FTABLE     34
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.31  0.000620   0.00860   0.0
      0.50      0.35  0.000700   0.00860   5.0
  END FTABLE 34

  FTABLE     36
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.21  0.000420   0.00580   0.0
      0.50      0.35  0.000550   0.00580   5.0
  END FTABLE 36

  FTABLE     37
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00     0.000  0.00000    0.00000   0.00000
      1.50     0.188  0.00035    0.00521   0.00000
      2.00     0.250  0.00300    0.00521   100.000
  END FTABLE 37

END FTABLES

***=============================================================================
===

GENER
  OPCODE
    # -  #  Op- ***
           code ***
    1    3   16
  END OPCODE
END GENER

***
==============================================================================

EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
```

```
                   ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR               DIV  PERLND   1 119 EXTNL  PREC
WDM1   155 PREC     METR               DIV  IMPLND   1  22 EXTNL  PREC
WDM1   155 PREC     METR               DIV  IMPLND 101 102 EXTNL  PREC
WDM1   141 AIRT     METR               SAME PERLND   1 119 ATEMP  AIRTMP
WDM1   141 AIRT     METR               SAME IMPLND   1  22 ATEMP  AIRTMP
WDM1   141 AIRT     METR               SAME IMPLND 101 102 ATEMP  AIRTMP
WDM1   141 AIRT     METR               SAME RCHRES   1 369 EXTNL  GATMP
WDM1   181 WIND     METR               DIV  PERLND   1 119 EXTNL  WINMOV
WDM1   181 WIND     METR               DIV  IMPLND   1  22 EXTNL  WINMOV
WDM1   181 WIND     METR               DIV  IMPLND 101 102 EXTNL  WINMOV
WDM1   181 WIND     METR               DIV  RCHRES   1 369 EXTNL  WIND
WDM1   131 SOLR     METR               DIV  PERLND   1 119 EXTNL  SOLRAD
WDM1   131 SOLR     METR               DIV  IMPLND   1  22 EXTNL  SOLRAD
WDM1   131 SOLR     METR               DIV  IMPLND 101 102 EXTNL  SOLRAD
WDM1   131 SOLR     METR               DIV  RCHRES   1 369 EXTNL  SOLRAD
WDM1   164 PET      METR               DIV  PERLND   1 119 EXTNL  PETINP
WDM1   164 PET      METR               DIV  IMPLND   1  22 EXTNL  PETINP
WDM1   164 PET      METR               DIV  IMPLND 101 102 EXTNL  PETINP
WDM1   121 DEWT     METR               SAME PERLND   1 119 EXTNL  DTMPG
WDM1   121 DEWT     METR               SAME IMPLND   1  22 EXTNL  DTMPG
WDM1   121 DEWT     METR               SAME IMPLND 101 102 EXTNL  DTMPG
WDM1   121 DEWT     METR               SAME RCHRES   1 369 EXTNL  DEWTMP
WDM1   171 CLDC     METR               SAME PERLND   1 119 EXTNL  CLOUD
WDM1   171 CLDC     METR               SAME IMPLND   1  22 EXTNL  CLOUD
WDM1   171 CLDC     METR               SAME IMPLND 101 102 EXTNL  CLOUD
WDM1   171 CLDC     METR               SAME RCHRES   1 369 EXTNL  CLOUD
END EXT SOURCES
***

***============================================================================
===

***  This is where the URFs are developed.
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 6 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.
NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->
***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #
***
RCHRES 301 OFLOW         2   1.00          RCHRES   1     INFLOW
RCHRES 302 OFLOW         2   1.00          RCHRES   2     INFLOW
```

```
RCHRES 303 OFLOW         2   1.00          RCHRES   3      INFLOW
RCHRES 319 OFLOW         2   1.00          RCHRES  19      INFLOW
*** ADD AGWO AND IFWO TOGETHER USING GENER TO GET 6901,6902,6903
PERLND  13 PWATER IFWO                     GENER    1      INPUT  ONE
PERLND  13 PWATER AGWO                     GENER    1      INPUT  TWO
PERLND  14 PWATER IFWO                     GENER    2      INPUT  ONE
PERLND  14 PWATER AGWO                     GENER    2      INPUT  TWO
PERLND  15 PWATER IFWO                     GENER    3      INPUT  ONE
PERLND  15 PWATER AGWO                     GENER    3      INPUT  TWO
RCHRES 205 OFLOW         1   1.00          RCHRES 104      INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   4      INFLOW
RCHRES 205 OFLOW         1   1.00          RCHRES 105      INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   5      INFLOW
*** UPDATED REACH # 105->106 5->6
RCHRES 205 OFLOW         1   1.00          RCHRES 106      INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   6      INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 116      INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  16      INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 117      INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  17      INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 118      INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  18      INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 126      INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  26      INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 127      INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  27      INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 128      INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  28      INFLOW
RCHRES 352 OFLOW         1   1.00          RCHRES 102      INFLOW
RCHRES 352 OFLOW         2   1.00          RCHRES   2      INFLOW
RCHRES 353 OFLOW         1   1.00          RCHRES 103      INFLOW
RCHRES 353 OFLOW         2   1.00          RCHRES   3      INFLOW
RCHRES 369 OFLOW         1   1.00          RCHRES 119      INFLOW
RCHRES 369 OFLOW         2   1.00          RCHRES  19      INFLOW
***
END NETWORK


SCHEMATIC
<-Source->                <--Area-->       <-Target->  <ML->  ***
<Name>   #                <-factor->       <Name>   #      #  ***
***-----------------------------------------------------------------
***URFs  1 to  3, DOWNTOWN, BIG BOX and STRIP COMMERCIAL, B-C
Soils
*** Lawns/open space onto Roadway
PERLND   1                    0.132       IMPLND   1       2
PERLND   2                    0.167       IMPLND   2       2
PERLND   3                    0.105       IMPLND   3       2
*** 25% of flat Roof to roof garden
IMPLND 101                    1.300       RCHRES 301       5
IMPLND 101                    0.725       RCHRES 302       5
IMPLND 101                    0.425       RCHRES 303       5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                    3.900       RCHRES 201       5
IMPLND 101                    2.175       RCHRES 202       5
IMPLND 101                    1.275       RCHRES 203       5
```

```
*** restricted roof to storm sewer
RCHRES 201                    1.000       RCHRES   1      7
RCHRES 202                    1.000       RCHRES   2      7
RCHRES 203                    1.000       RCHRES   3      7
***100 % of driveway to road
IMPLND 102                    0.132       IMPLND   1      4
*** 60% parking (pervious) to road
PERLND 102                    2.850       IMPLND   2      2
PERLND 102                    1.958       IMPLND   3      2
***35 % of driveway or parking to restrictor
IMPLND 102                    1.995       RCHRES 252      5
IMPLND 102                    2.170       RCHRES 253      5
*** 5% of parking to bio-retention area
IMPLND 102                    0.285       RCHRES 352      5
IMPLND 102                    0.310       RCHRES 353      5
*** restricted parking to storm sewer
RCHRES 252                    1.000       RCHRES   2      7
RCHRES 253                    1.000       RCHRES   3      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   1                    0.500       RCHRES 101      6
PERLND   2                    0.200       RCHRES 102      6
PERLND   3                    0.200       RCHRES 103      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                    3.420       RCHRES 102      6
PERLND 102                    3.720       RCHRES 103      6
*** Roadway into local storm sewer
IMPLND   1                    3.800       RCHRES   1      5
IMPLND   2                    1.200       RCHRES   2      5
IMPLND   3                    1.900       RCHRES   3      5
***-------------------------------------------------------------
***URFs 4 to 6 , SMALL INSTITUTIONAL,  all Soils
*** Lawns/open space onto Roadway
PERLND   4                    7.556       IMPLND   4      2
PERLND   5                    7.556       IMPLND   5      2
PERLND   6                    7.556       IMPLND   6      2
*** Flat Roof to wetland/cistern
IMPLND 101                    0.900       RCHRES 204      5
*** wetland/cistern to storm sewer
RCHRES 204                    1.000       RCHRES   4      7
RCHRES 204                    1.000       RCHRES   5      7
RCHRES 204                    1.000       RCHRES   6      7
*** 5% of parking to bio-retention area
IMPLND 102                    0.070       RCHRES 205      5
***Parking onto road (10% of parking area)
IMPLND 102                    0.155       IMPLND   4      4
IMPLND 102                    0.155       IMPLND   5      4
IMPLND 102                    0.155       IMPLND   6      4
*** 25 % of parking onto pervious
IMPLND 102                    0.051       PERLND   4      3
IMPLND 102                    0.051       PERLND   5      3
IMPLND 102                    0.051       PERLND   6      3
*** 60% parking (pervious) to road
PERLND 102                    0.933       IMPLND   4      2
PERLND 102                    0.933       IMPLND   5      2
PERLND 102                    0.933       IMPLND   6      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
```

```
PERLND   4                      6.800       RCHRES 104      6
PERLND   5                      6.800       RCHRES 105      6
PERLND   6                      6.800       RCHRES 106      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                      0.840       RCHRES 104      6
PERLND 102                      0.840       RCHRES 105      6
PERLND 102                      0.840       RCHRES 106      6
*** Roadway into local storm sewer
IMPLND   4                      0.900       RCHRES   4      5
IMPLND   5                      0.900       RCHRES   5      5
IMPLND   6                      0.900       RCHRES   6      5
***-----------------------------------------------------------------
***URFs  7 to 9 , OPEN SPACES/PARKS/CORRIDORS on all Soils
*** Lawns/open space onto Roadway
PERLND   7                     18.000       IMPLND   7      2
PERLND   8                     18.000       IMPLND   8      2
PERLND   9                     18.000       IMPLND   9      2
*** 75% of parking onto road
IMPLND 102                      0.750       IMPLND   7      4
IMPLND 102                      0.750       IMPLND   8      4
IMPLND 102                      0.750       IMPLND   9      4
*** 25% of parking onto pervious
IMPLND 102                     0.0138       PERLND   7      3
IMPLND 102                     0.0138       PERLND   8      3
IMPLND 102                     0.0138       PERLND   9      3
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   7                      9.000       RCHRES 107      6
PERLND   8                      9.000       RCHRES 108      6
PERLND   9                      9.000       RCHRES 109      6
*** Roadway into local storm sewer
IMPLND   7                      0.500       RCHRES   7      5
IMPLND   8                      0.500       RCHRES   8      5
IMPLND   9                      0.500       RCHRES   9      5
***-----------------------------------------------------------------
***URFs 10 to 12, VALLEY LANDS on all Soils
*** Lawns/open space onto Roadway
PERLND  10                     32.330       IMPLND  10      2
PERLND  11                     32.330       IMPLND  11      2
PERLND  12                     32.330       IMPLND  12      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  10                      9.700       RCHRES 110      6
PERLND  11                      9.700       RCHRES 111      6
PERLND  12                      9.700       RCHRES 112      6
*** Roadway into local storm sewer
IMPLND  10                      0.300       RCHRES  10      5
IMPLND  11                      0.300       RCHRES  11      5
IMPLND  12                      0.300       RCHRES  12      5
***-----------------------------------------------------------------
***URFs 13 to 15, ROADS/HIGHWAYS on all Soils
*** Roads to adjacent grassed area
*** For study area 5 use 70% roadway/30% open.
IMPLND  13                      2.333       PERLND  13      3
IMPLND  14                      2.333       PERLND  14      3
IMPLND  15                      2.333       PERLND  15      3
*** Surface runoff from grassed area to storm sewer
PERLND  13                      3.000       RCHRES  13      1
```

```
PERLND  14                      3.000       RCHRES  14      1
PERLND  15                      3.000       RCHRES  15      1
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  13                      3.000       RCHRES 113      6
PERLND  14                      3.000       RCHRES 114      6
PERLND  15                      3.000       RCHRES 115      6
***-------------------------------------------------------------
***URFs 16 to 18, PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  16                      2.857       IMPLND  16      2
PERLND  17                      2.857       IMPLND  17      2
PERLND  18                      2.857       IMPLND  18      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                      3.000       RCHRES 317      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                      4.300       RCHRES 317      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  16                      2.000       RCHRES 116      6
PERLND  17                      2.000       RCHRES 117      6
PERLND  18                      2.000       RCHRES 118      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  16                      0.700       RCHRES 317      5
IMPLND  17                      0.700       RCHRES 317      5
IMPLND  18                      0.700       RCHRES 317      5
***-------------------------------------------------------------
***URFs 19 , BIG BOX INDUSTRIAL,  B-C Soils
*** Lawns/open space onto Roadway
PERLND  19                      1.167       IMPLND  19      2
*** 25% of flat Roof to roof garden
IMPLND 101                      1.125       RCHRES 319      5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                      3.375       RCHRES 219      5
*** restricted roof to storm sewer
RCHRES 219                      1.000       RCHRES  19      7
*** 60% parking (pervious) to road
PERLND 102                      4.200       IMPLND  19      2
*** 5% of parking to bio-retention area
IMPLND 102                      0.210       RCHRES 369      5
***35 % of parking to restrictor
IMPLND 102                      1.470       RCHRES 269      5
*** restricted parking to storm sewer
RCHRES 269                      1.000       RCHRES  19      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  19                      0.700       RCHRES 119      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                      2.520       RCHRES 119      6
*** Roadway into local storm sewer
IMPLND  19                      0.600       RCHRES  19      5
***-------------------------------------------------------------
***URFs 20 to 25, AGRICULTURAL LANDS
*** Surface and subsurface flow to an agricultural drain, all Soils
*** Tilled Land
PERLND  20                     10.000       RCHRES  20      1
PERLND  20                     10.000       RCHRES 120      6
```

```
PERLND  21                    10.000       RCHRES  21      1
PERLND  21                    10.000       RCHRES 121      6
PERLND  22                    10.000       RCHRES  22      1
PERLND  22                    10.000       RCHRES 122      6
*** Pasture/Fallow
PERLND  23                    10.000       RCHRES  23      1
PERLND  23                    10.000       RCHRES 123      6
PERLND  24                    10.000       RCHRES  24      1
PERLND  24                    10.000       RCHRES 124      6
PERLND  25                    10.000       RCHRES  25      1
PERLND  25                    10.000       RCHRES 125      6
***-------------------------------------------------------------
***URFs 26 to 28, Eco PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  26                     6.000       IMPLND  20      2
PERLND  27                     6.000       IMPLND  21      2
PERLND  28                     6.000       IMPLND  22      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                     2.500       RCHRES 318      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                     4.000       RCHRES 318      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  26                     3.000       RCHRES 126      6
PERLND  27                     3.000       RCHRES 127      6
PERLND  28                     3.000       RCHRES 128      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  20                     0.500       RCHRES 318      5
IMPLND  21                     0.500       RCHRES 318      5
IMPLND  22                     0.500       RCHRES 318      5
***-------------------------------------------------------------

END SCHEMATIC

***============================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
****          1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****          2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****          3 = IMPLND RUNOFF to a PERLND (highway to grassed
ROW
****          4 = IMPLND RUNOFF TO AN IMPLND (parking  to roadway)
****          5 = IMPLND RUNOFF to a RCHRES (roadway to storm
sewer)
****          6 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (agricultural
runoff)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****           for flows into RCHRES. For flows from one parcel of land to
another
```

```
***           no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    3

  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    5

  MASS-LINK        6
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (agr. or
highway)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
```

```
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6

  MASS-LINK        7
*** RCHRES to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
RCHRES     ROFLOW             1.0          RCHRES         INFLOW
  END MASS-LINK    7

END MASS-LINK

***=========================================================================
===

EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
RCHRES   1 HYDR   ROVOL      1000000.      WDM2  2031 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL      1000000.      WDM2  2531 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL      1000000.      WDM2  2131 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL      1000000.      WDM2  2631 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL      1000000.      WDM2  2231 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL      1000000.      WDM2  2731 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL      1000000.      WDM2  3031 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL      1000000.      WDM2  3531 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL      1000000.      WDM2  3032 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL      1000000.      WDM2  3532 FLOW     METR      REPL
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  3033 FLOW     METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  3533 FLOW     METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  4031 FLOW     METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  4531 FLOW     METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  4032 FLOW     METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  4532 FLOW     METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  4033 FLOW     METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  4533 FLOW     METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  4131 FLOW     METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  4631 FLOW     METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  4132 FLOW     METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  4632 FLOW     METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  4133 FLOW     METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  4633 FLOW     METR      REPL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  5031 FLOW     METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  5531 FLOW     METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  5032 FLOW     METR      REPL
RCHRES 114 HYDR   ROVOL      1000000.      WDM2  5532 FLOW     METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  5033 FLOW     METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  5533 FLOW     METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  6031 FLOW     METR      REPL
```

```
RCHRES 116 HYDR   ROVOL      1000000.      WDM2  6531 FLOW     METR      REPL
RCHRES  17 HYDR   ROVOL      1000000.      WDM2  6032 FLOW     METR      REPL
RCHRES 117 HYDR   ROVOL      1000000.      WDM2  6532 FLOW     METR      REPL
RCHRES  18 HYDR   ROVOL      1000000.      WDM2  6033 FLOW     METR      REPL
RCHRES 118 HYDR   ROVOL      1000000.      WDM2  6533 FLOW     METR      REPL
RCHRES  19 HYDR   ROVOL      1000000.      WDM2  6131 FLOW     METR      REPL
RCHRES 119 HYDR   ROVOL      1000000.      WDM2  6631 FLOW     METR      REPL
RCHRES  20 HYDR   ROVOL      1000000.      WDM2  6231 FLOW     METR      REPL
RCHRES 120 HYDR   ROVOL      1000000.      WDM2  6731 FLOW     METR      REPL
RCHRES  21 HYDR   ROVOL      1000000.      WDM2  6232 FLOW     METR      REPL
RCHRES 121 HYDR   ROVOL      1000000.      WDM2  6732 FLOW     METR      REPL
RCHRES  22 HYDR   ROVOL      1000000.      WDM2  6233 FLOW     METR      REPL
RCHRES 122 HYDR   ROVOL      1000000.      WDM2  6733 FLOW     METR      REPL
RCHRES  23 HYDR   ROVOL      1000000.      WDM2  6331 FLOW     METR      REPL
RCHRES 123 HYDR   ROVOL      1000000.      WDM2  6831 FLOW     METR      REPL
RCHRES  24 HYDR   ROVOL      1000000.      WDM2  6332 FLOW     METR      REPL
RCHRES 124 HYDR   ROVOL      1000000.      WDM2  6832 FLOW     METR      REPL
RCHRES  25 HYDR   ROVOL      1000000.      WDM2  6333 FLOW     METR      REPL
RCHRES 125 HYDR   ROVOL      1000000.      WDM2  6833 FLOW     METR      REPL
RCHRES  26 HYDR   ROVOL      1000000.      WDM2  6034 FLOW     METR      REPL
RCHRES 126 HYDR   ROVOL      1000000.      WDM2  6534 FLOW     METR      REPL
RCHRES  27 HYDR   ROVOL      1000000.      WDM2  6035 FLOW     METR      REPL
RCHRES 127 HYDR   ROVOL      1000000.      WDM2  6535 FLOW     METR      REPL
RCHRES  28 HYDR   ROVOL      1000000.      WDM2  6036 FLOW     METR      REPL
RCHRES 128 HYDR   ROVOL      1000000.      WDM2  6536 FLOW     METR      REPL
RCHRES   1 HTRCH  ROHEAT                   WDM3  2081 HEAT     METR      REPL
RCHRES 101 HTRCH  ROHEAT                   WDM3  2581 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                   WDM3  2181 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                   WDM3  2681 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                   WDM3  2281 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                   WDM3  2781 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                   WDM3  3081 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                   WDM3  3581 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                   WDM3  3082 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                   WDM3  3582 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                   WDM3  3083 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                   WDM3  3583 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                   WDM3  4081 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                   WDM3  4581 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                   WDM3  4082 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                   WDM3  4582 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                   WDM3  4083 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                   WDM3  4583 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                   WDM3  4181 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                   WDM3  4681 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                   WDM3  4182 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                   WDM3  4682 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                   WDM3  4183 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                   WDM3  4683 HEAT     METR      REPL
RCHRES  13 HTRCH  ROHEAT                   WDM3  5081 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                   WDM3  5581 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                   WDM3  5082 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                   WDM3  5582 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                   WDM3  5083 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                   WDM3  5583 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                   WDM3  6081 HEAT     METR      REPL
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RCHRES 116 HTRCH  ROHEAT                     WDM3  6581 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                     WDM3  6082 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                     WDM3  6582 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                     WDM3  6083 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                     WDM3  6583 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                     WDM3  6181 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                     WDM3  6681 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                     WDM3  6281 HEAT     METR      REPL
RCHRES 120 HTRCH  ROHEAT                     WDM3  6781 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                     WDM3  6282 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                     WDM3  6782 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                     WDM3  6283 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                     WDM3  6783 HEAT     METR      REPL
RCHRES  23 HTRCH  ROHEAT                     WDM3  6381 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                     WDM3  6881 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                     WDM3  6382 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                     WDM3  6882 HEAT     METR      REPL
RCHRES  25 HTRCH  ROHEAT                     WDM3  6383 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                     WDM3  6883 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                     WDM3  6084 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                     WDM3  6584 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                     WDM3  6085 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                     WDM3  6585 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                     WDM3  6086 HEAT     METR      REPL
RCHRES 128 HTRCH  ROHEAT                     WDM3  6586 HEAT     METR      REPL
PERLND  13 PWATER SURO                       WDM2  6431 SAB      METR      REPL
GENER    1 OUTPUT TIMSER                     WDM2  6931 GWAB     METR      REPL
PERLND  14 PWATER SURO                       WDM2  6432 SBC      METR      REPL
GENER    2 OUTPUT TIMSER                     WDM2  6932 GWBC     METR      REPL
PERLND  15 PWATER SURO                       WDM2  6433 SCD      METR      REPL
GENER    3 OUTPUT TIMSER                     WDM2  6933 GWCD     METR      REPL
IMPLND  13 IWATER SURO                       WDM2  6434 ROAD     METR      REPL
END EXT TARGETS

*** ==========================================================================

END RUN
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RUN
***          NON-RESIDENTIAL LAND USES
*** TEST CATCHMENT SCALE ANALSIS FOR THE TWWF STUDY ***
*** Note #1: This version simulates unit area response functions
(URFs)
***          for runoff from standard sized (10 hectare)
***          parcels of land within the City.  Only non-residential
is
***          represented with eleven land use designations, on
***          three general soil types.
*** Note #2: Land parcel runoff is separated into surface and subsurface
***          components and these are routed to separate reaches.
***MAXIMUM EFFORT SOURCE CONTROL***************************************

GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPT LEVELS    3
  RESUME     0 RUN     1                         Units     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   Hamilton Airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF2sc3-10.ech
           23   PER2sc3-10.out
           24   IMP2sc3-10.out
           25   RCH2sc3-10.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP               INDELT 00:15
      <OPTYP AND ##>      ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      RCHRES     201
      RCHRES     202
      RCHRES     203
      RCHRES     204
      RCHRES     216
      RCHRES     219
      RCHRES     301
      RCHRES     302
      RCHRES     303
      RCHRES     319
      RCHRES     252
      RCHRES     253
      RCHRES     266
      RCHRES     269
      PERLND       1
```

```
      PERLND       2
      PERLND       3
      PERLND       4
      PERLND       5
      PERLND       6
      PERLND       7
      PERLND       8
      PERLND       9
      PERLND      10
      PERLND      11
      PERLND      12
      PERLND     102
***
      IMPLND       1
      IMPLND       2
      IMPLND       3
      IMPLND       4
      IMPLND       5
      IMPLND       6
      IMPLND       7
      IMPLND       8
      IMPLND       9
      IMPLND      10
      IMPLND      11
      IMPLND      12
      IMPLND      13
      IMPLND      14
      IMPLND      15
      RCHRES     205
      RCHRES     352
      RCHRES     353
      RCHRES     369
****
      PERLND      13
      PERLND      14
      PERLND      15
      PERLND      16
      PERLND      17
      PERLND      18
      PERLND      19
      PERLND      20
      PERLND      21
      PERLND      22
      PERLND      23
      PERLND      24
      PERLND      25
      PERLND      26
      PERLND      27
      PERLND      28
***  Roads must be simulated after
PERLNDS
      IMPLND      16
      IMPLND      17
      IMPLND      18
      IMPLND      19
      IMPLND      20
```

```
IMPLND      21
IMPLND      22
RCHRES     317
RCHRES     318
RCHRES       1
RCHRES       2
RCHRES       3
RCHRES       4
RCHRES       5
RCHRES       6
RCHRES       7
RCHRES       8
RCHRES       9
RCHRES      10
RCHRES      11
RCHRES      12
RCHRES      13
RCHRES      14
RCHRES      15
RCHRES      16
RCHRES      17
RCHRES      18
RCHRES      19
RCHRES      20
RCHRES      21
RCHRES      22
RCHRES      23
RCHRES      24
RCHRES      25
RCHRES      26
RCHRES      27
RCHRES      28
RCHRES     101
RCHRES     102
RCHRES     103
RCHRES     104
RCHRES     105
RCHRES     106
RCHRES     107
RCHRES     108
RCHRES     109
RCHRES     110
RCHRES     111
RCHRES     112
RCHRES     113
RCHRES     114
RCHRES     115
RCHRES     116
RCHRES     117
RCHRES     118
RCHRES     119
RCHRES     120
RCHRES     121
RCHRES     122
RCHRES     123
RCHRES     124
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      RCHRES     125
      RCHRES     126
      RCHRES     127
      RCHRES     128
      GENER        1
      GENER        2
      GENER        3
    END INGRP
END OPN SEQUENCE


***
==============================================================================
=====

PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
    1  102         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1  102         4    4         4    4
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
***  COMMERCIAL  LAND USES                                    ****
    1     DNTWN COMM B-C SOIL              2    2        23
    2     BIG BOX COMM B-C                 2    2        23
    3     STRIP COMM B-C SOIL              2    2        23
***  INST/GOV'T  LAND USES                               ****
    4     SMALL INST A-B SOIL              2    2        23
    5     SMALL INST B-C SOIL              2    2        23
    6     SMALL INST D SOIL                2    2        23
***  OPEN SPACE LAND USES                                ****
    7     PARK/OPEN A-B SOIL               2    2        23
    8     PARK/OPEN B-C SOIL               2    2        23
    9     PARK/OPEN D  SOIL                2    2        23
   10     VALLEYS ON A-B SOIL              2    2        23
   11     VALLEYS ON B-C SOIL              2    2        23
   12     VALLEYS ON D SOIL                2    2        23
***  TRANSPORTATION RELATED LAND USES                    ****
   13     HIGHWAY ON A-B SOIL              2    2        23
   14     HIGHWAY ON B-C SOIL              2    2        23
   15     HIGHWAY ON D SOIL                2    2        23
***  INDUSTRIAL LAND USES                 ****
   16     PRESTIGE ON A-B SOIL             2    2        23
   17     PRESTIGE ON B-C SOIL             2    2        23
   18     PRESTIGE ON D SOIL               2    2        23
   19     BIG BOX IND B-C SOIL             2    2        23
***  AGRICULTURAL LAND USES               ****
   20     TILLED A-B SOIL                  2    2        23
   21     TILLED B-C SOIL                  2    2        23
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   22     TILLED C-D SOIL                  2    2        23
   23     PASTURE ON A-B SOIL              2    2        23
   24     PASTURE ON B-C SOIL              2    2        23
   25     PASTURE ON C-D SOIL              2    2        23
***  Eco INDUSTRIAL LAND USES                 ****
   26     Eco PRESTIGE ON A-B SOIL         2    2        23
   27     Eco PRESTIGE ON B-C SOIL         2    2        23
   28     Eco PRESTIGE ON D SOIL           2    2        23
***  PERVIOUS PARKING                                ****
  102     PERVIOUS PARKING                 2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #               ELEV                                ***
***  COMMERCIAL    *****
    1    3     43.50       90.      0.75      1.00       100.
*** INSTITUTIONAL  *****
    4    6     43.50       90.      0.75      1.00       100.
***  OPEN SPACES   *****
    7   12     43.50       90.      0.25      1.00       100.
***  TRANSPORTATION*****
   13   15     43.50       90.      0.40      1.00       100.
*** INDUSTRIAL     *****
   16   19     43.50       90.      0.75      1.00       100.
*** AGRICULTURAL   *****
   20   25     43.50      125.      0.05      1.00       100.
*** Eco INDUSTRIAL     *****
   26   28     43.50       90.      0.75      1.00       100.
***  PERVIOUS PARKING
  102          43.50      125.      0.05      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1  102      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
  *** Woodlots start with more snow pack    ***
    1  102      10.0        0.       0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1  102      100.       0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
```

```
***
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1  102    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                      ***  A-B   SOILS   ***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4          0.25      300.     15.0       75.0    0.02        0.0
.995
***  OPEN SPACES   ***
    7          0.25      300.     15.0      150.0    0.02        0.0
.995
   10          0.60      300.     15.0      150.0    0.15        0.0
.995
***  TRANSPORTATION ***
   13          0.25      300.     15.0       20.0    0.02        0.0
.995
***  INDUSTRIAL     ***
   16          0.25      300.     15.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   20          0.05      300.     15.0      200.0    0.02        0.0
.995
   23          0.20      300.     15.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   26          0.25      300.     15.0        5.0    0.02        0.0
.995
***
***
                                      ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3     0.25      200.      8.0        5.0    0.02        0.0
.995
***  INSTITUTIONAL ***
    5          0.25      200.      8.0       75.0    0.02        0.0
.995
***  OPEN SPACES   ***
    8          0.25      200.      8.0      150.0    0.02        0.0
.995
   11          0.60      200.      8.0      150.0    0.15        0.0
.995
***  TRANSPORTATION ***
   14          0.25      200.      8.0       20.0    0.02        0.0
.995
***  INDUSTRIAL     ***
   17          0.25      200.      8.0        5.0    0.02        0.0
.995
```

```
   19           0.25      200.      8.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   21           0.05      200.      8.0      200.0    0.02        0.0
.995
   24           0.20      200.      8.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   27           0.25      200.      8.0        5.0    0.02        0.0
.995
***
***
                                         ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6           0.25      100.      4.0       75.0    0.02        0.0
.995
***  OPEN SPACES   ***
    9           0.25      100.      4.0      150.0    0.02        0.0
.995
   12           0.60      100.      4.0      150.0    0.15        0.0
.995
***  TRANSPORTATION ***
   15           0.25      100.      4.0       20.0    0.02        0.0
.995
***  INDUSTRIAL     ***
   18           0.25      100.      4.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   22           0.05      100.      4.0      200.0    0.02        0.0
.995
   25           0.20      100.      4.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   28           0.25      100.      4.0        5.0    0.02        0.0
.995
***  PERVIOUS PARKING
  102           0.05      200.     10.0      100.0    0.02        0.0
.995
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1  102  4.5        1.7         2.0      2.0         0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                         ***  A-B   SOILS   ***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            5.0      30.0     0.25        1.0     0.85
```

```
0.30
***  OPEN SPACES   ***
    7          5.0     30.0    0.25       1.0     0.85
0.30
   10          5.0     30.0    0.35       1.0     0.85
0.60
***  TRANSPORTATION ***
   13          5.0     30.0    0.25       1.0     0.85
0.30
***  INDUSTRIAL     ***
   16          5.0     30.0    0.25       1.0     0.85
0.30
***  AGRICULTURAL   ***
   20          4.0     30.0    0.40       1.0     0.85
0.20
   23          2.5     30.0    0.30       1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   26          5.0     30.0    0.25       1.0     0.85
0.30
***
***
                                       ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3     5.0     16.0    0.25       1.0     0.85
0.30
***  INSTITUTIONAL ***
    5          5.0     16.0    0.25       1.0     0.85
0.30
***  OPEN SPACES   ***
    8          5.0     16.0    0.25       1.0     0.85
0.30
   11          5.0     16.0    0.35       1.0     0.85
0.60
***  TRANSPORTATION ***
   14          5.0     16.0    0.25       1.0     0.85
0.30
***  INDUSTRIAL     ***
   17          5.0     16.0    0.25       1.0     0.85
0.30
   19          5.0     16.0    0.25       1.0     0.85
0.30
***  AGRICULTURAL   ***
   21          4.0     16.0    0.40       1.0     0.85
0.20
   24          2.5     16.0    0.30       1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   27          5.0     16.0    0.25       1.0     0.85
0.30
***
***
                                       ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
```

```
    6           5.0       6.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    9           5.0       6.0     0.25        1.0     0.85
0.30
   12           5.0       6.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   15           5.0       6.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   18           5.0       6.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   22           4.0       6.0     0.40        1.0     0.85
0.20
   25           2.5       6.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   28           5.0       6.0     0.25        1.0     0.85     0.30
***  PERVIOUS PARKING
  102           2.5      16.0     0.25        1.0     0.85
0.20
  END PWAT-PARM4
  PWAT-PARM5
  < RANGE>       FZG      FZGL
***
    1  102       1.0
0.1
  END PWAT-PARM5
  ***
  MON-INTERCEP
    <PLS>   Only required if VCSFG=1 in PWAT-PARM1                    ***
    # -  #  Interception storage capacity at start of each month      ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
***Open space increased by 75% May-Oct
    7   12  2.0  2.0  2.0  3.0  7.0 8.75 8.75 8.75 8.75  7.0  3.0  2.0
***Institutional and Industrial increased by 25% May-Oct
    4    6  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   16   19  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   26   28  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
***highways increased by 10% May-Oct
   13   15  2.0  2.0  2.0  3.0  4.4  5.5  5.5  5.5  5.5  4.4  3.0  2.0
    1    3  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
   20   25  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  102       2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  END MON-INTERCEP

  MON-UZSN
    <PLS>   Only required if VUZFG=1 in PWAT-PARM1                    ***
    # -  #  Upper zone storage at start of each month                 ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
```

```
 20      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 23      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

  1    3  9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 19       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 21       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 24       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

  6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 18       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 22       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 25       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
102       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
END MON-UZSN

***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
MON-MANNING
  <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
  # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
  ***   LOW DENSITY RESIDENTIAL   ****
  1    3 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   MEDIUM DENSITY RESIDENTIAL   ****
  4    6 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH DENSITY RESIDENTIAL   ****
  7    9 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH RISE    RESIDENTIAL   ****
 10   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  DOWNTOWN COMMERCIAL        ****
 13      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   BIG BOX COMMERCIAL        ****
 14      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   STRIP MALL COMMERCIAL     ****
 15      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  SMALL INSTITUTIONAL        ****
 16   18 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PARK LAND                 ****
 19   21 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  VALLEY LAND                ****
 22   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   HIGHWAYS   ***
 25   27 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PRESTIGE INDUSTRIAL       ****
 28   30 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   LARGE INDUSTRIAL  ****
 31      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   TILLED AGRICULTURAL       ****
 32   34 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PASTURE/FALLOW AGRICULTURAL ***
```

```
   35   37 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  END MON-MANNING
  MON-INTERFLW
    <PLS >  Interflow Inflow Parameter for Start of Each Month ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
  END MON-INTERFLW
  MON-IRC
    <PLS >  INTERFLOW RECESSION CONSTANT ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
  END MON-IRC
***

  MON-LZETPARM
    <PLS >  ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1  102 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
  END MON-LZETPARM

  PWAT-STATE1
    <PLS >***
    # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  OPEN SPACES   ***
    7            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   10            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  TRANSPORTATION ***
   13            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  INDUSTRIAL     ***
   16            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  AGRICULTURAL   ***
   20            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   23            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   26            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***
***
                                       ***  B-C   SOILS   ***
***
***
***  COMMERCIAL    ***
    1    3       0.0       0.0      16.0       0.0     200.0      10.0
0.0
***  INSTITUTIONAL ***
```

```
    5            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  OPEN SPACES   ***
    8            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   11            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  TRANSPORTATION ***
   14            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  INDUSTRIAL     ***
   17            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   19            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  AGRICULTURAL   ***
   21            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   24            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***Eco  INDUSTRIAL     ***
   27            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  OPEN SPACES   ***
    9            0.0       0.0       6.0       0.0      100.0      10.0
0.0
   12            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  TRANSPORTATION ***
   15            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  INDUSTRIAL     ***
   18            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  AGRICULTURAL   ***
   22            0.0       0.0       6.0       0.0      100.0      10.0
0.0
   25            0.0       0.0       6.0       0.0      100.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   28            0.0       0.0       6.0       0.0      100.0      10.0
0.0
  102            0.0       0.0      16.0       0.0      200.0      10.0
0.0
  END PWAT-STATE1

  ***
```

```
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1  102    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1  102        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)    ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1  102  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1  102       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1  102    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1  102      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1  102       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1  102
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
    1   22         1    1         1
  101  102         1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   22         4    4         4             12
  101  102         4    4         4             12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     CDT1bc                       2    2        24
    2     CBB1bc                       2    2        24
    3     CSM1bc                       2    2        24
    4     EIS1ab                       2    2        24
```

```
    5     EIS1bc                     2    2        24
    6     EIS1cd                     2    2        24
    7     OPL0ab                     2    2        24
    8     OPL0bc                     2    2        24
    9     OPL0cd                     2    2        24
   10     OVL0ab                     2    2        24
   11     OVL0bc                     2    2        24
   12     OVL0cd                     2    2        24
   13     THC0ab                     2    2        24
   14     THC0bc                     2    2        24
   15     THC0cd                     2    2        24
   16     IPR1ab                     2    2        24
   17     IPR1bc                     2    2        24
   18     IPR1cd                     2    2        24
   19     IBB1bc                     2    2        24
   20     IPE1ab                     2    2        24
   21     IPE1bc                     2    2        24
   22     IPE1cd                     2    2        24
  101     FLAT ROOFS                 2    2        24
  102     INDUST/COMM PARKING        2    2        24
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   22    1
  101  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #               ELEV                                ***
*** 1-Flat roof,2-Ind/Comm Parking, 11 - 35 local roads ***
    1         43.50       90.      0.10      1.00      100.
    2         43.50       90.      0.10      1.00      100.
    3         43.50       90.      0.10      1.00      100.
    4         43.50       90.      0.10      1.00      100.
    5         43.50       90.      0.10      1.00      100.
    6         43.50       90.      0.10      1.00      100.
    7         43.50       90.      0.10      1.00      100.
    8         43.50       90.      0.10      1.00      100.
    9         43.50       90.      0.10      1.00      100.
   10         43.50       90.      0.10      1.00      100.
   11         43.50       90.      0.10      1.00      100.
   12         43.50       90.      0.10      1.00      100.
   13         43.50       90.      0.10      1.00      100.
   14         43.50       90.      0.10      1.00      100.
   15         43.50       90.      0.10      1.00      100.
   16         43.50       90.      0.10      1.00      100.
   17         43.50       90.      0.10      1.00      100.
   18         43.50       90.      0.10      1.00      100.
   19         43.50       90.      0.10      1.00      100.
   20         43.50       90.      0.10      1.00      100.
   21         43.50       90.      0.10      1.00      100.
   22         43.50       90.      0.10      1.00      100.
  101         43.50       90.      0.10      1.00      100.
  102         43.50       90.      0.10      1.00      100.
```

```
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   22      0.15     -0.99      0.20      1.50      .250      0.00
  101  102      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   22       0.0       0.0       0.0       0.2      500.       0.0
  101  102       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   22      100.       0.5       1.0
  101  102      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   22    1    1    0    0    0
  101  102    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
    1   22       50.    0.02        0.10       2.0
  101            20.    0.01        0.10       3.0
  102            25.    0.02        0.10       2.5
  END IWAT-PARM2
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   22       4.5       1.7
  101  102       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   22       0.0       0.0
  101  102       0.0       0.0
  END IWAT-STATE1

  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO           ***
    1  102    0    1
  END IWT-PARM1
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  102      150.       1.0       0.8
  END IWT-PARM2
  IWT-INIT
```

```
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  102       0.5
  END IWT-INIT
END IMPLND
                                 ***                    *****
                                 ***     RCHRES         *****
                                 ***                    *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  369    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  369    4    4         4                                      12
  END PRINT-INFO

***

  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX        IN  OUT ENGL METR LKFG ***
***   The first set of 25 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 25 RCHRESs (101-125) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   COMMERCIAL  CONFIGURATIONS    *****
    1     DOWNTOWN COMM ON BC     1         2    2        25    0
    2     BIG BOX  COMM ON BC     1         2    2        25    0
    3     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
    4     SMALL INSTIT. ON AB     1         2    2        25    0
    5     SMALL INSTIT. ON BC     1         2    2        25    0
    6     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
    7     PARK LAND ON AB         1         2    2        25    0
    8     PARK LAND ON BC         1         2    2        25    0
    9     PARK LAND ON CD         1         2    2        25    0
   10     VALLEY LAND ON AB       1         2    2        25    0
   11     VALLEY LAND ON BC       1         2    2        25    0
   12     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
   13     ROADS/HIGHWAYS AB       1         2    2        25    0
   14     ROADS/HIGHWAYS BC       1         2    2        25    0
   15     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
   16     PRESTIGE IND  AB        1         2    2        25    0
   17     PRESTIGE IND  BC        1         2    2        25    0
   18     PRESTIGE IND  CD        1         2    2        25    0
   19     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURAL CONFIGURATIONS    *****
   20     TILLED LAND   AB        1         2    2        25    0
   21     TILLED LAND   BC        1         2    2        25    0
   22     TILLED LAND   CD        1         2    2        25    0
```

```
   23     PASTURE/FALLOW AB       1         2    2        25    0
   24     PASTURE/FALLOW BC       1         2    2        25    0
   25     PASTURE/FALLOW CD       1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
   26     Eco PRESTIGE IND  AB    1         2    2        25    0
   27     Eco PRESTIGE IND  BC    1         2    2        25    0
   28     Eco PRESTIGE IND  CD    1         2    2        25    0
***   SUBSURFACE RCHRESs              *****
***   COMMERCIAL  CONFIGURATIONS      *****
  101     DOWNTOWN COMM ON BC     1         2    2        25    0
  102     BIG BOX  COMM ON BC     1         2    2        25    0
  103     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS      *****
  104     SMALL INSTIT. ON AB     1         2    2        25    0
  105     SMALL INSTIT. ON BC     1         2    2        25    0
  106     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS      *****
  107     PARK LAND ON AB         1         2    2        25    0
  108     PARK LAND ON BC         1         2    2        25    0
  109     PARK LAND ON CD         1         2    2        25    0
  110     VALLEY LAND ON AB       1         2    2        25    0
  111     VALLEY LAND ON BC       1         2    2        25    0
  112     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS      *****
  113     ROADS/HIGHWAYS AB       1         2    2        25    0
  114     ROADS/HIGHWAYS BC       1         2    2        25    0
  115     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS      *****
  116     PRESTIGE IND  AB        1         2    2        25    0
  117     PRESTIGE IND  BC        1         2    2        25    0
  118     PRESTIGE IND  CD        1         2    2        25    0
  119     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURE CONFIGURATIONS      *****
  120     TILLED LAND   AB        1         2    2        25    0
  121     TILLED LAND   BC        1         2    2        25    0
  122     TILLED LAND   CD        1         2    2        25    0
  123     PASTURE/FALLOW AB       1         2    2        25    0
  124     PASTURE/FALLOW BC       1         2    2        25    0
  125     PASTURE/FALLOW CD       1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
  126     Eco PRESTIGE IND  AB    1         2    2        25    0
  127     Eco PRESTIGE IND  BC    1         2    2        25    0
  128     Eco PRESTIGE IND  CD    1         2    2        25    0
***  ROOF AND PARKING RESTRICTORS *****
  201     CDT ROOF RESTRICTOR     1         2    2        25    0
  202     CBB ROOF RESTRICTOR     1         2    2        25    0
  203     CSM ROOF RESTRICTOR     1         2    2        25    0
  216     IPR ROOF RESTRICTOR     1         2    2        25    0
  219     IBB ROOF RESTRICTOR     1         2    2        25    0
  252     CBB PARKING RESTRICT    1         2    2        25    0
  253     CSM PARKING RESTRICT    1         2    2        25    0
  266     IPR PARKING RESTRICT    1         2    2        25    0
  269     IBB PARKING RESTRICT    1         2    2        25    0
***  ROOFTOP GARDENS *****
  301     CDT ROOF GARDEN         2         2    2        25    0
  302     CBB ROOF GARDEN         2         2    2        25    0
```

```
  303     CSM ROOF GARDEN         2         2    2        25    0
  317     IPR ROOF INFILTRATIO    2         2    2        25    0
  318     IPE ROOF INFILTRATIO    2         2    2        25    0
  319     IBB ROOF GARDEN         2         2    2        25    0
  204     EIS WETLAND             1         2    2        25    0
  205     EIS BIORETENTION        2         2    2        25    0
  352     CBB BIORETENTION        2         2    2        25    0
  353     CSM BIORETENTION        2         2    2        25    0
  369     IBB BIORETENTION        2         2    2        25    0
  END GEN-INFO
                                ***                     ***
                                ***   HYDR SECTION      ***
                                ***                     ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1  204      1  1  1    4                                       3
  206  269      1  1  1    4                                       3
  205           1  1  1    4  5                                    3
  301  369      1  1  1    4  5                                    3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   19    0   11    0.3000  6.000         0.0      0.5      1.00
   20   25    0   12    0.3000  6.000         0.0      0.5      1.00
   26   28    0   11    0.3000  6.000         0.0      0.5      1.00
  101  119    0   13    0.3000  6.000         0.0      0.5      1.00
  120  125    0   12    0.3000  6.000         0.0      0.5      1.00
  126  128    0   13    0.3000  6.000         0.0      0.5      1.00
  201         0   14    0.3000  6.000         0.0      0.5      1.00
  202         0   15    0.3000  6.000         0.0      0.5      1.00
  203         0   16    0.3000  6.000         0.0      0.5      1.00
  216         0   17    0.3000  6.000         0.0      0.5      1.00
  219         0   18    0.3000  6.000         0.0      0.5      1.00
  252         0   19    0.3000  6.000         0.0      0.5      1.00
  253         0   20    0.3000  6.000         0.0      0.5      1.00
  266         0   21    0.3000  6.000         0.0      0.5      1.00
  269         0   22    0.3000  6.000         0.0      0.5      1.00
  301         0   23    0.3000  6.000         0.0      0.5      1.00
  302         0   24    0.3000  6.000         0.0      0.5      1.00
  303         0   25    0.3000  6.000         0.0      0.5      1.00
  319         0   27    0.3000  6.000         0.0      0.5      1.00
  204         0   30    0.3000  6.000         0.0      0.5      1.00
  205         0   31    0.3000  6.000         0.0      0.5      1.00
  317         0   32    0.3000  6.000         0.0      0.5      1.00
  318         0   37    0.3000  6.000         0.0      0.5      1.00
  352         0   33    0.3000  6.000         0.0      0.5      1.00
  353         0   34    0.3000  6.000         0.0      0.5      1.00
  369         0   36    0.3000  6.000         0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   19 0.00001        4.3
```

```
   20   25 0.00001        4.3
   26   28 0.00001        4.3
  101  119 0.000001       4.3
  120  125 0.00001        4.3
  126  128 0.000001       4.3
  129  204 0.00001        4.3
  205      0.000001       4.3   5.3
  206  269 0.000001       4.3
  301  369 0.000001       4.3   5.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT       VOL  ****
    1  369
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
    # -  # BDFG TGFG TSTP ***
    1  369    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                       ***
    1  369      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   28      0.50       0.0
  101  369      4.50       0.0
  END HEAT-INIT
END RCHRES



***
============================================================================



FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
  FTABLE     11
  ROW  COL  ***
    5    4
    <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
```

```
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    0.50     0.015  0.00008     0.820
    0.75     0.255  0.00071     9.910
    1.00     0.255  0.00135    27.830
END FTABLE 11
FTABLE     12
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    1.00     0.060  0.00032     5.000
END FTABLE12
FTABLE     13
ROW  COL  ***
  2    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    1.00     0.001  0.00015     100.00
END FTABLE13

FTABLE     14
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.90  0.00195     0.164
    0.50      4.10  0.00300     5.000
END FTABLE 14
FTABLE     15
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.90  0.001088    0.0914
    0.50      3.10  0.00200     5.000
END FTABLE 15
FTABLE     16
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      1.70  0.000638    0.0536
    0.50      1.90  0.00100     5.000
END FTABLE 16
FTABLE     17
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.25  0.001125    0.0945
    0.50      2.50  0.00200     5.000
END FTABLE 17
FTABLE     18
ROW  COL  ***
```

```
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.38  0.001688    0.142
    0.50      3.50  0.00250     5.000
END FTABLE 18

FTABLE     19
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.00  0.00135     0.299
    1.00      2.50  0.00200     5.000
END FTABLE 19
FTABLE     20
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.17  0.001465    0.326
    1.00      2.50  0.00200     5.000
END FTABLE 20
FTABLE     21
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.08  0.000726    0.161
    1.00      2.00  0.00100     5.000
END FTABLE 21
FTABLE     22
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.47  0.000992    0.221
    1.00      2.00  0.00150     5.000
END FTABLE 22

FTABLE     23
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.05      1.10  0.000650   0.00021   0.0
    0.10      1.20  0.001300   0.00023   0.0
    0.15      1.30  0.001950   0.00025   0.0
    0.20      1.40  0.002500   0.00026   5.0
END FTABLE 23

FTABLE     24
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
```

```
    0.05      0.71  0.000363  0.000138    0.0
    0.10      0.72  0.000725  0.000139    0.0
    0.15      0.73  0.001088  0.000140    0.0
    0.20      1.00  0.002000  0.000141    5.0
END FTABLE 24

FTABLE     25
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
    0.05      0.41  0.000213  0.000080    0.0
    0.10      0.42  0.000425  0.000081    0.0
    0.15      0.43  0.000638  0.000082    0.0
    0.20      0.60  0.001000  0.000083    5.0
END FTABLE 25

FTABLE     27
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000      0.0
    0.05      1.11  0.000562   0.00020    0.0
    0.10      1.12  0.001125   0.00021    0.0
    0.15      1.13  0.001688   0.00022    0.0
    0.20      1.30  0.002000   0.00023    5.0
END FTABLE 27

FTABLE     30
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      .036  0.00018     0.00104
    1.00      .050  0.00100     5.000
END FTABLE 30

FTABLE     31
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.20      0.07  0.000140   0.00194   0.0
    0.50      0.10  0.000300   0.00194   5.0
END FTABLE 31

FTABLE     32
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00     0.000  0.00000    0.00000   0.00000
    1.50     0.188  0.00080    0.00521   0.00000
    2.00     0.250  0.00300    0.00521   100.000
END FTABLE 32

FTABLE     33
```

```
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.29  0.000570   0.00790   0.0
      0.50      0.35  0.000650   0.00790   5.0
  END FTABLE 33

  FTABLE     34
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.31  0.000620   0.00860   0.0
      0.50      0.35  0.000700   0.00860   5.0
  END FTABLE 34

  FTABLE     36
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.21  0.000420   0.00580   0.0
      0.50      0.35  0.000550   0.00580   5.0
  END FTABLE 36

  FTABLE     37
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00     0.000  0.00000    0.00000   0.00000
      1.50     0.188  0.00070    0.00521   0.00000
      2.00     0.250  0.00300    0.00521   100.000
  END FTABLE 37

END FTABLES

***==============================================================================
===

GENER
  OPCODE
    # -  #  Op- ***
           code ***
    1    3   16
  END OPCODE
END GENER

***
==============================================================================

EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
```

```
                  ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR              DIV  PERLND   1 119 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND   1  22 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND 101 102 EXTNL  PREC
WDM1   141 AIRT     METR              SAME PERLND   1 119 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND   1  22 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND 101 102 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME RCHRES   1 369 EXTNL  GATMP
WDM1   181 WIND     METR              DIV  PERLND   1 119 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND   1  22 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND 101 102 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  RCHRES   1 369 EXTNL  WIND
WDM1   131 SOLR     METR              DIV  PERLND   1 119 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND   1  22 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND 101 102 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  RCHRES   1 369 EXTNL  SOLRAD
WDM1   164 PET      METR              DIV  PERLND   1 119 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND   1  22 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND 101 102 EXTNL  PETINP
WDM1   121 DEWT     METR              SAME PERLND   1 119 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND   1  22 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND 101 102 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME RCHRES   1 369 EXTNL  DEWTMP
WDM1   171 CLDC     METR              SAME PERLND   1 119 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND   1  22 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND 101 102 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME RCHRES   1 369 EXTNL  CLOUD
END EXT SOURCES
***

***==============================================================================
===

***  This is where the URFs are developed.
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 6 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.
NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->
***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #
***
RCHRES 301 OFLOW         2   1.00          RCHRES   1     INFLOW
RCHRES 302 OFLOW         2   1.00          RCHRES   2     INFLOW
```

```
RCHRES 303 OFLOW         2   1.00          RCHRES   3     INFLOW
RCHRES 319 OFLOW         2   1.00          RCHRES  19     INFLOW
*** ADD AGWO AND IFWO TOGETHER USING GENER TO GET 6901,6902,6903
PERLND  13 PWATER IFWO                     GENER    1     INPUT  ONE
PERLND  13 PWATER AGWO                     GENER    1     INPUT  TWO
PERLND  14 PWATER IFWO                     GENER    2     INPUT  ONE
PERLND  14 PWATER AGWO                     GENER    2     INPUT  TWO
PERLND  15 PWATER IFWO                     GENER    3     INPUT  ONE
PERLND  15 PWATER AGWO                     GENER    3     INPUT  TWO
RCHRES 205 OFLOW         1   1.00          RCHRES 104     INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   4     INFLOW
RCHRES 205 OFLOW         1   1.00          RCHRES 105     INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   5     INFLOW
*** UPDATED REACH # 105->106 5->6
RCHRES 205 OFLOW         1   1.00          RCHRES 106     INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   6     INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 116     INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  16     INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 117     INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  17     INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 118     INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  18     INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 126     INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  26     INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 127     INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  27     INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 128     INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  28     INFLOW
RCHRES 352 OFLOW         1   1.00          RCHRES 102     INFLOW
RCHRES 352 OFLOW         2   1.00          RCHRES   2     INFLOW
RCHRES 353 OFLOW         1   1.00          RCHRES 103     INFLOW
RCHRES 353 OFLOW         2   1.00          RCHRES   3     INFLOW
RCHRES 369 OFLOW         1   1.00          RCHRES 119     INFLOW
RCHRES 369 OFLOW         2   1.00          RCHRES  19     INFLOW
***
END NETWORK


SCHEMATIC
<-Source->                <--Area-->       <-Target->  <ML->  ***
<Name>   #                <-factor->       <Name>   #      #  ***
***-----------------------------------------------------------------
***URFs  1 to  3, DOWNTOWN, BIG BOX and STRIP COMMERCIAL, B-C
Soils
*** Lawns/open space onto Roadway
PERLND   1                     0.132       IMPLND   1      2
PERLND   2                     0.167       IMPLND   2      2
PERLND   3                     0.105       IMPLND   3      2
*** 25% of flat Roof to roof garden
IMPLND 101                     1.300       RCHRES 301      5
IMPLND 101                     0.725       RCHRES 302      5
IMPLND 101                     0.425       RCHRES 303      5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                     3.900       RCHRES 201      5
IMPLND 101                     2.175       RCHRES 202      5
IMPLND 101                     1.275       RCHRES 203      5
```

```
*** restricted roof to storm sewer
RCHRES 201                     1.000       RCHRES   1      7
RCHRES 202                     1.000       RCHRES   2      7
RCHRES 203                     1.000       RCHRES   3      7
***100 % of driveway to road
IMPLND 102                     0.132       IMPLND   1      4
*** 60% parking (pervious) to road
PERLND 102                     2.850       IMPLND   2      2
PERLND 102                     1.958       IMPLND   3      2
***35 % of driveway or parking to restrictor
IMPLND 102                     1.995       RCHRES 252      5
IMPLND 102                     2.170       RCHRES 253      5
*** 5% of parking to bio-retention area
IMPLND 102                     0.285       RCHRES 352      5
IMPLND 102                     0.310       RCHRES 353      5
*** restricted parking to storm sewer
RCHRES 252                     1.000       RCHRES   2      7
RCHRES 253                     1.000       RCHRES   3      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   1                     0.500       RCHRES 101      6
PERLND   2                     0.200       RCHRES 102      6
PERLND   3                     0.200       RCHRES 103      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                     3.420       RCHRES 102      6
PERLND 102                     3.720       RCHRES 103      6
*** Roadway into local storm sewer
IMPLND   1                     3.800       RCHRES   1      5
IMPLND   2                     1.200       RCHRES   2      5
IMPLND   3                     1.900       RCHRES   3      5
***-------------------------------------------------------------
***URFs 4 to 6 , SMALL INSTITUTIONAL,  all Soils
*** Lawns/open space onto Roadway
PERLND   4                     7.556       IMPLND   4      2
PERLND   5                     7.556       IMPLND   5      2
PERLND   6                     7.556       IMPLND   6      2
*** Flat Roof to wetland/cistern
IMPLND 101                     0.900       RCHRES 204      5
*** wetland/cistern to storm sewer
RCHRES 204                     1.000       RCHRES   4      7
RCHRES 204                     1.000       RCHRES   5      7
RCHRES 204                     1.000       RCHRES   6      7
*** 5% of parking to bio-retention area
IMPLND 102                     0.070       RCHRES 205      5
***Parking onto road (10% of parking area)
IMPLND 102                     0.155       IMPLND   4      4
IMPLND 102                     0.155       IMPLND   5      4
IMPLND 102                     0.155       IMPLND   6      4
*** 25 % of parking onto pervious
IMPLND 102                     0.051       PERLND   4      3
IMPLND 102                     0.051       PERLND   5      3
IMPLND 102                     0.051       PERLND   6      3
*** 60% parking (pervious) to road
PERLND 102                     0.933       IMPLND   4      2
PERLND 102                     0.933       IMPLND   5      2
PERLND 102                     0.933       IMPLND   6      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
```

```
PERLND   4                    6.800       RCHRES 104      6
PERLND   5                    6.800       RCHRES 105      6
PERLND   6                    6.800       RCHRES 106      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                    0.840       RCHRES 104      6
PERLND 102                    0.840       RCHRES 105      6
PERLND 102                    0.840       RCHRES 106      6
*** Roadway into local storm sewer
IMPLND   4                    0.900       RCHRES   4      5
IMPLND   5                    0.900       RCHRES   5      5
IMPLND   6                    0.900       RCHRES   6      5
***-------------------------------------------------------------
***URFs  7 to 9 , OPEN SPACES/PARKS/CORRIDORS on all Soils
*** Lawns/open space onto Roadway
PERLND   7                   18.000       IMPLND   7      2
PERLND   8                   18.000       IMPLND   8      2
PERLND   9                   18.000       IMPLND   9      2
*** 75% of parking onto road
IMPLND 102                    0.750       IMPLND   7      4
IMPLND 102                    0.750       IMPLND   8      4
IMPLND 102                    0.750       IMPLND   9      4
*** 25% of parking onto pervious
IMPLND 102                   0.0138       PERLND   7      3
IMPLND 102                   0.0138       PERLND   8      3
IMPLND 102                   0.0138       PERLND   9      3
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   7                    9.000       RCHRES 107      6
PERLND   8                    9.000       RCHRES 108      6
PERLND   9                    9.000       RCHRES 109      6
*** Roadway into local storm sewer
IMPLND   7                    0.500       RCHRES   7      5
IMPLND   8                    0.500       RCHRES   8      5
IMPLND   9                    0.500       RCHRES   9      5
***-------------------------------------------------------------
***URFs 10 to 12, VALLEY LANDS on all Soils
*** Lawns/open space onto Roadway
PERLND  10                   32.330       IMPLND  10      2
PERLND  11                   32.330       IMPLND  11      2
PERLND  12                   32.330       IMPLND  12      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  10                    9.700       RCHRES 110      6
PERLND  11                    9.700       RCHRES 111      6
PERLND  12                    9.700       RCHRES 112      6
*** Roadway into local storm sewer
IMPLND  10                    0.300       RCHRES  10      5
IMPLND  11                    0.300       RCHRES  11      5
IMPLND  12                    0.300       RCHRES  12      5
***-------------------------------------------------------------
***URFs 13 to 15, ROADS/HIGHWAYS on all Soils
*** Roads to adjacent grassed area
*** For study area 5 use 70% roadway/30% open.
IMPLND  13                    2.333       PERLND  13      3
IMPLND  14                    2.333       PERLND  14      3
IMPLND  15                    2.333       PERLND  15      3
*** Surface runoff from grassed area to storm sewer
PERLND  13                    3.000       RCHRES  13      1
```

```
PERLND  14                    3.000       RCHRES  14      1
PERLND  15                    3.000       RCHRES  15      1
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  13                    3.000       RCHRES 113      6
PERLND  14                    3.000       RCHRES 114      6
PERLND  15                    3.000       RCHRES 115      6
***-----------------------------------------------------------
***URFs 16 to 18, PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  16                    2.857       IMPLND  16      2
PERLND  17                    2.857       IMPLND  17      2
PERLND  18                    2.857       IMPLND  18      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                    3.000       RCHRES 317      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                    4.300       RCHRES 317      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  16                    2.000       RCHRES 116      6
PERLND  17                    2.000       RCHRES 117      6
PERLND  18                    2.000       RCHRES 118      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  16                    0.700       RCHRES 317      5
IMPLND  17                    0.700       RCHRES 317      5
IMPLND  18                    0.700       RCHRES 317      5
***-----------------------------------------------------------
***URFs 19 , BIG BOX INDUSTRIAL,  B-C Soils
*** Lawns/open space onto Roadway
PERLND  19                    1.167       IMPLND  19      2
*** 25% of flat Roof to roof garden
IMPLND 101                    1.125       RCHRES 319      5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                    3.375       RCHRES 219      5
*** restricted roof to storm sewer
RCHRES 219                    1.000       RCHRES  19      7
*** 60% parking (pervious) to road
PERLND 102                    4.200       IMPLND  19      2
*** 5% of parking to bio-retention area
IMPLND 102                    0.210       RCHRES 369      5
***35 % of parking to restrictor
IMPLND 102                    1.470       RCHRES 269      5
*** restricted parking to storm sewer
RCHRES 269                    1.000       RCHRES  19      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  19                    0.700       RCHRES 119      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                    2.520       RCHRES 119      6
*** Roadway into local storm sewer
IMPLND  19                    0.600       RCHRES  19      5
***-----------------------------------------------------------
***URFs 20 to 25, AGRICULTURAL LANDS
*** Surface and subsurface flow to an agricultural drain, all Soils
*** Tilled Land
PERLND  20                   10.000       RCHRES  20      1
PERLND  20                   10.000       RCHRES 120      6
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```
PERLND  21                    10.000       RCHRES  21      1
PERLND  21                    10.000       RCHRES 121      6
PERLND  22                    10.000       RCHRES  22      1
PERLND  22                    10.000       RCHRES 122      6
*** Pasture/Fallow
PERLND  23                    10.000       RCHRES  23      1
PERLND  23                    10.000       RCHRES 123      6
PERLND  24                    10.000       RCHRES  24      1
PERLND  24                    10.000       RCHRES 124      6
PERLND  25                    10.000       RCHRES  25      1
PERLND  25                    10.000       RCHRES 125      6
***-------------------------------------------------------------
***URFs 26 to 28, Eco PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  26                     6.000       IMPLND  20      2
PERLND  27                     6.000       IMPLND  21      2
PERLND  28                     6.000       IMPLND  22      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                     2.500       RCHRES 318      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                     4.000       RCHRES 318      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  26                     3.000       RCHRES 126      6
PERLND  27                     3.000       RCHRES 127      6
PERLND  28                     3.000       RCHRES 128      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  20                     0.500       RCHRES 318      5
IMPLND  21                     0.500       RCHRES 318      5
IMPLND  22                     0.500       RCHRES 318      5
***-------------------------------------------------------------

END SCHEMATIC

***===========================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
****          1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****          2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****          3 = IMPLND RUNOFF to a PERLND (highway to grassed
ROW
****          4 = IMPLND RUNOFF TO AN IMPLND (parking  to roadway)
****          5 = IMPLND RUNOFF to a RCHRES (roadway to storm
sewer)
****          6 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (agricultural
runoff)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****           for flows into RCHRES. For flows from one parcel of land to
another
```

```
***           no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    3

  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    5

  MASS-LINK        6
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (agr. or
highway)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
```

```
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6

  MASS-LINK        7
*** RCHRES to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
RCHRES     ROFLOW             1.0          RCHRES         INFLOW
  END MASS-LINK    7

END MASS-LINK

***============================================================================
===

EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
RCHRES   1 HYDR   ROVOL      1000000.      WDM2  2031 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL      1000000.      WDM2  2531 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL      1000000.      WDM2  2131 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL      1000000.      WDM2  2631 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL      1000000.      WDM2  2231 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL      1000000.      WDM2  2731 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL      1000000.      WDM2  3031 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL      1000000.      WDM2  3531 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL      1000000.      WDM2  3032 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL      1000000.      WDM2  3532 FLOW     METR      REPL
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  3033 FLOW     METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  3533 FLOW     METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  4031 FLOW     METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  4531 FLOW     METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  4032 FLOW     METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  4532 FLOW     METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  4033 FLOW     METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  4533 FLOW     METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  4131 FLOW     METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  4631 FLOW     METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  4132 FLOW     METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  4632 FLOW     METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  4133 FLOW     METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  4633 FLOW     METR      REPL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  5031 FLOW     METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  5531 FLOW     METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  5032 FLOW     METR      REPL
RCHRES 114 HYDR   ROVOL      1000000.      WDM2  5532 FLOW     METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  5033 FLOW     METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  5533 FLOW     METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  6031 FLOW     METR      REPL
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RCHRES 116 HYDR   ROVOL      1000000.     WDM2  6531 FLOW     METR      REPL
RCHRES  17 HYDR   ROVOL      1000000.     WDM2  6032 FLOW     METR      REPL
RCHRES 117 HYDR   ROVOL      1000000.     WDM2  6532 FLOW     METR      REPL
RCHRES  18 HYDR   ROVOL      1000000.     WDM2  6033 FLOW     METR      REPL
RCHRES 118 HYDR   ROVOL      1000000.     WDM2  6533 FLOW     METR      REPL
RCHRES  19 HYDR   ROVOL      1000000.     WDM2  6131 FLOW     METR      REPL
RCHRES 119 HYDR   ROVOL      1000000.     WDM2  6631 FLOW     METR      REPL
RCHRES  20 HYDR   ROVOL      1000000.     WDM2  6231 FLOW     METR      REPL
RCHRES 120 HYDR   ROVOL      1000000.     WDM2  6731 FLOW     METR      REPL
RCHRES  21 HYDR   ROVOL      1000000.     WDM2  6232 FLOW     METR      REPL
RCHRES 121 HYDR   ROVOL      1000000.     WDM2  6732 FLOW     METR      REPL
RCHRES  22 HYDR   ROVOL      1000000.     WDM2  6233 FLOW     METR      REPL
RCHRES 122 HYDR   ROVOL      1000000.     WDM2  6733 FLOW     METR      REPL
RCHRES  23 HYDR   ROVOL      1000000.     WDM2  6331 FLOW     METR      REPL
RCHRES 123 HYDR   ROVOL      1000000.     WDM2  6831 FLOW     METR      REPL
RCHRES  24 HYDR   ROVOL      1000000.     WDM2  6332 FLOW     METR      REPL
RCHRES 124 HYDR   ROVOL      1000000.     WDM2  6832 FLOW     METR      REPL
RCHRES  25 HYDR   ROVOL      1000000.     WDM2  6333 FLOW     METR      REPL
RCHRES 125 HYDR   ROVOL      1000000.     WDM2  6833 FLOW     METR      REPL
RCHRES  26 HYDR   ROVOL      1000000.     WDM2  6034 FLOW     METR      REPL
RCHRES 126 HYDR   ROVOL      1000000.     WDM2  6534 FLOW     METR      REPL
RCHRES  27 HYDR   ROVOL      1000000.     WDM2  6035 FLOW     METR      REPL
RCHRES 127 HYDR   ROVOL      1000000.     WDM2  6535 FLOW     METR      REPL
RCHRES  28 HYDR   ROVOL      1000000.     WDM2  6036 FLOW     METR      REPL
RCHRES 128 HYDR   ROVOL      1000000.     WDM2  6536 FLOW     METR      REPL
RCHRES   1 HTRCH  ROHEAT                  WDM3  2081 HEAT     METR      REPL
RCHRES 101 HTRCH  ROHEAT                  WDM3  2581 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                  WDM3  2181 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                  WDM3  2681 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                  WDM3  2281 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                  WDM3  2781 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                  WDM3  3081 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                  WDM3  3581 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                  WDM3  3082 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                  WDM3  3582 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                  WDM3  3083 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                  WDM3  3583 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                  WDM3  4081 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                  WDM3  4581 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                  WDM3  4082 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                  WDM3  4582 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                  WDM3  4083 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                  WDM3  4583 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                  WDM3  4181 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                  WDM3  4681 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                  WDM3  4182 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                  WDM3  4682 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                  WDM3  4183 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                  WDM3  4683 HEAT     METR      REPL
RCHRES  13 HTRCH  ROHEAT                  WDM3  5081 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                  WDM3  5581 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                  WDM3  5082 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                  WDM3  5582 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                  WDM3  5083 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                  WDM3  5583 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                  WDM3  6081 HEAT     METR      REPL
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RCHRES 116 HTRCH  ROHEAT                        WDM3  6581 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                        WDM3  6082 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                        WDM3  6582 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                        WDM3  6083 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                        WDM3  6583 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                        WDM3  6181 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                        WDM3  6681 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                        WDM3  6281 HEAT     METR      REPL
RCHRES 120 HTRCH  ROHEAT                        WDM3  6781 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                        WDM3  6282 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                        WDM3  6782 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                        WDM3  6283 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                        WDM3  6783 HEAT     METR      REPL
RCHRES  23 HTRCH  ROHEAT                        WDM3  6381 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                        WDM3  6881 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                        WDM3  6382 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                        WDM3  6882 HEAT     METR      REPL
RCHRES  25 HTRCH  ROHEAT                        WDM3  6383 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                        WDM3  6883 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                        WDM3  6084 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                        WDM3  6584 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                        WDM3  6085 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                        WDM3  6585 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                        WDM3  6086 HEAT     METR      REPL
RCHRES 128 HTRCH  ROHEAT                        WDM3  6586 HEAT     METR      REPL
PERLND  13 PWATER SURO                          WDM2  6431 SAB      METR      REPL
GENER    1 OUTPUT TIMSER                        WDM2  6931 GWAB     METR      REPL
PERLND  14 PWATER SURO                          WDM2  6432 SBC      METR      REPL
GENER    2 OUTPUT TIMSER                        WDM2  6932 GWBC     METR      REPL
PERLND  15 PWATER SURO                          WDM2  6433 SCD      METR      REPL
GENER    3 OUTPUT TIMSER                        WDM2  6933 GWCD     METR      REPL
IMPLND  13 IWATER SURO                          WDM2  6434 ROAD     METR      REPL
END EXT TARGETS

*** ===========================================================================

END RUN
```

```
RUN
***          NON-RESIDENTIAL LAND USES
*** TEST CATCHMENT SCALE ANALSIS FOR THE TWWF STUDY ***
*** Note #1: This version simulates unit area response functions
(URFs)
***          for runoff from standard sized (10 hectare)
***          parcels of land within the City.  Only non-residential
is
***          represented with eleven land use designations, on
***          three general soil types.
*** Note #2: Land parcel runoff is separated into surface and subsurface
***          components and these are routed to separate reaches.
***MAXIMUM EFFORT SOURCE CONTROL***************************************

GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPT LEVELS    3
  RESUME     0 RUN     1                         Units     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   Hamilton Airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF2sc3-6.ech
           23   PER2sc3-6.out
           24   IMP2sc3-6.out
           25   RCH2sc3-6.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP              INDELT 00:15
      <OPTYP AND ##>      ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      RCHRES     201
      RCHRES     202
      RCHRES     203
      RCHRES     204
      RCHRES     216
      RCHRES     219
      RCHRES     301
      RCHRES     302
      RCHRES     303
      RCHRES     319
      RCHRES     252
      RCHRES     253
      RCHRES     266
      RCHRES     269
      PERLND       1
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      PERLND       2
      PERLND       3
      PERLND       4
      PERLND       5
      PERLND       6
      PERLND       7
      PERLND       8
      PERLND       9
      PERLND      10
      PERLND      11
      PERLND      12
      PERLND     102
***
      IMPLND       1
      IMPLND       2
      IMPLND       3
      IMPLND       4
      IMPLND       5
      IMPLND       6
      IMPLND       7
      IMPLND       8
      IMPLND       9
      IMPLND      10
      IMPLND      11
      IMPLND      12
      IMPLND      13
      IMPLND      14
      IMPLND      15
      RCHRES     205
      RCHRES     352
      RCHRES     353
      RCHRES     369
****
      PERLND      13
      PERLND      14
      PERLND      15
      PERLND      16
      PERLND      17
      PERLND      18
      PERLND      19
      PERLND      20
      PERLND      21
      PERLND      22
      PERLND      23
      PERLND      24
      PERLND      25
      PERLND      26
      PERLND      27
      PERLND      28
***  Roads must be simulated after
PERLNDS
      IMPLND      16
      IMPLND      17
      IMPLND      18
      IMPLND      19
      IMPLND      20
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IMPLND      21
IMPLND      22
RCHRES     317
RCHRES     318
RCHRES       1
RCHRES       2
RCHRES       3
RCHRES       4
RCHRES       5
RCHRES       6
RCHRES       7
RCHRES       8
RCHRES       9
RCHRES      10
RCHRES      11
RCHRES      12
RCHRES      13
RCHRES      14
RCHRES      15
RCHRES      16
RCHRES      17
RCHRES      18
RCHRES      19
RCHRES      20
RCHRES      21
RCHRES      22
RCHRES      23
RCHRES      24
RCHRES      25
RCHRES      26
RCHRES      27
RCHRES      28
RCHRES     101
RCHRES     102
RCHRES     103
RCHRES     104
RCHRES     105
RCHRES     106
RCHRES     107
RCHRES     108
RCHRES     109
RCHRES     110
RCHRES     111
RCHRES     112
RCHRES     113
RCHRES     114
RCHRES     115
RCHRES     116
RCHRES     117
RCHRES     118
RCHRES     119
RCHRES     120
RCHRES     121
RCHRES     122
RCHRES     123
RCHRES     124
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      RCHRES     125
      RCHRES     126
      RCHRES     127
      RCHRES     128
      GENER        1
      GENER        2
      GENER        3
    END INGRP
END OPN SEQUENCE


***
==============================================================================
=====

PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
    1  102         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1  102         4    4         4    4
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
***  COMMERCIAL  LAND USES                                    ****
    1     DNTWN COMM B-C SOIL              2    2        23
    2     BIG BOX COMM B-C                 2    2        23
    3     STRIP COMM B-C SOIL              2    2        23
***  INST/GOV'T  LAND USES                             ****
    4     SMALL INST A-B SOIL              2    2        23
    5     SMALL INST B-C SOIL              2    2        23
    6     SMALL INST D SOIL                2    2        23
***  OPEN SPACE LAND USES                              ****
    7     PARK/OPEN A-B SOIL               2    2        23
    8     PARK/OPEN B-C SOIL               2    2        23
    9     PARK/OPEN D  SOIL                2    2        23
   10     VALLEYS ON A-B SOIL              2    2        23
   11     VALLEYS ON B-C SOIL              2    2        23
   12     VALLEYS ON D SOIL                2    2        23
***  TRANSPORTATION RELATED LAND USES                  ****
   13     HIGHWAY ON A-B SOIL              2    2        23
   14     HIGHWAY ON B-C SOIL              2    2        23
   15     HIGHWAY ON D SOIL                2    2        23
***  INDUSTRIAL LAND USES                 ****
   16     PRESTIGE ON A-B SOIL             2    2        23
   17     PRESTIGE ON B-C SOIL             2    2        23
   18     PRESTIGE ON D SOIL               2    2        23
   19     BIG BOX IND B-C SOIL             2    2        23
***  AGRICULTURAL LAND USES               ****
   20     TILLED A-B SOIL                  2    2        23
   21     TILLED B-C SOIL                  2    2        23
```

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   22     TILLED C-D SOIL                      2    2        23
   23     PASTURE ON A-B SOIL                  2    2        23
   24     PASTURE ON B-C SOIL                  2    2        23
   25     PASTURE ON C-D SOIL                  2    2        23
***  Eco INDUSTRIAL LAND USES                     ****
   26     Eco PRESTIGE ON A-B SOIL             2    2        23
   27     Eco PRESTIGE ON B-C SOIL             2    2        23
   28     Eco PRESTIGE ON D SOIL               2    2        23
***  PERVIOUS PARKING                                    ****
  102     PERVIOUS PARKING                     2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                              ***
***  COMMERCIAL     *****
    1    3     43.50       90.      0.75      1.00       100.
*** INSTITUTIONAL  *****
    4    6     43.50       90.      0.75      1.00       100.
***  OPEN SPACES   *****
    7   12     43.50       90.      0.25      1.00       100.
***  TRANSPORTATION*****
   13   15     43.50       90.      0.40      1.00       100.
*** INDUSTRIAL     *****
   16   19     43.50       90.      0.75      1.00       100.
*** AGRICULTURAL   *****
   20   25     43.50      125.      0.05      1.00       100.
*** Eco INDUSTRIAL     *****
   26   28     43.50       90.      0.75      1.00       100.
***  PERVIOUS PARKING
  102          43.50      125.      0.05      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1  102      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
  *** Woodlots start with more snow pack    ***
    1  102      10.0        0.       0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1  102      100.       0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
```

```
***
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1  102    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                          ***  A-B   SOILS   ***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4          0.25      300.     15.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    7          0.25      300.     15.0      150.0    0.02         0.0
.995
   10          0.60      300.     15.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   13          0.25      300.     15.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   16          0.25      300.     15.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   20          0.05      300.     15.0      200.0    0.02         0.0
.995
   23          0.20      300.     15.0      200.0    0.02         0.0
.995
***  Eco INDUSTRIAL     ***
   26          0.25      300.     15.0        5.0    0.02         0.0
.995
***
***
                                          ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3     0.25      200.      8.0        5.0    0.02         0.0
.995
***  INSTITUTIONAL ***
    5          0.25      200.      8.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    8          0.25      200.      8.0      150.0    0.02         0.0
.995
   11          0.60      200.      8.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   14          0.25      200.      8.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   17          0.25      200.      8.0        5.0    0.02         0.0
.995
```

```
   19           0.25      200.      8.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   21           0.05      200.      8.0      200.0    0.02        0.0
.995
   24           0.20      200.      8.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   27           0.25      200.      8.0        5.0    0.02        0.0
.995
***
***
                                             ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6           0.25      100.      4.0       75.0    0.02        0.0
.995
***  OPEN SPACES   ***
    9           0.25      100.      4.0      150.0    0.02        0.0
.995
   12           0.60      100.      4.0      150.0    0.15        0.0
.995
***  TRANSPORTATION ***
   15           0.25      100.      4.0       20.0    0.02        0.0
.995
***  INDUSTRIAL     ***
   18           0.25      100.      4.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   22           0.05      100.      4.0      200.0    0.02        0.0
.995
   25           0.20      100.      4.0      200.0    0.02        0.0
.995
***  Eco INDUSTRIAL     ***
   28           0.25      100.      4.0        5.0    0.02        0.0
.995
***  PERVIOUS PARKING
  102           0.05      200.     10.0      100.0    0.02        0.0
.995
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1  102  4.5        1.7        2.0      2.0        0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                             ***  A-B   SOILS   ***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            5.0      30.0     0.25        1.0     0.85
```

```
0.30
***  OPEN SPACES   ***
    7            5.0      30.0     0.25        1.0     0.85
0.30
   10            5.0      30.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   13            5.0      30.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   16            5.0      30.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   20            4.0      30.0     0.40        1.0     0.85
0.20
   23            2.5      30.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   26            5.0      30.0     0.25        1.0     0.85
0.30
***
***
                                      ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3       5.0      16.0     0.25        1.0     0.85
0.30
***  INSTITUTIONAL ***
    5            5.0      16.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    8            5.0      16.0     0.25        1.0     0.85
0.30
   11            5.0      16.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   14            5.0      16.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   17            5.0      16.0     0.25        1.0     0.85
0.30
   19            5.0      16.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   21            4.0      16.0     0.40        1.0     0.85
0.20
   24            2.5      16.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   27            5.0      16.0     0.25        1.0     0.85
0.30
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
```

```
    6            5.0       6.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    9            5.0       6.0     0.25        1.0     0.85
0.30
   12            5.0       6.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   15            5.0       6.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   18            5.0       6.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   22            4.0       6.0     0.40        1.0     0.85
0.20
   25            2.5       6.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   28            5.0       6.0     0.25        1.0     0.85     0.30
***  PERVIOUS PARKING
  102            2.5      16.0     0.25        1.0     0.85
0.20
  END PWAT-PARM4
  PWAT-PARM5
  < RANGE>       FZG      FZGL
***
    1  102       1.0
0.1
  END PWAT-PARM5
  ***
  MON-INTERCEP
    <PLS>   Only required if VCSFG=1 in PWAT-PARM1                    ***
    # -  #  Interception storage capacity at start of each month      ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
***Open space increased by 75% May-Oct
    7   12  2.0  2.0  2.0  3.0  7.0 8.75 8.75 8.75 8.75  7.0  3.0  2.0
***Institutional and Industrial increased by 25% May-Oct
    4    6  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   16   19  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   26   28  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
***highways increased by 10% May-Oct
   13   15  2.0  2.0  2.0  3.0  4.4  5.5  5.5  5.5  5.5  4.4  3.0  2.0
    1    3  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
   20   25  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  102       2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  END MON-INTERCEP

  MON-UZSN
    <PLS>   Only required if VUZFG=1 in PWAT-PARM1                    ***
    # -  #  Upper zone storage at start of each month                 ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
```

```
 20      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 23      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

  1    3  9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 19       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 21       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 24       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

  6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 18       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 22       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 25       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
102       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
END MON-UZSN

***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
MON-MANNING
  <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
  # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
  ***   LOW DENSITY RESIDENTIAL   ****
  1    3 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   MEDIUM DENSITY RESIDENTIAL   ****
  4    6 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH DENSITY RESIDENTIAL   ****
  7    9 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH RISE    RESIDENTIAL   ****
 10   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  DOWNTOWN COMMERCIAL        ****
 13      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   BIG BOX COMMERCIAL        ****
 14      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   STRIP MALL COMMERCIAL     ****
 15      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  SMALL INSTITUTIONAL        ****
 16   18 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PARK LAND                 ****
 19   21 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  VALLEY LAND                ****
 22   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   HIGHWAYS   ***
 25   27 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PRESTIGE INDUSTRIAL       ****
 28   30 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   LARGE INDUSTRIAL  ****
 31      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   TILLED AGRICULTURAL       ****
 32   34 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PASTURE/FALLOW AGRICULTURAL ***
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   35   37 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  END MON-MANNING
  MON-INTERFLW
    <PLS >  Interflow Inflow Parameter for Start of Each Month ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
  END MON-INTERFLW
  MON-IRC
    <PLS >  INTERFLOW RECESSION CONSTANT ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
  END MON-IRC
***

  MON-LZETPARM
    <PLS >  ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1  102 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
  END MON-LZETPARM

  PWAT-STATE1
    <PLS >***
    # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  OPEN SPACES   ***
    7            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   10            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  TRANSPORTATION ***
   13            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  INDUSTRIAL     ***
   16            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  AGRICULTURAL   ***
   20            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   23            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   26            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***
***
                                       ***  B-C   SOILS   ***
***
***
***  COMMERCIAL    ***
    1    3       0.0       0.0      16.0       0.0     200.0      10.0
0.0
***  INSTITUTIONAL ***
```

```
    5           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***  OPEN SPACES   ***
    8           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   11           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***  TRANSPORTATION ***
   14           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***  INDUSTRIAL     ***
   17           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   19           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***  AGRICULTURAL   ***
   21           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   24           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***Eco  INDUSTRIAL     ***
   27           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  OPEN SPACES   ***
    9           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   12           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  TRANSPORTATION ***
   15           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  INDUSTRIAL     ***
   18           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  AGRICULTURAL   ***
   22           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   25           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   28           0.0       0.0       6.0      0.0      100.0      10.0
0.0
  102           0.0       0.0      16.0      0.0      200.0      10.0
0.0
  END PWAT-STATE1

  ***
```

```
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1  102    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1  102        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)   ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1  102  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1  102       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1  102    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1  102      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1  102       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1  102
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
    1   22         1    1         1
  101  102         1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   22         4    4         4             12
  101  102         4    4         4             12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     CDT1bc                       2    2        24
    2     CBB1bc                       2    2        24
    3     CSM1bc                       2    2        24
    4     EIS1ab                       2    2        24
```

```
    5     EIS1bc                       2    2        24
    6     EIS1cd                       2    2        24
    7     OPL0ab                       2    2        24
    8     OPL0bc                       2    2        24
    9     OPL0cd                       2    2        24
   10     OVL0ab                       2    2        24
   11     OVL0bc                       2    2        24
   12     OVL0cd                       2    2        24
   13     THC0ab                       2    2        24
   14     THC0bc                       2    2        24
   15     THC0cd                       2    2        24
   16     IPR1ab                       2    2        24
   17     IPR1bc                       2    2        24
   18     IPR1cd                       2    2        24
   19     IBB1bc                       2    2        24
   20     IPE1ab                       2    2        24
   21     IPE1bc                       2    2        24
   22     IPE1cd                       2    2        24
  101     FLAT ROOFS                   2    2        24
  102     INDUST/COMM PARKING          2    2        24
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   22    1
  101  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #               ELEV                                ***
*** 1-Flat roof,2-Ind/Comm Parking, 11 - 35 local roads ***
    1        43.50       90.       0.10      1.00      100.
    2        43.50       90.       0.10      1.00      100.
    3        43.50       90.       0.10      1.00      100.
    4        43.50       90.       0.10      1.00      100.
    5        43.50       90.       0.10      1.00      100.
    6        43.50       90.       0.10      1.00      100.
    7        43.50       90.       0.10      1.00      100.
    8        43.50       90.       0.10      1.00      100.
    9        43.50       90.       0.10      1.00      100.
   10        43.50       90.       0.10      1.00      100.
   11        43.50       90.       0.10      1.00      100.
   12        43.50       90.       0.10      1.00      100.
   13        43.50       90.       0.10      1.00      100.
   14        43.50       90.       0.10      1.00      100.
   15        43.50       90.       0.10      1.00      100.
   16        43.50       90.       0.10      1.00      100.
   17        43.50       90.       0.10      1.00      100.
   18        43.50       90.       0.10      1.00      100.
   19        43.50       90.       0.10      1.00      100.
   20        43.50       90.       0.10      1.00      100.
   21        43.50       90.       0.10      1.00      100.
   22        43.50       90.       0.10      1.00      100.
  101        43.50       90.       0.10      1.00      100.
  102        43.50       90.       0.10      1.00      100.
```

```
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   22      0.15     -0.99      0.20      1.50      .250      0.00
  101  102      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   22       0.0       0.0       0.0       0.2      500.       0.0
  101  102       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   22      100.       0.5       1.0
  101  102      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   22    1    1    0    0    0
  101  102    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
    1   22       50.    0.02        0.10       2.0
  101            20.    0.01        0.10       3.0
  102            25.    0.02        0.10       2.5
  END IWAT-PARM2
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   22       4.5       1.7
  101  102       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   22       0.0       0.0
  101  102       0.0       0.0
  END IWAT-STATE1

  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO           ***
    1  102    0    1
  END IWT-PARM1
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  102      150.       1.0       0.8
  END IWT-PARM2
  IWT-INIT
```

```
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  102       0.5
  END IWT-INIT
END IMPLND
                                 ***                    *****
                                 ***     RCHRES         *****
                                 ***                    *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  369    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  369    4    4         4                                      12
  END PRINT-INFO

***

  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX        IN  OUT ENGL METR LKFG ***
***   The first set of 25 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 25 RCHRESs (101-125) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   COMMERCIAL  CONFIGURATIONS    *****
    1     DOWNTOWN COMM ON BC     1         2    2        25    0
    2     BIG BOX  COMM ON BC     1         2    2        25    0
    3     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
    4     SMALL INSTIT. ON AB     1         2    2        25    0
    5     SMALL INSTIT. ON BC     1         2    2        25    0
    6     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
    7     PARK LAND ON AB         1         2    2        25    0
    8     PARK LAND ON BC         1         2    2        25    0
    9     PARK LAND ON CD         1         2    2        25    0
   10     VALLEY LAND ON AB       1         2    2        25    0
   11     VALLEY LAND ON BC       1         2    2        25    0
   12     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
   13     ROADS/HIGHWAYS AB       1         2    2        25    0
   14     ROADS/HIGHWAYS BC       1         2    2        25    0
   15     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
   16     PRESTIGE IND  AB        1         2    2        25    0
   17     PRESTIGE IND  BC        1         2    2        25    0
   18     PRESTIGE IND  CD        1         2    2        25    0
   19     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURAL CONFIGURATIONS    *****
   20     TILLED LAND   AB        1         2    2        25    0
   21     TILLED LAND   BC        1         2    2        25    0
   22     TILLED LAND   CD        1         2    2        25    0
```

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    23     PASTURE/FALLOW AB       1         2    2        25    0
    24     PASTURE/FALLOW BC       1         2    2        25    0
    25     PASTURE/FALLOW CD       1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
    26     Eco PRESTIGE IND  AB    1         2    2        25    0
    27     Eco PRESTIGE IND  BC    1         2    2        25    0
    28     Eco PRESTIGE IND  CD    1         2    2        25    0
***   SUBSURFACE RCHRESs              *****
***   COMMERCIAL  CONFIGURATIONS      *****
   101     DOWNTOWN COMM ON BC     1         2    2        25    0
   102     BIG BOX  COMM ON BC     1         2    2        25    0
   103     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS      *****
   104     SMALL INSTIT. ON AB     1         2    2        25    0
   105     SMALL INSTIT. ON BC     1         2    2        25    0
   106     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS      *****
   107     PARK LAND ON AB         1         2    2        25    0
   108     PARK LAND ON BC         1         2    2        25    0
   109     PARK LAND ON CD         1         2    2        25    0
   110     VALLEY LAND ON AB       1         2    2        25    0
   111     VALLEY LAND ON BC       1         2    2        25    0
   112     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS      *****
   113     ROADS/HIGHWAYS AB       1         2    2        25    0
   114     ROADS/HIGHWAYS BC       1         2    2        25    0
   115     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS      *****
   116     PRESTIGE IND  AB        1         2    2        25    0
   117     PRESTIGE IND  BC        1         2    2        25    0
   118     PRESTIGE IND  CD        1         2    2        25    0
   119     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURE CONFIGURATIONS      *****
   120     TILLED LAND   AB        1         2    2        25    0
   121     TILLED LAND   BC        1         2    2        25    0
   122     TILLED LAND   CD        1         2    2        25    0
   123     PASTURE/FALLOW AB       1         2    2        25    0
   124     PASTURE/FALLOW BC       1         2    2        25    0
   125     PASTURE/FALLOW CD       1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
   126     Eco PRESTIGE IND  AB    1         2    2        25    0
   127     Eco PRESTIGE IND  BC    1         2    2        25    0
   128     Eco PRESTIGE IND  CD    1         2    2        25    0
***  ROOF AND PARKING RESTRICTORS *****
   201     CDT ROOF RESTRICTOR     1         2    2        25    0
   202     CBB ROOF RESTRICTOR     1         2    2        25    0
   203     CSM ROOF RESTRICTOR     1         2    2        25    0
   216     IPR ROOF RESTRICTOR     1         2    2        25    0
   219     IBB ROOF RESTRICTOR     1         2    2        25    0
   252     CBB PARKING RESTRICT    1         2    2        25    0
   253     CSM PARKING RESTRICT    1         2    2        25    0
   266     IPR PARKING RESTRICT    1         2    2        25    0
   269     IBB PARKING RESTRICT    1         2    2        25    0
***  ROOFTOP GARDENS *****
   301     CDT ROOF GARDEN         2         2    2        25    0
   302     CBB ROOF GARDEN         2         2    2        25    0
```

```
  303     CSM ROOF GARDEN         2         2    2        25    0
  317     IPR ROOF INFILTRATIO    2         2    2        25    0
  318     IPE ROOF INFILTRATIO    2         2    2        25    0
  319     IBB ROOF GARDEN         2         2    2        25    0
  204     EIS WETLAND             1         2    2        25    0
  205     EIS BIORETENTION        2         2    2        25    0
  352     CBB BIORETENTION        2         2    2        25    0
  353     CSM BIORETENTION        2         2    2        25    0
  369     IBB BIORETENTION        2         2    2        25    0
  END GEN-INFO
                                ***                    ***
                                ***   HYDR SECTION     ***
                                ***                    ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1  204      1  1  1    4                                         3
  206  269      1  1  1    4                                         3
  205           1  1  1    4  5                                      3
  301  369      1  1  1    4  5                                      3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   19    0   11    0.3000  6.000         0.0      0.5      1.00
   20   25    0   12    0.3000  6.000         0.0      0.5      1.00
   26   28    0   11    0.3000  6.000         0.0      0.5      1.00
  101  119    0   13    0.3000  6.000         0.0      0.5      1.00
  120  125    0   12    0.3000  6.000         0.0      0.5      1.00
  126  128    0   13    0.3000  6.000         0.0      0.5      1.00
  201         0   14    0.3000  6.000         0.0      0.5      1.00
  202         0   15    0.3000  6.000         0.0      0.5      1.00
  203         0   16    0.3000  6.000         0.0      0.5      1.00
  216         0   17    0.3000  6.000         0.0      0.5      1.00
  219         0   18    0.3000  6.000         0.0      0.5      1.00
  252         0   19    0.3000  6.000         0.0      0.5      1.00
  253         0   20    0.3000  6.000         0.0      0.5      1.00
  266         0   21    0.3000  6.000         0.0      0.5      1.00
  269         0   22    0.3000  6.000         0.0      0.5      1.00
  301         0   23    0.3000  6.000         0.0      0.5      1.00
  302         0   24    0.3000  6.000         0.0      0.5      1.00
  303         0   25    0.3000  6.000         0.0      0.5      1.00
  319         0   27    0.3000  6.000         0.0      0.5      1.00
  204         0   30    0.3000  6.000         0.0      0.5      1.00
  205         0   31    0.3000  6.000         0.0      0.5      1.00
  317         0   32    0.3000  6.000         0.0      0.5      1.00
  318         0   37    0.3000  6.000         0.0      0.5      1.00
  352         0   33    0.3000  6.000         0.0      0.5      1.00
  353         0   34    0.3000  6.000         0.0      0.5      1.00
  369         0   36    0.3000  6.000         0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   19 0.00001        4.3
```

```
   20   25 0.00001        4.3
   26   28 0.00001        4.3
  101  119 0.000001       4.3
  120  125 0.00001        4.3
  126  128 0.000001       4.3
  129  204 0.00001        4.3
  205      0.000001       4.3   5.3
  206  269 0.000001       4.3
  301  369 0.000001       4.3   5.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT       VOL  ****
    1  369
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
    # -  # BDFG TGFG TSTP ***
    1  369    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                         ***
    1  369      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   28      0.50       0.0
  101  369      4.50       0.0
  END HEAT-INIT
END RCHRES


***
============================================================================


FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
  FTABLE     11
  ROW  COL  ***
    5    4
    <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
```

```
        0.00       0.00  0.00000      0.000
        0.25      0.015  0.00004      0.340
        0.50      0.015  0.00008      0.820
        0.75      0.255  0.00071      9.910
        1.00      0.255  0.00135     27.830
END FTABLE 11
FTABLE     12
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    1.00     0.060  0.00032     5.000
END FTABLE12
FTABLE     13
ROW  COL  ***
  2    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    1.00     0.001  0.00015     100.00
END FTABLE13

FTABLE     14
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.90  0.00195     0.164
    0.50      4.10  0.00300     5.000
END FTABLE 14
FTABLE     15
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.90  0.001088    0.0914
    0.50      3.10  0.00200     5.000
END FTABLE 15
FTABLE     16
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      1.70  0.000638    0.0536
    0.50      1.90  0.00100     5.000
END FTABLE 16
FTABLE     17
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.25  0.001125    0.0945
    0.50      2.50  0.00200     5.000
END FTABLE 17
FTABLE     18
ROW  COL  ***
```

```
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.38  0.001688    0.142
    0.50      3.50  0.00250     5.000
END FTABLE 18

FTABLE     19
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.00  0.00135     0.299
    1.00      2.50  0.00200     5.000
END FTABLE 19
FTABLE     20
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.17  0.001465    0.326
    1.00      2.50  0.00200     5.000
END FTABLE 20
FTABLE     21
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.08  0.000726    0.161
    1.00      2.00  0.00100     5.000
END FTABLE 21
FTABLE     22
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.47  0.000992    0.221
    1.00      2.00  0.00150     5.000
END FTABLE 22

FTABLE     23
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.05      1.10  0.000650   0.00021   0.0
    0.10      1.20  0.001300   0.00023   0.0
    0.15      1.30  0.001950   0.00025   0.0
    0.20      1.40  0.002500   0.00026   5.0
END FTABLE 23

FTABLE     24
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
```

```
    0.05      0.71  0.000363  0.000138    0.0
    0.10      0.72  0.000725  0.000139    0.0
    0.15      0.73  0.001088  0.000140    0.0
    0.20      1.00  0.002000  0.000141    5.0
END FTABLE 24

FTABLE     25
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
    0.05      0.41  0.000213  0.000080    0.0
    0.10      0.42  0.000425  0.000081    0.0
    0.15      0.43  0.000638  0.000082    0.0
    0.20      0.60  0.001000  0.000083    5.0
END FTABLE 25

FTABLE     27
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000      0.0
    0.05      1.11  0.000562   0.00020    0.0
    0.10      1.12  0.001125   0.00021    0.0
    0.15      1.13  0.001688   0.00022    0.0
    0.20      1.30  0.002000   0.00023    5.0
END FTABLE 27

FTABLE     30
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000      0.000
    0.50      .036  0.00018      0.00104
    1.00      .050  0.00100      5.000
END FTABLE 30

FTABLE     31
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.20      0.07  0.000140   0.00194   0.0
    0.50      0.10  0.000300   0.00194   5.0
END FTABLE 31

FTABLE     32
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00     0.000  0.00000    0.00000   0.00000
    1.50     0.188  0.00048    0.00521   0.00000
    2.00     0.250  0.00300    0.00521   100.000
END FTABLE 32

FTABLE     33
```

```
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.29  0.000570   0.00790   0.0
      0.50      0.35  0.000650   0.00790   5.0
  END FTABLE 33

  FTABLE     34
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.31  0.000620   0.00860   0.0
      0.50      0.35  0.000700   0.00860   5.0
  END FTABLE 34

  FTABLE     36
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.21  0.000420   0.00580   0.0
      0.50      0.35  0.000550   0.00580   5.0
  END FTABLE 36

  FTABLE     37
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00     0.000  0.00000    0.00000   0.00000
      1.50     0.188  0.00042    0.00521   0.00000
      2.00     0.250  0.00300    0.00521   100.000
  END FTABLE 37

END FTABLES

***==============================================================================
===

GENER
  OPCODE
    # -  #  Op- ***
           code ***
    1    3   16
  END OPCODE
END GENER

***
=================================================================================

EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
```

```
                   ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR              DIV  PERLND   1 119 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND   1  22 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND 101 102 EXTNL  PREC
WDM1   141 AIRT     METR              SAME PERLND   1 119 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND   1  22 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND 101 102 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME RCHRES   1 369 EXTNL  GATMP
WDM1   181 WIND     METR              DIV  PERLND   1 119 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND   1  22 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND 101 102 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  RCHRES   1 369 EXTNL  WIND
WDM1   131 SOLR     METR              DIV  PERLND   1 119 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND   1  22 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND 101 102 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  RCHRES   1 369 EXTNL  SOLRAD
WDM1   164 PET      METR              DIV  PERLND   1 119 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND   1  22 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND 101 102 EXTNL  PETINP
WDM1   121 DEWT     METR              SAME PERLND   1 119 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND   1  22 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND 101 102 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME RCHRES   1 369 EXTNL  DEWTMP
WDM1   171 CLDC     METR              SAME PERLND   1 119 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND   1  22 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND 101 102 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME RCHRES   1 369 EXTNL  CLOUD
END EXT SOURCES
***

***===========================================================================
===

***  This is where the URFs are developed.
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 6 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.
NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->
***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #
***
RCHRES 301 OFLOW         2   1.00          RCHRES   1     INFLOW
RCHRES 302 OFLOW         2   1.00          RCHRES   2     INFLOW
```

```
RCHRES 303 OFLOW         2   1.00          RCHRES   3     INFLOW
RCHRES 319 OFLOW         2   1.00          RCHRES  19     INFLOW
*** ADD AGWO AND IFWO TOGETHER USING GENER TO GET 6901,6902,6903
PERLND  13 PWATER IFWO                     GENER    1     INPUT  ONE
PERLND  13 PWATER AGWO                     GENER    1     INPUT  TWO
PERLND  14 PWATER IFWO                     GENER    2     INPUT  ONE
PERLND  14 PWATER AGWO                     GENER    2     INPUT  TWO
PERLND  15 PWATER IFWO                     GENER    3     INPUT  ONE
PERLND  15 PWATER AGWO                     GENER    3     INPUT  TWO
RCHRES 205 OFLOW         1   1.00          RCHRES 104     INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   4     INFLOW
RCHRES 205 OFLOW         1   1.00          RCHRES 105     INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   5     INFLOW
*** UPDATED REACH # 105->106 5->6
RCHRES 205 OFLOW         1   1.00          RCHRES 106     INFLOW
RCHRES 205 OFLOW         2   1.00          RCHRES   6     INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 116     INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  16     INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 117     INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  17     INFLOW
RCHRES 317 OFLOW         1   1.00          RCHRES 118     INFLOW
RCHRES 317 OFLOW         2   1.00          RCHRES  18     INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 126     INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  26     INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 127     INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  27     INFLOW
RCHRES 318 OFLOW         1   1.00          RCHRES 128     INFLOW
RCHRES 318 OFLOW         2   1.00          RCHRES  28     INFLOW
RCHRES 352 OFLOW         1   1.00          RCHRES 102     INFLOW
RCHRES 352 OFLOW         2   1.00          RCHRES   2     INFLOW
RCHRES 353 OFLOW         1   1.00          RCHRES 103     INFLOW
RCHRES 353 OFLOW         2   1.00          RCHRES   3     INFLOW
RCHRES 369 OFLOW         1   1.00          RCHRES 119     INFLOW
RCHRES 369 OFLOW         2   1.00          RCHRES  19     INFLOW
***
END NETWORK


SCHEMATIC
<-Source->                <--Area-->       <-Target->  <ML->  ***
<Name>   #                <-factor->       <Name>   #      #  ***
***---------------------------------------------------------------
***URFs  1 to  3, DOWNTOWN, BIG BOX and STRIP COMMERCIAL, B-C
Soils
*** Lawns/open space onto Roadway
PERLND   1                    0.132       IMPLND   1      2
PERLND   2                    0.167       IMPLND   2      2
PERLND   3                    0.105       IMPLND   3      2
*** 25% of flat Roof to roof garden
IMPLND 101                    1.300       RCHRES 301      5
IMPLND 101                    0.725       RCHRES 302      5
IMPLND 101                    0.425       RCHRES 303      5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                    3.900       RCHRES 201      5
IMPLND 101                    2.175       RCHRES 202      5
IMPLND 101                    1.275       RCHRES 203      5
```

```
*** restricted roof to storm sewer
RCHRES 201                    1.000       RCHRES   1      7
RCHRES 202                    1.000       RCHRES   2      7
RCHRES 203                    1.000       RCHRES   3      7
***100 % of driveway to road
IMPLND 102                    0.132       IMPLND   1      4
*** 60% parking (pervious) to road
PERLND 102                    2.850       IMPLND   2      2
PERLND 102                    1.958       IMPLND   3      2
***35 % of driveway or parking to restrictor
IMPLND 102                    1.995       RCHRES 252      5
IMPLND 102                    2.170       RCHRES 253      5
*** 5% of parking to bio-retention area
IMPLND 102                    0.285       RCHRES 352      5
IMPLND 102                    0.310       RCHRES 353      5
*** restricted parking to storm sewer
RCHRES 252                    1.000       RCHRES   2      7
RCHRES 253                    1.000       RCHRES   3      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   1                    0.500       RCHRES 101      6
PERLND   2                    0.200       RCHRES 102      6
PERLND   3                    0.200       RCHRES 103      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                    3.420       RCHRES 102      6
PERLND 102                    3.720       RCHRES 103      6
*** Roadway into local storm sewer
IMPLND   1                    3.800       RCHRES   1      5
IMPLND   2                    1.200       RCHRES   2      5
IMPLND   3                    1.900       RCHRES   3      5
***-------------------------------------------------------------
***URFs 4 to 6 , SMALL INSTITUTIONAL,  all Soils
*** Lawns/open space onto Roadway
PERLND   4                    7.556       IMPLND   4      2
PERLND   5                    7.556       IMPLND   5      2
PERLND   6                    7.556       IMPLND   6      2
*** Flat Roof to wetland/cistern
IMPLND 101                    0.900       RCHRES 204      5
*** wetland/cistern to storm sewer
RCHRES 204                    1.000       RCHRES   4      7
RCHRES 204                    1.000       RCHRES   5      7
RCHRES 204                    1.000       RCHRES   6      7
*** 5% of parking to bio-retention area
IMPLND 102                    0.070       RCHRES 205      5
***Parking onto road (10% of parking area)
IMPLND 102                    0.155       IMPLND   4      4
IMPLND 102                    0.155       IMPLND   5      4
IMPLND 102                    0.155       IMPLND   6      4
*** 25 % of parking onto pervious
IMPLND 102                    0.051       PERLND   4      3
IMPLND 102                    0.051       PERLND   5      3
IMPLND 102                    0.051       PERLND   6      3
*** 60% parking (pervious) to road
PERLND 102                    0.933       IMPLND   4      2
PERLND 102                    0.933       IMPLND   5      2
PERLND 102                    0.933       IMPLND   6      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
```

```
PERLND   4                     6.800       RCHRES 104      6
PERLND   5                     6.800       RCHRES 105      6
PERLND   6                     6.800       RCHRES 106      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                     0.840       RCHRES 104      6
PERLND 102                     0.840       RCHRES 105      6
PERLND 102                     0.840       RCHRES 106      6
*** Roadway into local storm sewer
IMPLND   4                     0.900       RCHRES   4      5
IMPLND   5                     0.900       RCHRES   5      5
IMPLND   6                     0.900       RCHRES   6      5
***----------------------------------------------------------------
***URFs  7 to 9 , OPEN SPACES/PARKS/CORRIDORS on all Soils
*** Lawns/open space onto Roadway
PERLND   7                    18.000       IMPLND   7      2
PERLND   8                    18.000       IMPLND   8      2
PERLND   9                    18.000       IMPLND   9      2
*** 75% of parking onto road
IMPLND 102                     0.750       IMPLND   7      4
IMPLND 102                     0.750       IMPLND   8      4
IMPLND 102                     0.750       IMPLND   9      4
*** 25% of parking onto pervious
IMPLND 102                    0.0138       PERLND   7      3
IMPLND 102                    0.0138       PERLND   8      3
IMPLND 102                    0.0138       PERLND   9      3
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   7                     9.000       RCHRES 107      6
PERLND   8                     9.000       RCHRES 108      6
PERLND   9                     9.000       RCHRES 109      6
*** Roadway into local storm sewer
IMPLND   7                     0.500       RCHRES   7      5
IMPLND   8                     0.500       RCHRES   8      5
IMPLND   9                     0.500       RCHRES   9      5
***----------------------------------------------------------------
***URFs 10 to 12, VALLEY LANDS on all Soils
*** Lawns/open space onto Roadway
PERLND  10                    32.330       IMPLND  10      2
PERLND  11                    32.330       IMPLND  11      2
PERLND  12                    32.330       IMPLND  12      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  10                     9.700       RCHRES 110      6
PERLND  11                     9.700       RCHRES 111      6
PERLND  12                     9.700       RCHRES 112      6
*** Roadway into local storm sewer
IMPLND  10                     0.300       RCHRES  10      5
IMPLND  11                     0.300       RCHRES  11      5
IMPLND  12                     0.300       RCHRES  12      5
***----------------------------------------------------------------
***URFs 13 to 15, ROADS/HIGHWAYS on all Soils
*** Roads to adjacent grassed area
*** For study area 5 use 70% roadway/30% open.
IMPLND  13                     2.333       PERLND  13      3
IMPLND  14                     2.333       PERLND  14      3
IMPLND  15                     2.333       PERLND  15      3
*** Surface runoff from grassed area to storm sewer
PERLND  13                     3.000       RCHRES  13      1
```

```
PERLND  14                      3.000       RCHRES  14      1
PERLND  15                      3.000       RCHRES  15      1
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  13                      3.000       RCHRES 113      6
PERLND  14                      3.000       RCHRES 114      6
PERLND  15                      3.000       RCHRES 115      6
***-----------------------------------------------------------------
***URFs 16 to 18, PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  16                      2.857       IMPLND  16      2
PERLND  17                      2.857       IMPLND  17      2
PERLND  18                      2.857       IMPLND  18      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                      3.000       RCHRES 317      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                      4.300       RCHRES 317      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  16                      2.000       RCHRES 116      6
PERLND  17                      2.000       RCHRES 117      6
PERLND  18                      2.000       RCHRES 118      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  16                      0.700       RCHRES 317      5
IMPLND  17                      0.700       RCHRES 317      5
IMPLND  18                      0.700       RCHRES 317      5
***-----------------------------------------------------------------
***URFs 19 , BIG BOX INDUSTRIAL,  B-C Soils
*** Lawns/open space onto Roadway
PERLND  19                      1.167       IMPLND  19      2
*** 25% of flat Roof to roof garden
IMPLND 101                      1.125       RCHRES 319      5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                      3.375       RCHRES 219      5
*** restricted roof to storm sewer
RCHRES 219                      1.000       RCHRES  19      7
*** 60% parking (pervious) to road
PERLND 102                      4.200       IMPLND  19      2
*** 5% of parking to bio-retention area
IMPLND 102                      0.210       RCHRES 369      5
***35 % of parking to restrictor
IMPLND 102                      1.470       RCHRES 269      5
*** restricted parking to storm sewer
RCHRES 269                      1.000       RCHRES  19      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  19                      0.700       RCHRES 119      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                      2.520       RCHRES 119      6
*** Roadway into local storm sewer
IMPLND  19                      0.600       RCHRES  19      5
***-----------------------------------------------------------------
***URFs 20 to 25, AGRICULTURAL LANDS
*** Surface and subsurface flow to an agricultural drain, all Soils
*** Tilled Land
PERLND  20                     10.000       RCHRES  20      1
PERLND  20                     10.000       RCHRES 120      6
```

```
PERLND  21                    10.000       RCHRES  21      1
PERLND  21                    10.000       RCHRES 121      6
PERLND  22                    10.000       RCHRES  22      1
PERLND  22                    10.000       RCHRES 122      6
*** Pasture/Fallow
PERLND  23                    10.000       RCHRES  23      1
PERLND  23                    10.000       RCHRES 123      6
PERLND  24                    10.000       RCHRES  24      1
PERLND  24                    10.000       RCHRES 124      6
PERLND  25                    10.000       RCHRES  25      1
PERLND  25                    10.000       RCHRES 125      6
***-------------------------------------------------------------
***URFs 26 to 28, Eco PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  26                     6.000       IMPLND  20      2
PERLND  27                     6.000       IMPLND  21      2
PERLND  28                     6.000       IMPLND  22      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                     2.500       RCHRES 318      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                     4.000       RCHRES 318      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  26                     3.000       RCHRES 126      6
PERLND  27                     3.000       RCHRES 127      6
PERLND  28                     3.000       RCHRES 128      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  20                     0.500       RCHRES 318      5
IMPLND  21                     0.500       RCHRES 318      5
IMPLND  22                     0.500       RCHRES 318      5
***-------------------------------------------------------------

END SCHEMATIC

***============================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
****          1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****          2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****          3 = IMPLND RUNOFF to a PERLND (highway to grassed
ROW
****          4 = IMPLND RUNOFF TO AN IMPLND (parking  to roadway)
****          5 = IMPLND RUNOFF to a RCHRES (roadway to storm
sewer)
****          6 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (agricultural
runoff)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****           for flows into RCHRES. For flows from one parcel of land to
another
```

```
***            no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    3

  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    5

  MASS-LINK        6
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (agr. or
highway)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
```

```
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6

  MASS-LINK        7
*** RCHRES to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
RCHRES     ROFLOW             1.0          RCHRES         INFLOW
  END MASS-LINK    7

END MASS-LINK

***============================================================================
===

EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
RCHRES   1 HYDR   ROVOL      1000000.      WDM2  2031 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL      1000000.      WDM2  2531 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL      1000000.      WDM2  2131 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL      1000000.      WDM2  2631 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL      1000000.      WDM2  2231 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL      1000000.      WDM2  2731 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL      1000000.      WDM2  3031 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL      1000000.      WDM2  3531 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL      1000000.      WDM2  3032 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL      1000000.      WDM2  3532 FLOW     METR      REPL
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  3033 FLOW     METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  3533 FLOW     METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  4031 FLOW     METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  4531 FLOW     METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  4032 FLOW     METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  4532 FLOW     METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  4033 FLOW     METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  4533 FLOW     METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  4131 FLOW     METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  4631 FLOW     METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  4132 FLOW     METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  4632 FLOW     METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  4133 FLOW     METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  4633 FLOW     METR      REPL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  5031 FLOW     METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  5531 FLOW     METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  5032 FLOW     METR      REPL
RCHRES 114 HYDR   ROVOL      1000000.      WDM2  5532 FLOW     METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  5033 FLOW     METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  5533 FLOW     METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  6031 FLOW     METR      REPL
```

```
RCHRES 116 HYDR   ROVOL       1000000.      WDM2  6531 FLOW     METR      REPL
RCHRES  17 HYDR   ROVOL       1000000.      WDM2  6032 FLOW     METR      REPL
RCHRES 117 HYDR   ROVOL       1000000.      WDM2  6532 FLOW     METR      REPL
RCHRES  18 HYDR   ROVOL       1000000.      WDM2  6033 FLOW     METR      REPL
RCHRES 118 HYDR   ROVOL       1000000.      WDM2  6533 FLOW     METR      REPL
RCHRES  19 HYDR   ROVOL       1000000.      WDM2  6131 FLOW     METR      REPL
RCHRES 119 HYDR   ROVOL       1000000.      WDM2  6631 FLOW     METR      REPL
RCHRES  20 HYDR   ROVOL       1000000.      WDM2  6231 FLOW     METR      REPL
RCHRES 120 HYDR   ROVOL       1000000.      WDM2  6731 FLOW     METR      REPL
RCHRES  21 HYDR   ROVOL       1000000.      WDM2  6232 FLOW     METR      REPL
RCHRES 121 HYDR   ROVOL       1000000.      WDM2  6732 FLOW     METR      REPL
RCHRES  22 HYDR   ROVOL       1000000.      WDM2  6233 FLOW     METR      REPL
RCHRES 122 HYDR   ROVOL       1000000.      WDM2  6733 FLOW     METR      REPL
RCHRES  23 HYDR   ROVOL       1000000.      WDM2  6331 FLOW     METR      REPL
RCHRES 123 HYDR   ROVOL       1000000.      WDM2  6831 FLOW     METR      REPL
RCHRES  24 HYDR   ROVOL       1000000.      WDM2  6332 FLOW     METR      REPL
RCHRES 124 HYDR   ROVOL       1000000.      WDM2  6832 FLOW     METR      REPL
RCHRES  25 HYDR   ROVOL       1000000.      WDM2  6333 FLOW     METR      REPL
RCHRES 125 HYDR   ROVOL       1000000.      WDM2  6833 FLOW     METR      REPL
RCHRES  26 HYDR   ROVOL       1000000.      WDM2  6034 FLOW     METR      REPL
RCHRES 126 HYDR   ROVOL       1000000.      WDM2  6534 FLOW     METR      REPL
RCHRES  27 HYDR   ROVOL       1000000.      WDM2  6035 FLOW     METR      REPL
RCHRES 127 HYDR   ROVOL       1000000.      WDM2  6535 FLOW     METR      REPL
RCHRES  28 HYDR   ROVOL       1000000.      WDM2  6036 FLOW     METR      REPL
RCHRES 128 HYDR   ROVOL       1000000.      WDM2  6536 FLOW     METR      REPL
RCHRES   1 HTRCH  ROHEAT                    WDM3  2081 HEAT     METR      REPL
RCHRES 101 HTRCH  ROHEAT                    WDM3  2581 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                    WDM3  2181 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                    WDM3  2681 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                    WDM3  2281 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                    WDM3  2781 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                    WDM3  3081 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                    WDM3  3581 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                    WDM3  3082 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                    WDM3  3582 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                    WDM3  3083 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                    WDM3  3583 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                    WDM3  4081 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                    WDM3  4581 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                    WDM3  4082 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                    WDM3  4582 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                    WDM3  4083 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                    WDM3  4583 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                    WDM3  4181 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                    WDM3  4681 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                    WDM3  4182 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                    WDM3  4682 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                    WDM3  4183 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                    WDM3  4683 HEAT     METR      REPL
RCHRES  13 HTRCH  ROHEAT                    WDM3  5081 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                    WDM3  5581 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                    WDM3  5082 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                    WDM3  5582 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                    WDM3  5083 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                    WDM3  5583 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                    WDM3  6081 HEAT     METR      REPL
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RCHRES 116 HTRCH  ROHEAT                  WDM3  6581 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                  WDM3  6082 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                  WDM3  6582 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                  WDM3  6083 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                  WDM3  6583 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                  WDM3  6181 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                  WDM3  6681 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                  WDM3  6281 HEAT     METR      REPL
RCHRES 120 HTRCH  ROHEAT                  WDM3  6781 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                  WDM3  6282 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                  WDM3  6782 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                  WDM3  6283 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                  WDM3  6783 HEAT     METR      REPL
RCHRES  23 HTRCH  ROHEAT                  WDM3  6381 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                  WDM3  6881 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                  WDM3  6382 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                  WDM3  6882 HEAT     METR      REPL
RCHRES  25 HTRCH  ROHEAT                  WDM3  6383 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                  WDM3  6883 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                  WDM3  6084 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                  WDM3  6584 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                  WDM3  6085 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                  WDM3  6585 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                  WDM3  6086 HEAT     METR      REPL
RCHRES 128 HTRCH  ROHEAT                  WDM3  6586 HEAT     METR      REPL
PERLND  13 PWATER SURO                    WDM2  6431 SAB      METR      REPL
GENER    1 OUTPUT TIMSER                  WDM2  6931 GWAB     METR      REPL
PERLND  14 PWATER SURO                    WDM2  6432 SBC      METR      REPL
GENER    2 OUTPUT TIMSER                  WDM2  6932 GWBC     METR      REPL
PERLND  15 PWATER SURO                    WDM2  6433 SCD      METR      REPL
GENER    3 OUTPUT TIMSER                  WDM2  6933 GWCD     METR      REPL
IMPLND  13 IWATER SURO                    WDM2  6434 ROAD     METR      REPL
END EXT TARGETS

*** ===========================================================================

END RUN
```

```
RUN
***           NON-RESIDENTIAL LAND USES
*** TEST CATCHMENT SCALE ANALSIS FOR THE TWWF STUDY ***
*** Note #1: This version simulates unit area response functions
(URFs)
***           for runoff from standard sized (10 hectare)
***           parcels of land within the City.  Only non-residential
is
***           represented with eleven land use designations, on
***           three general soil types.
*** Note #2: Land parcel runoff is separated into surface and subsurface
***           components and these are routed to separate reaches.
***MAXIMUM EFFORT SOURCE CONTROL***************************************

GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPT LEVELS    3
  RESUME     0 RUN     1                         Units     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   Hamilton Airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF2sc3-7.ech
           23   PER2sc3-7.out
           24   IMP2sc3-7.out
           25   RCH2sc3-7.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP                INDELT 00:15
      <OPTYP AND ##>      ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      RCHRES     201
      RCHRES     202
      RCHRES     203
      RCHRES     204
      RCHRES     216
      RCHRES     219
      RCHRES     301
      RCHRES     302
      RCHRES     303
      RCHRES     319
      RCHRES     252
      RCHRES     253
      RCHRES     266
      RCHRES     269
      PERLND       1
```

```
      PERLND       2
      PERLND       3
      PERLND       4
      PERLND       5
      PERLND       6
      PERLND       7
      PERLND       8
      PERLND       9
      PERLND      10
      PERLND      11
      PERLND      12
      PERLND     102
***
      IMPLND       1
      IMPLND       2
      IMPLND       3
      IMPLND       4
      IMPLND       5
      IMPLND       6
      IMPLND       7
      IMPLND       8
      IMPLND       9
      IMPLND      10
      IMPLND      11
      IMPLND      12
      IMPLND      13
      IMPLND      14
      IMPLND      15
      RCHRES     205
      RCHRES     352
      RCHRES     353
      RCHRES     369
****
      PERLND      13
      PERLND      14
      PERLND      15
      PERLND      16
      PERLND      17
      PERLND      18
      PERLND      19
      PERLND      20
      PERLND      21
      PERLND      22
      PERLND      23
      PERLND      24
      PERLND      25
      PERLND      26
      PERLND      27
      PERLND      28
***  Roads must be simulated after
PERLNDS
      IMPLND      16
      IMPLND      17
      IMPLND      18
      IMPLND      19
      IMPLND      20
```

```
IMPLND       21
IMPLND       22
RCHRES      317
RCHRES      318
RCHRES        1
RCHRES        2
RCHRES        3
RCHRES        4
RCHRES        5
RCHRES        6
RCHRES        7
RCHRES        8
RCHRES        9
RCHRES       10
RCHRES       11
RCHRES       12
RCHRES       13
RCHRES       14
RCHRES       15
RCHRES       16
RCHRES       17
RCHRES       18
RCHRES       19
RCHRES       20
RCHRES       21
RCHRES       22
RCHRES       23
RCHRES       24
RCHRES       25
RCHRES       26
RCHRES       27
RCHRES       28
RCHRES      101
RCHRES      102
RCHRES      103
RCHRES      104
RCHRES      105
RCHRES      106
RCHRES      107
RCHRES      108
RCHRES      109
RCHRES      110
RCHRES      111
RCHRES      112
RCHRES      113
RCHRES      114
RCHRES      115
RCHRES      116
RCHRES      117
RCHRES      118
RCHRES      119
RCHRES      120
RCHRES      121
RCHRES      122
RCHRES      123
RCHRES      124
```

```
      RCHRES     125
      RCHRES     126
      RCHRES     127
      RCHRES     128
      GENER        1
      GENER        2
      GENER        3
    END INGRP
END OPN SEQUENCE


***
==============================================================================
=====

PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
    1  102         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1  102         4    4         4    4
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
***  COMMERCIAL  LAND USES                                     ****
    1     DNTWN COMM B-C SOIL              2    2        23
    2     BIG BOX COMM B-C                 2    2        23
    3     STRIP COMM B-C SOIL              2    2        23
***  INST/GOV'T  LAND USES                             ****
    4     SMALL INST A-B SOIL              2    2        23
    5     SMALL INST B-C SOIL              2    2        23
    6     SMALL INST D SOIL                2    2        23
***  OPEN SPACE LAND USES                              ****
    7     PARK/OPEN A-B SOIL               2    2        23
    8     PARK/OPEN B-C SOIL               2    2        23
    9     PARK/OPEN D  SOIL                2    2        23
   10     VALLEYS ON A-B SOIL              2    2        23
   11     VALLEYS ON B-C SOIL              2    2        23
   12     VALLEYS ON D SOIL                2    2        23
***  TRANSPORTATION RELATED LAND USES                  ****
   13     HIGHWAY ON A-B SOIL              2    2        23
   14     HIGHWAY ON B-C SOIL              2    2        23
   15     HIGHWAY ON D SOIL                2    2        23
***  INDUSTRIAL LAND USES                 ****
   16     PRESTIGE ON A-B SOIL             2    2        23
   17     PRESTIGE ON B-C SOIL             2    2        23
   18     PRESTIGE ON D SOIL               2    2        23
   19     BIG BOX IND B-C SOIL             2    2        23
***  AGRICULTURAL LAND USES               ****
   20     TILLED A-B SOIL                  2    2        23
   21     TILLED B-C SOIL                  2    2        23
```

```
   22     TILLED C-D SOIL                    2    2        23
   23     PASTURE ON A-B SOIL                2    2        23
   24     PASTURE ON B-C SOIL                2    2        23
   25     PASTURE ON C-D SOIL                2    2        23
***  Eco INDUSTRIAL LAND USES                   ****
   26     Eco PRESTIGE ON A-B SOIL           2    2        23
   27     Eco PRESTIGE ON B-C SOIL           2    2        23
   28     Eco PRESTIGE ON D SOIL             2    2        23
***  PERVIOUS PARKING                                  ****
  102     PERVIOUS PARKING                   2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                               ***
***  COMMERCIAL    *****
    1    3     43.50       90.      0.75      1.00       100.
*** INSTITUTIONAL  *****
    4    6     43.50       90.      0.75      1.00       100.
***  OPEN SPACES   *****
    7   12     43.50       90.      0.25      1.00       100.
***  TRANSPORTATION*****
   13   15     43.50       90.      0.40      1.00       100.
*** INDUSTRIAL     *****
   16   19     43.50       90.      0.75      1.00       100.
*** AGRICULTURAL   *****
   20   25     43.50      125.      0.05      1.00       100.
*** Eco INDUSTRIAL     *****
   26   28     43.50       90.      0.75      1.00       100.
***  PERVIOUS PARKING
  102          43.50      125.      0.05      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1  102      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
  *** Woodlots start with more snow pack    ***
    1  102      10.0        0.       0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1  102      100.       0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
```

```
***
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1  102    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                      ***  A-B   SOILS   ***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4           0.25      300.     15.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    7           0.25      300.     15.0      150.0    0.02         0.0
.995
   10           0.60      300.     15.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   13           0.25      300.     15.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   16           0.25      300.     15.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   20           0.05      300.     15.0      200.0    0.02         0.0
.995
   23           0.20      300.     15.0      200.0    0.02         0.0
.995
***  Eco INDUSTRIAL     ***
   26           0.25      300.     15.0        5.0    0.02         0.0
.995
***
***
                                      ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3      0.25      200.      8.0        5.0    0.02         0.0
.995
***  INSTITUTIONAL ***
    5           0.25      200.      8.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    8           0.25      200.      8.0      150.0    0.02         0.0
.995
   11           0.60      200.      8.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   14           0.25      200.      8.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   17           0.25      200.      8.0        5.0    0.02         0.0
.995
```

```
   19            0.25      200.      8.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   21            0.05      200.      8.0      200.0    0.02         0.0
.995
   24            0.20      200.      8.0      200.0    0.02         0.0
.995
***  Eco INDUSTRIAL     ***
   27            0.25      200.      8.0        5.0    0.02         0.0
.995
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6            0.25      100.      4.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    9            0.25      100.      4.0      150.0    0.02         0.0
.995
   12            0.60      100.      4.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   15            0.25      100.      4.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   18            0.25      100.      4.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   22            0.05      100.      4.0      200.0    0.02         0.0
.995
   25            0.20      100.      4.0      200.0    0.02         0.0
.995
***  Eco INDUSTRIAL     ***
   28            0.25      100.      4.0        5.0    0.02         0.0
.995
***  PERVIOUS PARKING
  102            0.05      200.     10.0      100.0    0.02         0.0
.995
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1  102  4.5        1.7         2.0      2.0         0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                      ***  A-B   SOILS   ***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4             5.0      30.0     0.25        1.0     0.85
```

```
0.30
***  OPEN SPACES   ***
    7            5.0      30.0     0.25        1.0     0.85
0.30
   10            5.0      30.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   13            5.0      30.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL      ***
   16            5.0      30.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL    ***
   20            4.0      30.0     0.40        1.0     0.85
0.20
   23            2.5      30.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL      ***
   26            5.0      30.0     0.25        1.0     0.85
0.30
***
***
                                      ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3       5.0      16.0     0.25        1.0     0.85
0.30
***  INSTITUTIONAL ***
    5            5.0      16.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    8            5.0      16.0     0.25        1.0     0.85
0.30
   11            5.0      16.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   14            5.0      16.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL      ***
   17            5.0      16.0     0.25        1.0     0.85
0.30
   19            5.0      16.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL    ***
   21            4.0      16.0     0.40        1.0     0.85
0.20
   24            2.5      16.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL      ***
   27            5.0      16.0     0.25        1.0     0.85
0.30
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
```

```
    6            5.0       6.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    9            5.0       6.0     0.25        1.0     0.85
0.30
   12            5.0       6.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   15            5.0       6.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   18            5.0       6.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   22            4.0       6.0     0.40        1.0     0.85
0.20
   25            2.5       6.0     0.30        1.0     0.85     0.20
***  Eco INDUSTRIAL     ***
   28            5.0       6.0     0.25        1.0     0.85     0.30
***  PERVIOUS PARKING
  102            2.5      16.0     0.25        1.0     0.85
0.20
  END PWAT-PARM4
  PWAT-PARM5
  < RANGE>       FZG      FZGL
***
    1  102       1.0
0.1
  END PWAT-PARM5
  ***
  MON-INTERCEP
    <PLS>   Only required if VCSFG=1 in PWAT-PARM1                    ***
    # -  #  Interception storage capacity at start of each month      ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
***Open space increased by 75% May-Oct
    7   12  2.0  2.0  2.0  3.0  7.0 8.75 8.75 8.75 8.75  7.0  3.0  2.0
***Institutional and Industrial increased by 25% May-Oct
    4    6  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   16   19  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
   26   28  2.0  2.0  2.0  3.0  5.0 6.25 6.25 6.25 6.25  5.0  3.0  2.0
***highways increased by 10% May-Oct
   13   15  2.0  2.0  2.0  3.0  4.4  5.5  5.5  5.5  5.5  4.4  3.0  2.0
    1    3  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
   20   25  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  102       2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  END MON-INTERCEP

  MON-UZSN
    <PLS>   Only required if VUZFG=1 in PWAT-PARM1                    ***
    # -  #  Upper zone storage at start of each month                 ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
```

```
 20      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 23      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

  1    3  9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 19       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 21       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 24       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

  6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 18       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 22       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 25       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
102       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
END MON-UZSN

***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
MON-MANNING
  <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
  # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
  ***   LOW DENSITY RESIDENTIAL   ****
  1    3 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   MEDIUM DENSITY RESIDENTIAL   ****
  4    6 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH DENSITY RESIDENTIAL   ****
  7    9 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  HIGH RISE    RESIDENTIAL   ****
 10   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  DOWNTOWN COMMERCIAL        ****
 13      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   BIG BOX COMMERCIAL        ****
 14      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   STRIP MALL COMMERCIAL     ****
 15      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  SMALL INSTITUTIONAL        ****
 16   18 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PARK LAND                 ****
 19   21 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***  VALLEY LAND                ****
 22   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   HIGHWAYS   ***
 25   27 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PRESTIGE INDUSTRIAL       ****
 28   30 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   LARGE INDUSTRIAL  ****
 31      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   TILLED AGRICULTURAL       ****
 32   34 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  ***   PASTURE/FALLOW AGRICULTURAL ***
```

```
   35   37 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  END MON-MANNING
  MON-INTERFLW
    <PLS >  Interflow Inflow Parameter for Start of Each Month ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
  END MON-INTERFLW
  MON-IRC
    <PLS >  INTERFLOW RECESSION CONSTANT ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
  END MON-IRC
***

  MON-LZETPARM
    <PLS >  ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1  102 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
  END MON-LZETPARM

  PWAT-STATE1
    <PLS >***
    # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  OPEN SPACES   ***
    7            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   10            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  TRANSPORTATION ***
   13            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  INDUSTRIAL     ***
   16            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  AGRICULTURAL   ***
   20            0.0       0.0      30.0       0.0     300.0      10.0
0.0
   23            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   26            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***
***
                                          ***  B-C   SOILS   ***
***
***
***  COMMERCIAL    ***
    1    3       0.0       0.0      16.0       0.0     200.0      10.0
0.0
***  INSTITUTIONAL ***
```

```
    5            0.0       0.0      16.0       0.0      200.0       10.0
0.0
***  OPEN SPACES   ***
    8            0.0       0.0      16.0       0.0      200.0       10.0
0.0
   11            0.0       0.0      16.0       0.0      200.0       10.0
0.0
***  TRANSPORTATION ***
   14            0.0       0.0      16.0       0.0      200.0       10.0
0.0
***  INDUSTRIAL     ***
   17            0.0       0.0      16.0       0.0      200.0       10.0
0.0
   19            0.0       0.0      16.0       0.0      200.0       10.0
0.0
***  AGRICULTURAL   ***
   21            0.0       0.0      16.0       0.0      200.0       10.0
0.0
   24            0.0       0.0      16.0       0.0      200.0       10.0
0.0
***Eco  INDUSTRIAL     ***
   27            0.0       0.0      16.0       0.0      200.0       10.0
0.0
***
***
                                        ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6            0.0       0.0       6.0       0.0      100.0       10.0
0.0
***  OPEN SPACES   ***
    9            0.0       0.0       6.0       0.0      100.0       10.0
0.0
   12            0.0       0.0       6.0       0.0      100.0       10.0
0.0
***  TRANSPORTATION ***
   15            0.0       0.0       6.0       0.0      100.0       10.0
0.0
***  INDUSTRIAL     ***
   18            0.0       0.0       6.0       0.0      100.0       10.0
0.0
***  AGRICULTURAL   ***
   22            0.0       0.0       6.0       0.0      100.0       10.0
0.0
   25            0.0       0.0       6.0       0.0      100.0       10.0
0.0
***  Eco INDUSTRIAL     ***
   28            0.0       0.0       6.0       0.0      100.0       10.0
0.0
  102            0.0       0.0      16.0       0.0      200.0       10.0
0.0
  END PWAT-STATE1

  ***
```

```
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1  102    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1  102        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)   ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1  102  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1  102       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1  102    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1  102      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1  102       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1  102
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
    1   22         1    1         1
  101  102         1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   22         4    4         4             12
  101  102         4    4         4             12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     CDT1bc                       2    2        24
    2     CBB1bc                       2    2        24
    3     CSM1bc                       2    2        24
    4     EIS1ab                       2    2        24
```

```
    5     EIS1bc                        2    2        24
    6     EIS1cd                        2    2        24
    7     OPL0ab                        2    2        24
    8     OPL0bc                        2    2        24
    9     OPL0cd                        2    2        24
   10     OVL0ab                        2    2        24
   11     OVL0bc                        2    2        24
   12     OVL0cd                        2    2        24
   13     THC0ab                        2    2        24
   14     THC0bc                        2    2        24
   15     THC0cd                        2    2        24
   16     IPR1ab                        2    2        24
   17     IPR1bc                        2    2        24
   18     IPR1cd                        2    2        24
   19     IBB1bc                        2    2        24
   20     IPE1ab                        2    2        24
   21     IPE1bc                        2    2        24
   22     IPE1cd                        2    2        24
  101     FLAT ROOFS                    2    2        24
  102     INDUST/COMM PARKING           2    2        24
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   22    1
  101  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #               ELEV                                ***
*** 1-Flat roof,2-Ind/Comm Parking, 11 - 35 local roads ***
    1        43.50       90.       0.10      1.00      100.
    2        43.50       90.       0.10      1.00      100.
    3        43.50       90.       0.10      1.00      100.
    4        43.50       90.       0.10      1.00      100.
    5        43.50       90.       0.10      1.00      100.
    6        43.50       90.       0.10      1.00      100.
    7        43.50       90.       0.10      1.00      100.
    8        43.50       90.       0.10      1.00      100.
    9        43.50       90.       0.10      1.00      100.
   10        43.50       90.       0.10      1.00      100.
   11        43.50       90.       0.10      1.00      100.
   12        43.50       90.       0.10      1.00      100.
   13        43.50       90.       0.10      1.00      100.
   14        43.50       90.       0.10      1.00      100.
   15        43.50       90.       0.10      1.00      100.
   16        43.50       90.       0.10      1.00      100.
   17        43.50       90.       0.10      1.00      100.
   18        43.50       90.       0.10      1.00      100.
   19        43.50       90.       0.10      1.00      100.
   20        43.50       90.       0.10      1.00      100.
   21        43.50       90.       0.10      1.00      100.
   22        43.50       90.       0.10      1.00      100.
  101        43.50       90.       0.10      1.00      100.
  102        43.50       90.       0.10      1.00      100.
```

```
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   22      0.15     -0.99      0.20      1.50      .250      0.00
  101  102      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   22       0.0       0.0       0.0       0.2      500.       0.0
  101  102       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   22      100.       0.5       1.0
  101  102      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   22    1    1    0    0    0
  101  102    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
    1   22       50.    0.02        0.10       2.0
  101            20.    0.01        0.10       3.0
  102            25.    0.02        0.10       2.5
  END IWAT-PARM2
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   22       4.5       1.7
  101  102       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   22       0.0       0.0
  101  102       0.0       0.0
  END IWAT-STATE1

  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO           ***
    1  102    0    1
  END IWT-PARM1
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  102      150.       1.0       0.8
  END IWT-PARM2
  IWT-INIT
```

```
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  102       0.5
  END IWT-INIT
END IMPLND
                                 ***                    *****
                                 ***     RCHRES         *****
                                 ***                    *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  369    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  369    4    4         4                                     12
  END PRINT-INFO

***

  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX        IN  OUT ENGL METR LKFG ***
***   The first set of 25 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 25 RCHRESs (101-125) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   COMMERCIAL  CONFIGURATIONS    *****
    1     DOWNTOWN COMM ON BC     1         2    2        25    0
    2     BIG BOX  COMM ON BC     1         2    2        25    0
    3     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
    4     SMALL INSTIT. ON AB     1         2    2        25    0
    5     SMALL INSTIT. ON BC     1         2    2        25    0
    6     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
    7     PARK LAND ON AB         1         2    2        25    0
    8     PARK LAND ON BC         1         2    2        25    0
    9     PARK LAND ON CD         1         2    2        25    0
   10     VALLEY LAND ON AB       1         2    2        25    0
   11     VALLEY LAND ON BC       1         2    2        25    0
   12     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
   13     ROADS/HIGHWAYS AB       1         2    2        25    0
   14     ROADS/HIGHWAYS BC       1         2    2        25    0
   15     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
   16     PRESTIGE IND  AB        1         2    2        25    0
   17     PRESTIGE IND  BC        1         2    2        25    0
   18     PRESTIGE IND  CD        1         2    2        25    0
   19     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURAL CONFIGURATIONS    *****
   20     TILLED LAND   AB        1         2    2        25    0
   21     TILLED LAND   BC        1         2    2        25    0
   22     TILLED LAND   CD        1         2    2        25    0
```

```
   23     PASTURE/FALLOW AB      1         2    2        25    0
   24     PASTURE/FALLOW BC      1         2    2        25    0
   25     PASTURE/FALLOW CD      1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
   26     Eco PRESTIGE IND  AB   1         2    2        25    0
   27     Eco PRESTIGE IND  BC   1         2    2        25    0
   28     Eco PRESTIGE IND  CD   1         2    2        25    0
***   SUBSURFACE RCHRESs            *****
***   COMMERCIAL  CONFIGURATIONS    *****
  101     DOWNTOWN COMM ON BC    1         2    2        25    0
  102     BIG BOX  COMM ON BC    1         2    2        25    0
  103     STRIP MALLS   ON BC    1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
  104     SMALL INSTIT. ON AB    1         2    2        25    0
  105     SMALL INSTIT. ON BC    1         2    2        25    0
  106     SMALL INSTIT. ON CD    1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
  107     PARK LAND ON AB        1         2    2        25    0
  108     PARK LAND ON BC        1         2    2        25    0
  109     PARK LAND ON CD        1         2    2        25    0
  110     VALLEY LAND ON AB      1         2    2        25    0
  111     VALLEY LAND ON BC      1         2    2        25    0
  112     VALLEY LAND ON CD      1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
  113     ROADS/HIGHWAYS AB      1         2    2        25    0
  114     ROADS/HIGHWAYS BC      1         2    2        25    0
  115     ROADS/HIGHWAYS CD      1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
  116     PRESTIGE IND  AB       1         2    2        25    0
  117     PRESTIGE IND  BC       1         2    2        25    0
  118     PRESTIGE IND  CD       1         2    2        25    0
  119     BIG BOX  IND  BC       1         2    2        25    0
***   AGRICULTURE CONFIGURATIONS    *****
  120     TILLED LAND   AB       1         2    2        25    0
  121     TILLED LAND   BC       1         2    2        25    0
  122     TILLED LAND   CD       1         2    2        25    0
  123     PASTURE/FALLOW AB      1         2    2        25    0
  124     PASTURE/FALLOW BC      1         2    2        25    0
  125     PASTURE/FALLOW CD      1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
  126     Eco PRESTIGE IND  AB   1         2    2        25    0
  127     Eco PRESTIGE IND  BC   1         2    2        25    0
  128     Eco PRESTIGE IND  CD   1         2    2        25    0
***  ROOF AND PARKING RESTRICTORS *****
  201     CDT ROOF RESTRICTOR    1         2    2        25    0
  202     CBB ROOF RESTRICTOR    1         2    2        25    0
  203     CSM ROOF RESTRICTOR    1         2    2        25    0
  216     IPR ROOF RESTRICTOR    1         2    2        25    0
  219     IBB ROOF RESTRICTOR    1         2    2        25    0
  252     CBB PARKING RESTRICT   1         2    2        25    0
  253     CSM PARKING RESTRICT   1         2    2        25    0
  266     IPR PARKING RESTRICT   1         2    2        25    0
  269     IBB PARKING RESTRICT   1         2    2        25    0
***  ROOFTOP GARDENS *****
  301     CDT ROOF GARDEN        2         2    2        25    0
  302     CBB ROOF GARDEN        2         2    2        25    0
```

```
  303     CSM ROOF GARDEN        2         2    2        25    0
  317     IPR ROOF INFILTRATIO   2         2    2        25    0
  318     IPE ROOF INFILTRATIO   2         2    2        25    0
  319     IBB ROOF GARDEN        2         2    2        25    0
  204     EIS WETLAND            1         2    2        25    0
  205     EIS BIORETENTION       2         2    2        25    0
  352     CBB BIORETENTION       2         2    2        25    0
  353     CSM BIORETENTION       2         2    2        25    0
  369     IBB BIORETENTION       2         2    2        25    0
  END GEN-INFO
                                ***                    ***
                                ***   HYDR SECTION     ***
                                ***                    ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1  204      1  1  1    4                                       3
  206  269      1  1  1    4                                       3
  205           1  1  1    4  5                                    3
  301  369      1  1  1    4  5                                    3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   19    0   11    0.3000  6.000         0.0      0.5      1.00
   20   25    0   12    0.3000  6.000         0.0      0.5      1.00
   26   28    0   11    0.3000  6.000         0.0      0.5      1.00
  101  119    0   13    0.3000  6.000         0.0      0.5      1.00
  120  125    0   12    0.3000  6.000         0.0      0.5      1.00
  126  128    0   13    0.3000  6.000         0.0      0.5      1.00
  201         0   14    0.3000  6.000         0.0      0.5      1.00
  202         0   15    0.3000  6.000         0.0      0.5      1.00
  203         0   16    0.3000  6.000         0.0      0.5      1.00
  216         0   17    0.3000  6.000         0.0      0.5      1.00
  219         0   18    0.3000  6.000         0.0      0.5      1.00
  252         0   19    0.3000  6.000         0.0      0.5      1.00
  253         0   20    0.3000  6.000         0.0      0.5      1.00
  266         0   21    0.3000  6.000         0.0      0.5      1.00
  269         0   22    0.3000  6.000         0.0      0.5      1.00
  301         0   23    0.3000  6.000         0.0      0.5      1.00
  302         0   24    0.3000  6.000         0.0      0.5      1.00
  303         0   25    0.3000  6.000         0.0      0.5      1.00
  319         0   27    0.3000  6.000         0.0      0.5      1.00
  204         0   30    0.3000  6.000         0.0      0.5      1.00
  205         0   31    0.3000  6.000         0.0      0.5      1.00
  317         0   32    0.3000  6.000         0.0      0.5      1.00
  318         0   37    0.3000  6.000         0.0      0.5      1.00
  352         0   33    0.3000  6.000         0.0      0.5      1.00
  353         0   34    0.3000  6.000         0.0      0.5      1.00
  369         0   36    0.3000  6.000         0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   19 0.00001        4.3
```

```
   20   25 0.00001        4.3
   26   28 0.00001        4.3
  101  119 0.000001       4.3
  120  125 0.00001        4.3
  126  128 0.000001       4.3
  129  204 0.00001        4.3
  205      0.000001       4.3   5.3
  206  269 0.000001       4.3
  301  369 0.000001       4.3   5.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT       VOL  ****
    1  369
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
    # -  # BDFG TGFG TSTP ***
    1  369    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                         ***
    1  369      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   28      0.50       0.0
  101  369      4.50       0.0
  END HEAT-INIT
END RCHRES



***
============================================================================



FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
  FTABLE     11
  ROW  COL  ***
    5    4
    <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
```

```
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    0.50     0.015  0.00008     0.820
    0.75     0.255  0.00071     9.910
    1.00     0.255  0.00135    27.830
END FTABLE 11
FTABLE     12
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.25     0.015  0.00004     0.340
    1.00     0.060  0.00032     5.000
END FTABLE12
FTABLE     13
ROW  COL  ***
  2    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    1.00     0.001  0.00015     100.00
END FTABLE13

FTABLE     14
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.90  0.00195     0.164
    0.50      4.10  0.00300     5.000
END FTABLE 14
FTABLE     15
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.90  0.001088    0.0914
    0.50      3.10  0.00200     5.000
END FTABLE 15
FTABLE     16
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      1.70  0.000638    0.0536
    0.50      1.90  0.00100     5.000
END FTABLE 16
FTABLE     17
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      2.25  0.001125    0.0945
    0.50      2.50  0.00200     5.000
END FTABLE 17
FTABLE     18
ROW  COL  ***
```

```
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.05      3.38  0.001688    0.142
    0.50      3.50  0.00250     5.000
END FTABLE 18

FTABLE     19
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.00  0.00135     0.299
    1.00      2.50  0.00200     5.000
END FTABLE 19
FTABLE     20
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      2.17  0.001465    0.326
    1.00      2.50  0.00200     5.000
END FTABLE 20
FTABLE     21
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.08  0.000726    0.161
    1.00      2.00  0.00100     5.000
END FTABLE 21
FTABLE     22
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000     0.000
    0.50      1.47  0.000992    0.221
    1.00      2.00  0.00150     5.000
END FTABLE 22

FTABLE     23
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.05      1.10  0.000650   0.00021   0.0
    0.10      1.20  0.001300   0.00023   0.0
    0.15      1.30  0.001950   0.00025   0.0
    0.20      1.40  0.002500   0.00026   5.0
END FTABLE 23

FTABLE     24
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
```

```
    0.05      0.71  0.000363  0.000138    0.0
    0.10      0.72  0.000725  0.000139    0.0
    0.15      0.73  0.001088  0.000140    0.0
    0.20      1.00  0.002000  0.000141    5.0
END FTABLE 24

FTABLE     25
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000   0.000       0.0
    0.05      0.41  0.000213  0.000080    0.0
    0.10      0.42  0.000425  0.000081    0.0
    0.15      0.43  0.000638  0.000082    0.0
    0.20      0.60  0.001000  0.000083    5.0
END FTABLE 25

FTABLE     27
ROW  COL  ***
  5    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000      0.0
    0.05      1.11  0.000562   0.00020    0.0
    0.10      1.12  0.001125   0.00021    0.0
    0.15      1.13  0.001688   0.00022    0.0
    0.20      1.30  0.002000   0.00023    5.0
END FTABLE 27

FTABLE     30
ROW  COL  ***
  3    4
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
    0.00      0.00  0.00000      0.000
    0.50      .036  0.00018      0.00104
    1.00      .050  0.00100      5.000
END FTABLE 30

FTABLE     31
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00      0.00  0.00000    0.000     0.0
    0.20      0.07  0.000140   0.00194   0.0
    0.50      0.10  0.000300   0.00194   5.0
END FTABLE 31

FTABLE     32
ROW  COL  ***
  3    5
 <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
    0.00     0.000  0.00000    0.00000   0.00000
    1.50     0.188  0.00056    0.00521   0.00000
    2.00     0.250  0.00300    0.00521   100.000
END FTABLE 32

FTABLE     33
```

```
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.29  0.000570   0.00790   0.0
      0.50      0.35  0.000650   0.00790   5.0
  END FTABLE 33

  FTABLE     34
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.31  0.000620   0.00860   0.0
      0.50      0.35  0.000700   0.00860   5.0
  END FTABLE 34

  FTABLE     36
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00      0.00  0.00000    0.000     0.0
      0.20      0.21  0.000420   0.00580   0.0
      0.50      0.35  0.000550   0.00580   5.0
  END FTABLE 36

  FTABLE     37
  ROW  COL  ***
    3    5
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>   <FLOW2>***
      0.00     0.000  0.00000    0.00000   0.00000
      1.50     0.188  0.00049    0.00521   0.00000
      2.00     0.250  0.00300    0.00521   100.000
  END FTABLE 37

END FTABLES

***==============================================================================
===

GENER
  OPCODE
    # -  #  Op- ***
           code ***
    1    3   16
  END OPCODE
END GENER

***
==============================================================================

EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
```

```
                   ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR                DIV  PERLND   1 119 EXTNL  PREC
WDM1   155 PREC     METR                DIV  IMPLND   1  22 EXTNL  PREC
WDM1   155 PREC     METR                DIV  IMPLND 101 102 EXTNL  PREC
WDM1   141 AIRT     METR                SAME PERLND   1 119 ATEMP  AIRTMP
WDM1   141 AIRT     METR                SAME IMPLND   1  22 ATEMP  AIRTMP
WDM1   141 AIRT     METR                SAME IMPLND 101 102 ATEMP  AIRTMP
WDM1   141 AIRT     METR                SAME RCHRES   1 369 EXTNL  GATMP
WDM1   181 WIND     METR                DIV  PERLND   1 119 EXTNL  WINMOV
WDM1   181 WIND     METR                DIV  IMPLND   1  22 EXTNL  WINMOV
WDM1   181 WIND     METR                DIV  IMPLND 101 102 EXTNL  WINMOV
WDM1   181 WIND     METR                DIV  RCHRES   1 369 EXTNL  WIND
WDM1   131 SOLR     METR                DIV  PERLND   1 119 EXTNL  SOLRAD
WDM1   131 SOLR     METR                DIV  IMPLND   1  22 EXTNL  SOLRAD
WDM1   131 SOLR     METR                DIV  IMPLND 101 102 EXTNL  SOLRAD
WDM1   131 SOLR     METR                DIV  RCHRES   1 369 EXTNL  SOLRAD
WDM1   164 PET      METR                DIV  PERLND   1 119 EXTNL  PETINP
WDM1   164 PET      METR                DIV  IMPLND   1  22 EXTNL  PETINP
WDM1   164 PET      METR                DIV  IMPLND 101 102 EXTNL  PETINP
WDM1   121 DEWT     METR                SAME PERLND   1 119 EXTNL  DTMPG
WDM1   121 DEWT     METR                SAME IMPLND   1  22 EXTNL  DTMPG
WDM1   121 DEWT     METR                SAME IMPLND 101 102 EXTNL  DTMPG
WDM1   121 DEWT     METR                SAME RCHRES   1 369 EXTNL  DEWTMP
WDM1   171 CLDC     METR                SAME PERLND   1 119 EXTNL  CLOUD
WDM1   171 CLDC     METR                SAME IMPLND   1  22 EXTNL  CLOUD
WDM1   171 CLDC     METR                SAME IMPLND 101 102 EXTNL  CLOUD
WDM1   171 CLDC     METR                SAME RCHRES   1 369 EXTNL  CLOUD
END EXT SOURCES
***

***==========================================================================
===

***  This is where the URFs are developed.
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 6 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.
NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->
***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #
***
RCHRES 301 OFLOW         2   1.00          RCHRES   1     INFLOW
RCHRES 302 OFLOW         2   1.00          RCHRES   2     INFLOW
```

```
RCHRES 303 OFLOW          2   1.00          RCHRES   3     INFLOW
RCHRES 319 OFLOW          2   1.00          RCHRES  19     INFLOW
*** ADD AGWO AND IFWO TOGETHER USING GENER TO GET 6901,6902,6903
PERLND  13 PWATER IFWO                      GENER    1     INPUT  ONE
PERLND  13 PWATER AGWO                      GENER    1     INPUT  TWO
PERLND  14 PWATER IFWO                      GENER    2     INPUT  ONE
PERLND  14 PWATER AGWO                      GENER    2     INPUT  TWO
PERLND  15 PWATER IFWO                      GENER    3     INPUT  ONE
PERLND  15 PWATER AGWO                      GENER    3     INPUT  TWO
RCHRES 205 OFLOW          1   1.00          RCHRES 104     INFLOW
RCHRES 205 OFLOW          2   1.00          RCHRES   4     INFLOW
RCHRES 205 OFLOW          1   1.00          RCHRES 105     INFLOW
RCHRES 205 OFLOW          2   1.00          RCHRES   5     INFLOW
*** UPDATED REACH # 105->106 5->6
RCHRES 205 OFLOW          1   1.00          RCHRES 106     INFLOW
RCHRES 205 OFLOW          2   1.00          RCHRES   6     INFLOW
RCHRES 317 OFLOW          1   1.00          RCHRES 116     INFLOW
RCHRES 317 OFLOW          2   1.00          RCHRES  16     INFLOW
RCHRES 317 OFLOW          1   1.00          RCHRES 117     INFLOW
RCHRES 317 OFLOW          2   1.00          RCHRES  17     INFLOW
RCHRES 317 OFLOW          1   1.00          RCHRES 118     INFLOW
RCHRES 317 OFLOW          2   1.00          RCHRES  18     INFLOW
RCHRES 318 OFLOW          1   1.00          RCHRES 126     INFLOW
RCHRES 318 OFLOW          2   1.00          RCHRES  26     INFLOW
RCHRES 318 OFLOW          1   1.00          RCHRES 127     INFLOW
RCHRES 318 OFLOW          2   1.00          RCHRES  27     INFLOW
RCHRES 318 OFLOW          1   1.00          RCHRES 128     INFLOW
RCHRES 318 OFLOW          2   1.00          RCHRES  28     INFLOW
RCHRES 352 OFLOW          1   1.00          RCHRES 102     INFLOW
RCHRES 352 OFLOW          2   1.00          RCHRES   2     INFLOW
RCHRES 353 OFLOW          1   1.00          RCHRES 103     INFLOW
RCHRES 353 OFLOW          2   1.00          RCHRES   3     INFLOW
RCHRES 369 OFLOW          1   1.00          RCHRES 119     INFLOW
RCHRES 369 OFLOW          2   1.00          RCHRES  19     INFLOW
***
END NETWORK


SCHEMATIC
<-Source->                <--Area-->        <-Target->  <ML->  ***
<Name>   #                <-factor->        <Name>   #      #  ***
***----------------------------------------------------------------
***URFs  1 to  3, DOWNTOWN, BIG BOX and STRIP COMMERCIAL, B-C
Soils
*** Lawns/open space onto Roadway
PERLND   1                    0.132       IMPLND   1       2
PERLND   2                    0.167       IMPLND   2       2
PERLND   3                    0.105       IMPLND   3       2
*** 25% of flat Roof to roof garden
IMPLND 101                    1.300       RCHRES 301       5
IMPLND 101                    0.725       RCHRES 302       5
IMPLND 101                    0.425       RCHRES 303       5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                    3.900       RCHRES 201       5
IMPLND 101                    2.175       RCHRES 202       5
IMPLND 101                    1.275       RCHRES 203       5
```

```
*** restricted roof to storm sewer
RCHRES 201                     1.000       RCHRES   1      7
RCHRES 202                     1.000       RCHRES   2      7
RCHRES 203                     1.000       RCHRES   3      7
***100 % of driveway to road
IMPLND 102                     0.132       IMPLND   1      4
*** 60% parking (pervious) to road
PERLND 102                     2.850       IMPLND   2      2
PERLND 102                     1.958       IMPLND   3      2
***35 % of driveway or parking to restrictor
IMPLND 102                     1.995       RCHRES 252      5
IMPLND 102                     2.170       RCHRES 253      5
*** 5% of parking to bio-retention area
IMPLND 102                     0.285       RCHRES 352      5
IMPLND 102                     0.310       RCHRES 353      5
*** restricted parking to storm sewer
RCHRES 252                     1.000       RCHRES   2      7
RCHRES 253                     1.000       RCHRES   3      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   1                     0.500       RCHRES 101      6
PERLND   2                     0.200       RCHRES 102      6
PERLND   3                     0.200       RCHRES 103      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                     3.420       RCHRES 102      6
PERLND 102                     3.720       RCHRES 103      6
*** Roadway into local storm sewer
IMPLND   1                     3.800       RCHRES   1      5
IMPLND   2                     1.200       RCHRES   2      5
IMPLND   3                     1.900       RCHRES   3      5
***-------------------------------------------------------------
***URFs 4 to 6 , SMALL INSTITUTIONAL,  all Soils
*** Lawns/open space onto Roadway
PERLND   4                     7.556       IMPLND   4      2
PERLND   5                     7.556       IMPLND   5      2
PERLND   6                     7.556       IMPLND   6      2
*** Flat Roof to wetland/cistern
IMPLND 101                     0.900       RCHRES 204      5
*** wetland/cistern to storm sewer
RCHRES 204                     1.000       RCHRES   4      7
RCHRES 204                     1.000       RCHRES   5      7
RCHRES 204                     1.000       RCHRES   6      7
*** 5% of parking to bio-retention area
IMPLND 102                     0.070       RCHRES 205      5
***Parking onto road (10% of parking area)
IMPLND 102                     0.155       IMPLND   4      4
IMPLND 102                     0.155       IMPLND   5      4
IMPLND 102                     0.155       IMPLND   6      4
*** 25 % of parking onto pervious
IMPLND 102                     0.051       PERLND   4      3
IMPLND 102                     0.051       PERLND   5      3
IMPLND 102                     0.051       PERLND   6      3
*** 60% parking (pervious) to road
PERLND 102                     0.933       IMPLND   4      2
PERLND 102                     0.933       IMPLND   5      2
PERLND 102                     0.933       IMPLND   6      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
```

```
PERLND   4                     6.800       RCHRES 104      6
PERLND   5                     6.800       RCHRES 105      6
PERLND   6                     6.800       RCHRES 106      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                     0.840       RCHRES 104      6
PERLND 102                     0.840       RCHRES 105      6
PERLND 102                     0.840       RCHRES 106      6
*** Roadway into local storm sewer
IMPLND   4                     0.900       RCHRES   4      5
IMPLND   5                     0.900       RCHRES   5      5
IMPLND   6                     0.900       RCHRES   6      5
***------------------------------------------------------------
***URFs  7 to 9 , OPEN SPACES/PARKS/CORRIDORS on all Soils
*** Lawns/open space onto Roadway
PERLND   7                    18.000       IMPLND   7      2
PERLND   8                    18.000       IMPLND   8      2
PERLND   9                    18.000       IMPLND   9      2
*** 75% of parking onto road
IMPLND 102                     0.750       IMPLND   7      4
IMPLND 102                     0.750       IMPLND   8      4
IMPLND 102                     0.750       IMPLND   9      4
*** 25% of parking onto pervious
IMPLND 102                    0.0138       PERLND   7      3
IMPLND 102                    0.0138       PERLND   8      3
IMPLND 102                    0.0138       PERLND   9      3
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   7                     9.000       RCHRES 107      6
PERLND   8                     9.000       RCHRES 108      6
PERLND   9                     9.000       RCHRES 109      6
*** Roadway into local storm sewer
IMPLND   7                     0.500       RCHRES   7      5
IMPLND   8                     0.500       RCHRES   8      5
IMPLND   9                     0.500       RCHRES   9      5
***------------------------------------------------------------
***URFs 10 to 12, VALLEY LANDS on all Soils
*** Lawns/open space onto Roadway
PERLND  10                    32.330       IMPLND  10      2
PERLND  11                    32.330       IMPLND  11      2
PERLND  12                    32.330       IMPLND  12      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  10                     9.700       RCHRES 110      6
PERLND  11                     9.700       RCHRES 111      6
PERLND  12                     9.700       RCHRES 112      6
*** Roadway into local storm sewer
IMPLND  10                     0.300       RCHRES  10      5
IMPLND  11                     0.300       RCHRES  11      5
IMPLND  12                     0.300       RCHRES  12      5
***------------------------------------------------------------
***URFs 13 to 15, ROADS/HIGHWAYS on all Soils
*** Roads to adjacent grassed area
*** For study area 5 use 70% roadway/30% open.
IMPLND  13                     2.333       PERLND  13      3
IMPLND  14                     2.333       PERLND  14      3
IMPLND  15                     2.333       PERLND  15      3
*** Surface runoff from grassed area to storm sewer
PERLND  13                     3.000       RCHRES  13      1
```

```
PERLND  14                     3.000       RCHRES  14      1
PERLND  15                     3.000       RCHRES  15      1
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  13                     3.000       RCHRES 113      6
PERLND  14                     3.000       RCHRES 114      6
PERLND  15                     3.000       RCHRES 115      6
***-----------------------------------------------------------------
***URFs 16 to 18, PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  16                     2.857       IMPLND  16      2
PERLND  17                     2.857       IMPLND  17      2
PERLND  18                     2.857       IMPLND  18      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                     3.000       RCHRES 317      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                     4.300       RCHRES 317      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  16                     2.000       RCHRES 116      6
PERLND  17                     2.000       RCHRES 117      6
PERLND  18                     2.000       RCHRES 118      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  16                     0.700       RCHRES 317      5
IMPLND  17                     0.700       RCHRES 317      5
IMPLND  18                     0.700       RCHRES 317      5
***-----------------------------------------------------------------
***URFs 19 , BIG BOX INDUSTRIAL,  B-C Soils
*** Lawns/open space onto Roadway
PERLND  19                     1.167       IMPLND  19      2
*** 25% of flat Roof to roof garden
IMPLND 101                     1.125       RCHRES 319      5
*** 75% of flat Roof to restrictor rchres
IMPLND 101                     3.375       RCHRES 219      5
*** restricted roof to storm sewer
RCHRES 219                     1.000       RCHRES  19      7
*** 60% parking (pervious) to road
PERLND 102                     4.200       IMPLND  19      2
*** 5% of parking to bio-retention area
IMPLND 102                     0.210       RCHRES 369      5
***35 % of parking to restrictor
IMPLND 102                     1.470       RCHRES 269      5
*** restricted parking to storm sewer
RCHRES 269                     1.000       RCHRES  19      7
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  19                     0.700       RCHRES 119      6
*** Subsurface from perv. parking to groundwater RCHRES
PERLND 102                     2.520       RCHRES 119      6
*** Roadway into local storm sewer
IMPLND  19                     0.600       RCHRES  19      5
***-----------------------------------------------------------------
***URFs 20 to 25, AGRICULTURAL LANDS
*** Surface and subsurface flow to an agricultural drain, all Soils
*** Tilled Land
PERLND  20                    10.000       RCHRES  20      1
PERLND  20                    10.000       RCHRES 120      6
```

```
PERLND  21                    10.000       RCHRES  21      1
PERLND  21                    10.000       RCHRES 121      6
PERLND  22                    10.000       RCHRES  22      1
PERLND  22                    10.000       RCHRES 122      6
*** Pasture/Fallow
PERLND  23                    10.000       RCHRES  23      1
PERLND  23                    10.000       RCHRES 123      6
PERLND  24                    10.000       RCHRES  24      1
PERLND  24                    10.000       RCHRES 124      6
PERLND  25                    10.000       RCHRES  25      1
PERLND  25                    10.000       RCHRES 125      6
***-------------------------------------------------------------
***URFs 26 to 28, Eco PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  26                     6.000       IMPLND  20      2
PERLND  27                     6.000       IMPLND  21      2
PERLND  28                     6.000       IMPLND  22      2
*** 100% of flat Roof to infiltration trench (5mm) overflow to storm
sewer
IMPLND 101                     2.500       RCHRES 318      5
*** 100% of parking to infiltration trench (5mm) overflow to storm
sewer
IMPLND 102                     4.000       RCHRES 318      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  26                     3.000       RCHRES 126      6
PERLND  27                     3.000       RCHRES 127      6
PERLND  28                     3.000       RCHRES 128      6
*** 100% of Road to infiltration trench (5mm) overflow to storm sewer
IMPLND  20                     0.500       RCHRES 318      5
IMPLND  21                     0.500       RCHRES 318      5
IMPLND  22                     0.500       RCHRES 318      5
***-------------------------------------------------------------

END SCHEMATIC

***============================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
****          1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****          2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****          3 = IMPLND RUNOFF to a PERLND (highway to grassed
ROW
****          4 = IMPLND RUNOFF TO AN IMPLND (parking  to roadway)
****          5 = IMPLND RUNOFF to a RCHRES (roadway to storm
sewer)
****          6 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (agricultural
runoff)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****           for flows into RCHRES. For flows from one parcel of land to
another
```

```
***           no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    3

  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    5

  MASS-LINK        6
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (agr. or
highway)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
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```
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6

  MASS-LINK        7
*** RCHRES to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
RCHRES     ROFLOW             1.0          RCHRES         INFLOW
  END MASS-LINK    7

END MASS-LINK

***===========================================================================
===

EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
RCHRES   1 HYDR   ROVOL      1000000.      WDM2  2031 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL      1000000.      WDM2  2531 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL      1000000.      WDM2  2131 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL      1000000.      WDM2  2631 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL      1000000.      WDM2  2231 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL      1000000.      WDM2  2731 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL      1000000.      WDM2  3031 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL      1000000.      WDM2  3531 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL      1000000.      WDM2  3032 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL      1000000.      WDM2  3532 FLOW     METR      REPL
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  3033 FLOW     METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  3533 FLOW     METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  4031 FLOW     METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  4531 FLOW     METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  4032 FLOW     METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  4532 FLOW     METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  4033 FLOW     METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  4533 FLOW     METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  4131 FLOW     METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  4631 FLOW     METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  4132 FLOW     METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  4632 FLOW     METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  4133 FLOW     METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  4633 FLOW     METR      REPL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  5031 FLOW     METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  5531 FLOW     METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  5032 FLOW     METR      REPL
RCHRES 114 HYDR   ROVOL      1000000.      WDM2  5532 FLOW     METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  5033 FLOW     METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  5533 FLOW     METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  6031 FLOW     METR      REPL
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RCHRES 116 HYDR   ROVOL      1000000.     WDM2  6531 FLOW     METR      REPL
RCHRES  17 HYDR   ROVOL      1000000.     WDM2  6032 FLOW     METR      REPL
RCHRES 117 HYDR   ROVOL      1000000.     WDM2  6532 FLOW     METR      REPL
RCHRES  18 HYDR   ROVOL      1000000.     WDM2  6033 FLOW     METR      REPL
RCHRES 118 HYDR   ROVOL      1000000.     WDM2  6533 FLOW     METR      REPL
RCHRES  19 HYDR   ROVOL      1000000.     WDM2  6131 FLOW     METR      REPL
RCHRES 119 HYDR   ROVOL      1000000.     WDM2  6631 FLOW     METR      REPL
RCHRES  20 HYDR   ROVOL      1000000.     WDM2  6231 FLOW     METR      REPL
RCHRES 120 HYDR   ROVOL      1000000.     WDM2  6731 FLOW     METR      REPL
RCHRES  21 HYDR   ROVOL      1000000.     WDM2  6232 FLOW     METR      REPL
RCHRES 121 HYDR   ROVOL      1000000.     WDM2  6732 FLOW     METR      REPL
RCHRES  22 HYDR   ROVOL      1000000.     WDM2  6233 FLOW     METR      REPL
RCHRES 122 HYDR   ROVOL      1000000.     WDM2  6733 FLOW     METR      REPL
RCHRES  23 HYDR   ROVOL      1000000.     WDM2  6331 FLOW     METR      REPL
RCHRES 123 HYDR   ROVOL      1000000.     WDM2  6831 FLOW     METR      REPL
RCHRES  24 HYDR   ROVOL      1000000.     WDM2  6332 FLOW     METR      REPL
RCHRES 124 HYDR   ROVOL      1000000.     WDM2  6832 FLOW     METR      REPL
RCHRES  25 HYDR   ROVOL      1000000.     WDM2  6333 FLOW     METR      REPL
RCHRES 125 HYDR   ROVOL      1000000.     WDM2  6833 FLOW     METR      REPL
RCHRES  26 HYDR   ROVOL      1000000.     WDM2  6034 FLOW     METR      REPL
RCHRES 126 HYDR   ROVOL      1000000.     WDM2  6534 FLOW     METR      REPL
RCHRES  27 HYDR   ROVOL      1000000.     WDM2  6035 FLOW     METR      REPL
RCHRES 127 HYDR   ROVOL      1000000.     WDM2  6535 FLOW     METR      REPL
RCHRES  28 HYDR   ROVOL      1000000.     WDM2  6036 FLOW     METR      REPL
RCHRES 128 HYDR   ROVOL      1000000.     WDM2  6536 FLOW     METR      REPL
RCHRES   1 HTRCH  ROHEAT                  WDM3  2081 HEAT     METR      REPL
RCHRES 101 HTRCH  ROHEAT                  WDM3  2581 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                  WDM3  2181 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                  WDM3  2681 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                  WDM3  2281 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                  WDM3  2781 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                  WDM3  3081 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                  WDM3  3581 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                  WDM3  3082 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                  WDM3  3582 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                  WDM3  3083 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                  WDM3  3583 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                  WDM3  4081 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                  WDM3  4581 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                  WDM3  4082 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                  WDM3  4582 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                  WDM3  4083 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                  WDM3  4583 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                  WDM3  4181 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                  WDM3  4681 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                  WDM3  4182 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                  WDM3  4682 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                  WDM3  4183 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                  WDM3  4683 HEAT     METR      REPL
RCHRES  13 HTRCH  ROHEAT                  WDM3  5081 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                  WDM3  5581 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                  WDM3  5082 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                  WDM3  5582 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                  WDM3  5083 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                  WDM3  5583 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                  WDM3  6081 HEAT     METR      REPL
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RCHRES 116 HTRCH  ROHEAT                   WDM3  6581 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                   WDM3  6082 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                   WDM3  6582 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                   WDM3  6083 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                   WDM3  6583 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                   WDM3  6181 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                   WDM3  6681 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                   WDM3  6281 HEAT     METR      REPL
RCHRES 120 HTRCH  ROHEAT                   WDM3  6781 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                   WDM3  6282 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                   WDM3  6782 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                   WDM3  6283 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                   WDM3  6783 HEAT     METR      REPL
RCHRES  23 HTRCH  ROHEAT                   WDM3  6381 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                   WDM3  6881 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                   WDM3  6382 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                   WDM3  6882 HEAT     METR      REPL
RCHRES  25 HTRCH  ROHEAT                   WDM3  6383 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                   WDM3  6883 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                   WDM3  6084 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                   WDM3  6584 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                   WDM3  6085 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                   WDM3  6585 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                   WDM3  6086 HEAT     METR      REPL
RCHRES 128 HTRCH  ROHEAT                   WDM3  6586 HEAT     METR      REPL
PERLND  13 PWATER SURO                     WDM2  6431 SAB      METR      REPL
GENER    1 OUTPUT TIMSER                   WDM2  6931 GWAB     METR      REPL
PERLND  14 PWATER SURO                     WDM2  6432 SBC      METR      REPL
GENER    2 OUTPUT TIMSER                   WDM2  6932 GWBC     METR      REPL
PERLND  15 PWATER SURO                     WDM2  6433 SCD      METR      REPL
GENER    3 OUTPUT TIMSER                   WDM2  6933 GWCD     METR      REPL
IMPLND  13 IWATER SURO                     WDM2  6434 ROAD     METR      REPL
END EXT TARGETS

*** ==========================================================================

END RUN
```

```
RUN
***
***  Development of Unit Responce Functions for Existing Conditions
***  Hamilton Airport Employment Growth District - Project Number 64758
***  Modeller: Matt Wilson
***
*** Note #1: This version simulates unit area response functions
(URFs)
***          for runoff from standard sized (10 hectare)
***          parcels of land
***
*** Note #2: Land parcel runoff is separated into surface and subsurface
***          components and these are routed to separate reaches.
***
*** Note #3: This UCI file will generate the RLD, RMD, RHD and RHR URFs
***          This UCI file generates fifteen land use designations, on
***          three general soil types.  Four levels of connectivity are
***          simulated for residential areas.
***
***          All existing landuses within the study area are represented
***          with eight land use  designations, all on C-D type soils.
***
***
GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPUT LEVEL    3
  RESUME     0 RUN     1                   UNIT SYSTEM     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   hamilton airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF1p1.ech
           23   PER1p1.out
           24   IMP1p1.out
           25   RCH1p1.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP               INDELT 00:15
      <OPTYP AND ##>     ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      IMPLND     103
      IMPLND     104
      IMPLND     105
      PERLND       1
      PERLND       2
      PERLND       3
```

```
PERLND       4
PERLND       5
PERLND       6
PERLND       7
PERLND       8
PERLND       9
PERLND      10
PERLND      11
PERLND      12
PERLND      13
PERLND      14
PERLND      15
PERLND      16
PERLND      17
PERLND      18
PERLND      19
PERLND      20
PERLND      21
PERLND      22
PERLND      23
PERLND      24
PERLND      25
PERLND      26
PERLND      27
PERLND      28
PERLND      29
PERLND      30
PERLND      31
PERLND      32
PERLND      33
PERLND      34
PERLND      35
PERLND      36
PERLND      37
PERLND      38
PERLND      39
IMPLND       1
IMPLND       2
IMPLND       3
IMPLND       4
IMPLND       5
IMPLND       6
IMPLND       7
IMPLND       8
IMPLND       9
IMPLND      10
IMPLND      11
IMPLND      12
IMPLND      13
IMPLND      14
IMPLND      15
IMPLND      16
IMPLND      17
IMPLND      18
IMPLND      19
IMPLND      20
```

```
      IMPLND      21
      IMPLND      22
      IMPLND      23
      IMPLND      24
      IMPLND      25
      IMPLND      26
      IMPLND      27
      IMPLND      28
      IMPLND      29
      IMPLND      30
      IMPLND      31
      IMPLND      32
      IMPLND      33
      IMPLND      34
      IMPLND      35
      IMPLND      36
      IMPLND      37
      IMPLND      38
      IMPLND      39
***  Roads must be simulated after PERLNDS,Ind/Com Parking doesn't
matter
      RCHRES       1
      RCHRES       2
      RCHRES       3
      RCHRES       4
      RCHRES       5
      RCHRES       6
      RCHRES       7
      RCHRES       8
      RCHRES       9
      RCHRES      10
      RCHRES      11
      RCHRES      12
      RCHRES      13
      RCHRES      14
      RCHRES      15
      RCHRES      16
      RCHRES      17
      RCHRES      18
      RCHRES      19
      RCHRES      20
      RCHRES      21
      RCHRES      22
      RCHRES      23
      RCHRES      24
      RCHRES      25
      RCHRES      26
      RCHRES      27
      RCHRES      28
      RCHRES      29
      RCHRES      30
      RCHRES      31
      RCHRES      32
      RCHRES      33
      RCHRES      34
      RCHRES      35
```

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      RCHRES      36
      RCHRES      37
      RCHRES      38
      RCHRES      39
      RCHRES     101
      RCHRES     102
      RCHRES     103
      RCHRES     104
      RCHRES     105
      RCHRES     106
      RCHRES     107
      RCHRES     108
      RCHRES     109
      RCHRES     110
      RCHRES     111
      RCHRES     112
      RCHRES     113
      RCHRES     114
      RCHRES     115
      RCHRES     116
      RCHRES     117
      RCHRES     118
      RCHRES     119
      RCHRES     120
      RCHRES     121
      RCHRES     122
      RCHRES     123
      RCHRES     124
      RCHRES     125
      RCHRES     126
      RCHRES     127
      RCHRES     128
      RCHRES     129
      RCHRES     130
      RCHRES     131
      RCHRES     132
      RCHRES     133
      RCHRES     134
      RCHRES     135
      RCHRES     136
      RCHRES     137
      RCHRES     138
      RCHRES     139
    END INGRP
END OPN SEQUENCE
***
PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
    1   39         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1   39         4    4         4    4
```

```
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
***  RESIDENTIAL LAND USES                                  ****
    1     RLD1ab                           2    2        23
    2     RLD1bc                           2    2        23
    3     RLD1cd                           2    2        23
    4     RLD2ab                           2    2        23
    5     RLD2bc                           2    2        23
    6     RLD2cd                           2    2        23
    7     RLD3ab                           2    2        23
    8     RLD3bc                           2    2        23
    9     RLD3cd                           2    2        23
   10     RLD4ab                           2    2        23
   11     RLD4bc                           2    2        23
   12     RLD4cd                           2    2        23
   13     RMD1ab                           2    2        23
   14     RMD1bc                           2    2        23
   15     RMD1cd                           2    2        23
   16     RMD2ab                           2    2        23
   17     RMD2bc                           2    2        23
   18     RMD2cd                           2    2        23
   19     RMD3ab                           2    2        23
   20     RMD3bc                           2    2        23
   21     RMD3cd                           2    2        23
   22     RMD4ab                           2    2        23
   23     RMD4bc                           2    2        23
   24     RMD4cd                           2    2        23
   25     RHD1ab                           2    2        23
   26     RHD1bc                           2    2        23
   27     RHD1cd                           2    2        23
   28     RHD2ab                           2    2        23
   29     RHD2bc                           2    2        23
   30     RHD2cd                           2    2        23
   31     RHD3ab                           2    2        23
   32     RHD3bc                           2    2        23
   33     RHD3cd                           2    2        23
   34     RHD4ab                           2    2        23
   35     RHD4bc                           2    2        23
   36     RHD4cd                           2    2        23
   37     RHR1ab                           2    2        23
   38     RHR1bc                           2    2        23
   39     RHR1cd                           2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   39    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                              ***
***  RESIDENTIAL   *****
```

```
    1   39     43.50        90.       0.75      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   39      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   39      10.0        0.        0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   39      100.        0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
***
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1   39    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                             ***  A-B   SOILS   ***
***
***  RESIDENTIAL   ***
    1           0.25      300.     15.0       25.0    0.02         0.0
.995
    4           0.25      300.     15.0       25.0    0.02         0.0
.995
    7           0.25      300.     15.0       25.0    0.02         0.0
.995
   10           0.25      300.     15.0       25.0    0.02         0.0
.995
   13           0.25      300.     15.0       25.0    0.02         0.0
.995
   16           0.25      300.     15.0       25.0    0.02         0.0
.995
   19           0.25      300.     15.0       25.0    0.02         0.0
.995
   22           0.25      300.     15.0       25.0    0.02         0.0
.995
   25           0.25      300.     15.0       25.0    0.02         0.0
.995
   28           0.25      300.     15.0       25.0    0.02         0.0
.995
   31           0.25      300.     15.0       25.0    0.02         0.0
.995
   34           0.25      300.     15.0       25.0    0.02         0.0
```

```
.995
   37           0.25       300.      15.0       100.0    0.02          0.0
.995
***
                                           ***  B-C   SOILS   ***
***
***  RESIDENTIAL   ***
    2           0.25       200.       8.0        25.0    0.02          0.0
.995
    5           0.25       200.       8.0        25.0    0.02          0.0
.995
    8           0.25       200.       8.0        25.0    0.02          0.0
.995
   11           0.25       200.       8.0        25.0    0.02          0.0
.995
   14           0.25       200.       8.0        25.0    0.02          0.0
.995
   17           0.25       200.       8.0        25.0    0.02          0.0
.995
   20           0.25       200.       8.0        25.0    0.02          0.0
.995
   23           0.25       200.       8.0        25.0    0.02          0.0
.995
   26           0.25       200.       8.0        25.0    0.02          0.0
.995
   29           0.25       200.       8.0        25.0    0.02          0.0
.995
   32           0.25       200.       8.0        25.0    0.02          0.0
.995
   35           0.25       200.       8.0        25.0    0.02          0.0
.995
   38           0.25       200.       8.0       100.0    0.02          0.0
.995
***
                                           ***  C-D   SOILS   ***
***
***  RESIDENTIAL   ***
    3           0.25       100.       4.0        25.0    0.02          0.0
.995
    6           0.25       100.       4.0        25.0    0.02          0.0
.995
    9           0.25       100.       4.0        25.0    0.02          0.0
.995
   12           0.25       100.       4.0        25.0    0.02          0.0
.995
   15           0.25       100.       4.0        25.0    0.02          0.0
.995
   18           0.25       100.       4.0        25.0    0.02          0.0
.995
   21           0.25       100.       4.0        25.0    0.02          0.0
.995
   24           0.25       100.       4.0        25.0    0.02          0.0
.995
   27           0.25       100.       4.0        25.0    0.02          0.0
.995
   30           0.25       100.       4.0        25.0    0.02          0.0
```

```
.995
   33            0.25      100.       4.0       25.0    0.02        0.0
.995
   36            0.25      100.       4.0       25.0    0.02        0.0
.995
   39            0.25      100.       4.0      100.0    0.02        0.0
.995
***
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1   39  4.5        1.7         2.0      2.0         0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                      ***  A-B   SOILS   ***
***
    1             5.0      30.0     0.25        1.0     0.85
0.30
    4             5.0      30.0     0.25        1.0     0.85
0.30
    7             5.0      30.0     0.25        1.0     0.85
0.30
   10             5.0      30.0     0.25        1.0     0.85
0.30
   13             5.0      30.0     0.25        1.0     0.85
0.30
   16             5.0      30.0     0.25        1.0     0.85
0.30
   19             5.0      30.0     0.25        1.0     0.85
0.30
   22             5.0      30.0     0.25        1.0     0.85
0.30
   25             5.0      30.0     0.25        1.0     0.85
0.30
   28             5.0      30.0     0.25        1.0     0.85
0.30
   31             5.0      30.0     0.25        1.0     0.85
0.30
   34             5.0      30.0     0.25        1.0     0.85
0.30
   37             5.0      30.0     0.25        1.0     0.85
0.30
***  COMMERCIAL    ***
***
                                      ***  B-C   SOILS   ***
***
***  RESIDENTIAL   ***
    2             5.0      16.0     0.25        1.0     0.85
0.30
    5             5.0      16.0     0.25        1.0     0.85
0.30
    8             5.0      16.0     0.25        1.0     0.85
```

```
0.30
   11              5.0      16.0     0.25        1.0     0.85
0.30
   14              5.0      16.0     0.25        1.0     0.85
0.30
   17              5.0      16.0     0.25        1.0     0.85
0.30
   20              5.0      16.0     0.25        1.0     0.85
0.30
   23              5.0      16.0     0.25        1.0     0.85
0.30
   26              5.0      16.0     0.25        1.0     0.85
0.30
   29              5.0      16.0     0.25        1.0     0.85
0.30
   32              5.0      16.0     0.25        1.0     0.85
0.30
   35              5.0      16.0     0.25        1.0     0.85
0.30
   38              5.0      16.0     0.25        1.0     0.85
0.30
***
                                      ***  C-D   SOILS   ***
***
***  RESIDENTIAL   ***
    3              5.0       6.0     0.25        1.0     0.85
0.30
    6              5.0       6.0     0.25        1.0     0.85
0.30
    9              5.0       6.0     0.25        1.0     0.85
0.30
   12              5.0       6.0     0.25        1.0     0.85
0.30
   15              5.0       6.0     0.25        1.0     0.85
0.30
   18              5.0       6.0     0.25        1.0     0.85
0.30
   21              5.0       6.0     0.25        1.0     0.85
0.30
   24              5.0       6.0     0.25        1.0     0.85
0.30
   27              5.0       6.0     0.25        1.0     0.85
0.30
   30              5.0       6.0     0.25        1.0     0.85
0.30
   33              5.0       6.0     0.25        1.0     0.85
0.30
   36              5.0       6.0     0.25        1.0     0.85
0.30
   39              5.0       6.0     0.25        1.0     0.85
0.30
***
  END PWAT-PARM4
  PWAT-PARM5
  < RANGE>       FZG      FZGL
***
```

```
    1   39       1.0
0.1
  END PWAT-PARM5
  ***
  ***
  MON-INTERCEP
    <PLS>   Only required if VCSFG=1 in PWAT-PARM1                        ***
    # -  #  Interception storage capacity at start of each month          ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1   39  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  END MON-INTERCEP

  MON-UZSN
    <PLS>   Only required if VUZFG=1 in PWAT-PARM1                        ***
    # -  #  Upper zone storage at start of each month                     ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   19      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   22      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   25      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   28      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   31      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   34      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   37      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

    2       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
    5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
    8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   20       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   23       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   26       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   29       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   32       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   35       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   38       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

    3       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
    6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
    9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   18       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   21       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   24       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   27       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   30       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   33       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   36       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
```

```
  39       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 END MON-UZSN

 ***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
 MON-MANNING
   <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
   # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
   ***   LOW DENSITY RESIDENTIAL    ****
   1   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
   ***   MEDIUM DENSITY RESIDENTIAL   ****
  13   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
   ***  HIGH DENSITY RESIDENTIAL    ****
  25   36 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
   ***  HIGH RISE    RESIDENTIAL    ****
  37   39 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
   ***  DOWNTOWN COMMERCIAL         ****
 END MON-MANNING
 MON-INTERFLW
   <PLS >  Interflow Inflow Parameter for Start of Each Month ***
   # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
   1   39 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
 END MON-INTERFLW
 MON-IRC
   <PLS >  INTERFLOW RECESSION CONSTANT ***
   # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
   1   39  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
 END MON-IRC
***
 MON-LZETPARM
   <PLS >  ***
   # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
   1   39 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
 END MON-LZETPARM

 PWAT-STATE1
   <PLS >***
   # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
   1            0.0       0.0      30.0      0.0      300.0      10.0
0.0
   4            0.0       0.0      30.0      0.0      300.0      10.0
0.0
   7            0.0       0.0      30.0      0.0      300.0      10.0
0.0
  10            0.0       0.0      30.0      0.0      300.0      10.0
0.0
  13            0.0       0.0      30.0      0.0      300.0      10.0
0.0
  16            0.0       0.0      30.0      0.0      300.0      10.0
0.0
  19            0.0       0.0      30.0      0.0      300.0      10.0
0.0
  22            0.0       0.0      30.0      0.0      300.0      10.0
0.0
  25            0.0       0.0      30.0      0.0      300.0      10.0
0.0
```

```
   28           0.0       0.0      30.0       0.0      300.0      10.0
0.0
   31           0.0       0.0      30.0       0.0      300.0      10.0
0.0
   34           0.0       0.0      30.0       0.0      300.0      10.0
0.0
   37           0.0       0.0      30.0       0.0      300.0      10.0
0.0
***
                                        ***  B-C   SOILS   ***
***
***  RESIDENTIAL   ***
    2           0.0       0.0      16.0       0.0      200.0      10.0
0.0
    5           0.0       0.0      16.0       0.0      200.0      10.0
0.0
    8           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   11           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   14           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   17           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   20           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   23           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   26           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   29           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   32           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   35           0.0       0.0      16.0       0.0      200.0      10.0
0.0
   38           0.0       0.0      16.0       0.0      200.0      10.0
0.0
***
                                        ***  C-D   SOILS   ***
***
***  RESIDENTIAL   ***
    3           0.0       0.0       6.0       0.0      100.0      10.0
0.0
    6           0.0       0.0       6.0       0.0      100.0      10.0
0.0
    9           0.0       0.0       6.0       0.0      100.0      10.0
0.0
   12           0.0       0.0       6.0       0.0      100.0      10.0
0.0
   15           0.0       0.0       6.0       0.0      100.0      10.0
0.0
   18           0.0       0.0       6.0       0.0      100.0      10.0
0.0
   21           0.0       0.0       6.0       0.0      100.0      10.0
0.0
```

```
   24             0.0       0.0       6.0      0.0      100.0      10.0
0.0
   27             0.0       0.0       6.0      0.0      100.0      10.0
0.0
   30             0.0       0.0       6.0      0.0      100.0      10.0
0.0
   33             0.0       0.0       6.0      0.0      100.0      10.0
0.0
   36             0.0       0.0       6.0      0.0      100.0      10.0
0.0
   39             0.0       0.0       6.0      0.0      100.0      10.0
0.0
***
  END PWAT-STATE1
  ***
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1   39    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1   39        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)   ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC   ***
    1   39  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1   39       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1   39    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1   39      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1   39       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1   39
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
```

```
    1   39         1    1         1
  101  105         1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   39         4    4         4             12
  101  105         4    4         4             12
  END PRINT-INFO
  GEN-INFO
*** IMPLND 1-39 represent local roads - 101-105 as indicated
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     RLD1ab                       2    2         24
    2     RLD1bc                       2    2         24
    3     RLD1cd                       2    2         24
    4     RLD2ab                       2    2         24
    5     RLD2bc                       2    2         24
    6     RLD2cd                       2    2         24
    7     RLD3ab                       2    2         24
    8     RLD3bc                       2    2         24
    9     RLD3cd                       2    2         24
   10     RLD4ab                       2    2         24
   11     RLD4bc                       2    2         24
   12     RLD4cd                       2    2         24
   13     RMD1ab                       2    2         24
   14     RMD1bc                       2    2         24
   15     RMD1cd                       2    2         24
   16     RMD2ab                       2    2         24
   17     RMD2bc                       2    2         24
   18     RMD2cd                       2    2         24
   19     RMD3ab                       2    2         24
   20     RMD3bc                       2    2         24
   21     RMD3cd                       2    2         24
   22     RMD4ab                       2    2         24
   23     RMD4bc                       2    2         24
   24     RMD4cd                       2    2         24
   25     RHD1ab                       2    2         24
   26     RHD1bc                       2    2         24
   27     RHD1cd                       2    2         24
   28     RHD2ab                       2    2         24
   29     RHD2bc                       2    2         24
   30     RHD2cd                       2    2         24
   31     RHD3ab                       2    2         24
   32     RHD3bc                       2    2         24
   33     RHD3cd                       2    2         24
   34     RHD4ab                       2    2         24
   35     RHD4bc                       2    2         24
   36     RHD4cd                       2    2         24
   37     RHR1ab                       2    2         24
   38     RHR1bc                       2    2         24
   39     RHR1cd                       2    2         24
  101     SLOPED ROOFS                 2    2         24
  102     FLAT ROOFS                   2    2         24
  103     SIDEWALK/PATIO               2    2         24
  104     DRIVEWAY                     2    2         24
  105     HIGHRISE PARKING             2    2         24
```

```
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   39    1
  101  105    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #               ELEV                                ***
*** 101-roofsloped,102-flatroof,103-sidewalk/patio,104-driveway,1-39-
localroads
    1        43.50       90.      0.40      1.00      100.
    2        43.50       90.      0.40      1.00      100.
    3        43.50       90.      0.40      1.00      100.
    4        43.50       90.      0.40      1.00      100.
    5        43.50       90.      0.40      1.00      100.
    6        43.50       90.      0.40      1.00      100.
    7        43.50       90.      0.40      1.00      100.
    8        43.50       90.      0.40      1.00      100.
    9        43.50       90.      0.40      1.00      100.
   10        43.50       90.      0.40      1.00      100.
   11        43.50       90.      0.40      1.00      100.
   12        43.50       90.      0.40      1.00      100.
   13        43.50       90.      0.40      1.00      100.
   14        43.50       90.      0.40      1.00      100.
   15        43.50       90.      0.40      1.00      100.
   16        43.50       90.      0.40      1.00      100.
   17        43.50       90.      0.40      1.00      100.
   18        43.50       90.      0.40      1.00      100.
   19        43.50       90.      0.40      1.00      100.
   20        43.50       90.      0.40      1.00      100.
   21        43.50       90.      0.40      1.00      100.
   22        43.50       90.      0.40      1.00      100.
   23        43.50       90.      0.40      1.00      100.
   24        43.50       90.      0.40      1.00      100.
   25        43.50       90.      0.40      1.00      100.
   26        43.50       90.      0.40      1.00      100.
   27        43.50       90.      0.40      1.00      100.
   28        43.50       90.      0.40      1.00      100.
   29        43.50       90.      0.40      1.00      100.
   30        43.50       90.      0.40      1.00      100.
   31        43.50       90.      0.40      1.00      100.
   32        43.50       90.      0.40      1.00      100.
   33        43.50       90.      0.40      1.00      100.
   34        43.50       90.      0.40      1.00      100.
   35        43.50       90.      0.40      1.00      100.
   36        43.50       90.      0.40      1.00      100.
   37        43.50       90.      0.40      1.00      100.
   38        43.50       90.      0.40      1.00      100.
   39        43.50       90.      0.40      1.00      100.
  101        43.50       90.      0.20      1.00      100.
  102        43.50       90.      0.10      1.00      100.
  103        43.50       90.      0.40      1.00      100.
  104        43.50       90.      0.40      1.00      100.
```

```
  105         43.50       90.      0.40      1.00      100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   39      0.15     -0.99      0.20      1.50      .250      0.00
  101  105      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   39       0.0       0.0       0.0       0.2      500.       0.0
  101  105       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   39      100.       0.5       1.0
  101  105      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   39    1    1    0    0    0
  101  105    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
*** 101-roofsloped,102-flatroof,103-sidewalk/patio,104-driveway,1-39-
localroads ***
    1   39       50.    0.02        0.10       2.0
  101            10.    0.30        0.10       1.0
  102            20.    0.01        0.10       3.0
  103             1.    0.02        0.10       2.0
  104            10.    0.02        0.10       2.0
  105            20.    0.02        0.10       2.5
  END IWAT-PARM2
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   39       4.5       1.7
  101  105       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   39       0.0       0.0
  101  105       0.0       0.0
  END IWAT-STATE1
  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO          ***
    1  105    0    1
  END IWT-PARM1
```

```
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  105      150.       1.0       0.8
  END IWT-PARM2
  IWT-INIT
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  105       0.5
  END IWT-INIT
END IMPLND
                                 ***                    *****
                                 ***     RCHRES         *****
                                 ***                    *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  139    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  139    4    4         4                                     12
  END PRINT-INFO

***

  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX        IN  OUT ENGL METR LKFG ***
***   The first set of 36 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 39 RCHRESs (101-139) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   RESIDENTIAL CONFIGURATIONS    *****
    1     RLD1ab                 1         2    2        25    0
    2     RLD1bc                 1         2    2        25    0
    3     RLD1cd                 1         2    2        25    0
    4     RLD2ab                 1         2    2        25    0
    5     RLD2bc                 1         2    2        25    0
    6     RLD2cd                 1         2    2        25    0
    7     RLD3ab                 1         2    2        25    0
    8     RLD3bc                 1         2    2        25    0
    9     RLD3cd                 1         2    2        25    0
   10     RLD4ab                 1         2    2        25    0
   11     RLD4bc                 1         2    2        25    0
   12     RLD4cd                 1         2    2        25    0
   13     RMD1ab                 1         2    2        25    0
   14     RMD1bc                 1         2    2        25    0
   15     RMD1cd                 1         2    2        25    0
   16     RMD2ab                 1         2    2        25    0
   17     RMD2bc                 1         2    2        25    0
   18     RMD2cd                 1         2    2        25    0
   19     RMD3ab                 1         2    2        25    0
   20     RMD3bc                 1         2    2        25    0
   21     RMD3cd                 1         2    2        25    0
   22     RMD4ab                 1         2    2        25    0
```

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    23     RMD4bc                 1          2    2        25    0
    24     RMD4cd                 1          2    2        25    0
    25     RHD1ab                 1          2    2        25    0
    26     RHD1bc                 1          2    2        25    0
    27     RHD1cd                 1          2    2        25    0
    28     RHD2ab                 1          2    2        25    0
    29     RHD2bc                 1          2    2        25    0
    30     RHD2cd                 1          2    2        25    0
    31     RHD3ab                 1          2    2        25    0
    32     RHD3bc                 1          2    2        25    0
    33     RHD3cd                 1          2    2        25    0
    34     RHD4ab                 1          2    2        25    0
    35     RHD4bc                 1          2    2        25    0
    36     RHD4cd                 1          2    2        25    0
    37     RHR1ab                 1          2    2        25    0
    38     RHR1bc                 1          2    2        25    0
    39     RHR1cd                 1          2    2        25    0
***   RESIDENTIAL CONFIGURATIONS    *****
   101     RLD1ab                 1          2    2        25    0
   102     RLD1bc                 1          2    2        25    0
   103     RLD1cd                 1          2    2        25    0
   104     RLD2ab                 1          2    2        25    0
   105     RLD2bc                 1          2    2        25    0
   106     RLD2cd                 1          2    2        25    0
   107     RLD3ab                 1          2    2        25    0
   108     RLD3bc                 1          2    2        25    0
   109     RLD3cd                 1          2    2        25    0
   110     RLD4ab                 1          2    2        25    0
   111     RLD4bc                 1          2    2        25    0
   112     RLD4cd                 1          2    2        25    0
   113     RMD1ab                 1          2    2        25    0
   114     RMD1bc                 1          2    2        25    0
   115     RMD1cd                 1          2    2        25    0
   116     RMD2ab                 1          2    2        25    0
   117     RMD2bc                 1          2    2        25    0
   118     RMD2cd                 1          2    2        25    0
   119     RMD3ab                 1          2    2        25    0
   120     RMD3bc                 1          2    2        25    0
   121     RMD3cd                 1          2    2        25    0
   122     RMD4ab                 1          2    2        25    0
   123     RMD4bc                 1          2    2        25    0
   124     RMD4cd                 1          2    2        25    0
   125     RHD1ab                 1          2    2        25    0
   126     RHD1bc                 1          2    2        25    0
   127     RHD1cd                 1          2    2        25    0
   128     RHD2ab                 1          2    2        25    0
   129     RHD2bc                 1          2    2        25    0
   130     RHD2cd                 1          2    2        25    0
   131     RHD3ab                 1          2    2        25    0
   132     RHD3bc                 1          2    2        25    0
   133     RHD3cd                 1          2    2        25    0
   134     RHD4ab                 1          2    2        25    0
   135     RHD4bc                 1          2    2        25    0
   136     RHD4cd                 1          2    2        25    0
   137     RHR1ab                 1          2    2        25    0
   138     RHR1bc                 1          2    2        25    0
```

```
  139     RHR1cd                  1         2    2        25    0
  END GEN-INFO
                                ***                     ***
                                ***   HYDR SECTION      ***
                                ***                     ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1   39      1  1  1    4                                        3
  101  139      1  1  1    4                                        3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   39    0   11    0.3000  6.000          0.0      0.5      1.00
  101  139    0   13    0.3000  6.000          0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   39 0.00001        4.3
  101  139 0.000001       4.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT       VOL  ****
    1  139
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
    # -  # BDFG TGFG TSTP ***
    1  139    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                        ***
    1  139      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   39      0.50       0.0
  101  139      4.50       0.0
  END HEAT-INIT
END RCHRES
```

```
                          ***                        ***
                          ***  FTABLES SECTION       ***
                          ***                        ***
FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
  FTABLE     11
  ROW  COL  ***
    5    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      0.25     0.015  0.00004     0.340
      0.50     0.015  0.00008     0.820
      0.75     0.255  0.00071     9.910
      1.00     0.255  0.00135    27.830
  END FTABLE11
  FTABLE     13
  ROW  COL  ***
    2    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      1.00     0.001  0.00015     100.00
  END FTABLE13
END FTABLES


***




EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
                   ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR              DIV  PERLND   1  39 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND   1  39 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND 101 105 EXTNL  PREC
WDM1   141 AIRT     METR              SAME PERLND   1  39 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND   1  39 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND 101 105 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME RCHRES   1 139 EXTNL  GATMP
WDM1   181 WIND     METR              DIV  PERLND   1  39 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND   1  39 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND 101 105 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  RCHRES   1 139 EXTNL  WIND
WDM1   131 SOLR     METR              DIV  PERLND   1  39 EXTNL  SOLRAD
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WDM1   131 SOLR     METR              DIV  IMPLND   1  39 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND 101 105 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  RCHRES   1 139 EXTNL  SOLRAD
WDM1   164 PET      METR              DIV  PERLND   1  39 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND   1  39 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND 101 105 EXTNL  PETINP
WDM1   121 DEWT     METR              SAME PERLND   1  39 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND   1  39 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND 101 105 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME RCHRES   1 139 EXTNL  DEWTMP
WDM1   171 CLDC     METR              SAME PERLND   1  39 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND   1  39 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND 101 105 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME RCHRES   1 139 EXTNL  CLOUD
END EXT SOURCES
***
***
***==============================================================================
===
***  This is where the URFs are developed.
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 7 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.
SCHEMATIC
<-Source->                <--Area-->       <-Target->  <ML->  ***
<Name>   #                <-factor->       <Name>   #      #  ***
***-----------------------------------------------------------------
***URFs  1 to  3, LOW DENSITY RESIDENTIAL, C-C , all
Soils
*** Walk/Patio (0.1 ha) to lawn(7.0 hectares)=0.014
IMPLND 103                     0.014       PERLND   1      4
IMPLND 103                     0.014       PERLND   2      4
IMPLND 103                     0.014       PERLND   3      4
*** Lawns/open space (7 ha.) onto Roadway (0.9 ha)= 7.78 conc.
factor
PERLND   1                     7.780       IMPLND   1      2
PERLND   2                     7.780       IMPLND   2      2
PERLND   3                     7.780       IMPLND   3      2
*** Sloped Roof(1.3 hectares) to storm sewer RCHRES
IMPLND 101                     1.300       RCHRES   1      6
IMPLND 101                     1.300       RCHRES   2      6
IMPLND 101                     1.300       RCHRES   3      6
***Driveway (0.7 ha.) to roadway (0.9ha)= 0.778
IMPLND 104                     0.778       IMPLND   1      5
IMPLND 104                     0.778       IMPLND   2      5
IMPLND 104                     0.778       IMPLND   3      5
```

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*** Subsurface (AGWO)(7ha) to groundwater RCHRES, footer to sanitary sewer
PERLND   1                     7.000       RCHRES 101      3
PERLND   2                     7.000       RCHRES 102      3
PERLND   3                     7.000       RCHRES 103      3
*** Roadway (0.9 ha) into local storm sewer
IMPLND   1                     0.900       RCHRES   1      6
IMPLND   2                     0.900       RCHRES   2      6
IMPLND   3                     0.900       RCHRES   3      6
***-----------------------------------------------------------------
***URFs  4 to  6, LOW DENSITY RESIDENTIAL, C-D , all Soils
*** Walk/Patio to lawn
IMPLND 103                     0.014       PERLND   4      4
IMPLND 103                     0.014       PERLND   5      4
IMPLND 103                     0.014       PERLND   6      4
*** Lawns/open space onto Roadway
PERLND   4                     7.780       IMPLND   4      2
PERLND   5                     7.780       IMPLND   5      2
PERLND   6                     7.780       IMPLND   6      2
*** Sloped Roof direct to storm sewer
IMPLND 101                     1.300       RCHRES   4      6
IMPLND 101                     1.300       RCHRES   5      6
IMPLND 101                     1.300       RCHRES   6      6
***Driveway onto road
IMPLND 104                     0.778       IMPLND   4      5
IMPLND 104                     0.778       IMPLND   5      5
IMPLND 104                     0.778       IMPLND   6      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   4                     7.000       RCHRES 104      7
PERLND   5                     7.000       RCHRES 105      7
PERLND   6                     7.000       RCHRES 106      7
*** Roadway into local storm sewer
IMPLND   4                     0.900       RCHRES   4      6
IMPLND   5                     0.900       RCHRES   5      6
IMPLND   6                     0.900       RCHRES   6      6
***-----------------------------------------------------------------
***URFs  7 to  9, LOW DENSITY RESIDENTIAL, D-C , all
Soils
*** Walk/Patio to lawn
IMPLND 103                     0.014       PERLND   7      4
IMPLND 103                     0.014       PERLND   8      4
IMPLND 103                     0.014       PERLND   9      4
*** Sloped Roof to lawn
IMPLND 101                     0.186       PERLND   7      4
IMPLND 101                     0.186       PERLND   8      4
IMPLND 101                     0.186       PERLND   9      4
*** Lawns/open space onto Roadway
PERLND   7                     7.780       IMPLND   7      2
PERLND   8                     7.780       IMPLND   8      2
PERLND   9                     7.780       IMPLND   9      2
***Driveway onto road
IMPLND 104                     0.778       IMPLND   7      5
IMPLND 104                     0.778       IMPLND   8      5
IMPLND 104                     0.778       IMPLND   9      5
*** Subsurface (AGWO) to RCHRES, footer to sanitary sewer
PERLND   7                     7.000       RCHRES 107      3
PERLND   8                     7.000       RCHRES 108      3
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PERLND   9                    7.000       RCHRES 109      3
*** Roadway into local storm sewer
IMPLND   7                    0.900       RCHRES   7      6
IMPLND   8                    0.900       RCHRES   8      6
IMPLND   9                    0.900       RCHRES   9      6
***----------------------------------------------------------------
***URFs 10 to 12, LOW DENSITY RESIDENTIAL, D-D , all
Soils
*** Walk/Patio to lawn
IMPLND 103                    0.014       PERLND  10      4
IMPLND 103                    0.014       PERLND  11      4
IMPLND 103                    0.014       PERLND  12      4
*** Sloped Roof to lawn
IMPLND 101                    0.186       PERLND  10      4
IMPLND 101                    0.186       PERLND  11      4
IMPLND 101                    0.186       PERLND  12      4
*** Lawns/open space onto Roadway
PERLND  10                    7.780       IMPLND  10      2
PERLND  11                    7.780       IMPLND  11      2
PERLND  12                    7.780       IMPLND  12      2
***Driveway onto road
IMPLND 104                    0.778       IMPLND  10      5
IMPLND 104                    0.778       IMPLND  11      5
IMPLND 104                    0.778       IMPLND  12      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  10                    7.000       RCHRES 110      7
PERLND  11                    7.000       RCHRES 111      7
PERLND  12                    7.000       RCHRES 112      7
*** Roadway into local storm sewer
IMPLND  10                    0.900       RCHRES  10      6
IMPLND  11                    0.900       RCHRES  11      6
IMPLND  12                    0.900       RCHRES  12      6
***----------------------------------------------------------------
***URFs 13 to 15, MEDIUM DENSITY RESIDENTIAL, C-C , all Soils
*** Walk/Patio to lawn
IMPLND 103                    0.060       PERLND  13      4
IMPLND 103                    0.060       PERLND  14      4
IMPLND 103                    0.060       PERLND  15      4
*** Lawns/open space onto Roadway
PERLND  13                    3.850       IMPLND  13      2
PERLND  14                    3.850       IMPLND  14      2
PERLND  15                    3.850       IMPLND  15      2
*** Sloped Roof direct to storm sewer
IMPLND 101                    2.400       RCHRES  13      6
IMPLND 101                    2.400       RCHRES  14      6
IMPLND 101                    2.400       RCHRES  15      6
***Driveway onto road
IMPLND 104                    0.769       IMPLND  13      5
IMPLND 104                    0.769       IMPLND  14      5
IMPLND 104                    0.769       IMPLND  15      5
*** Subsurface (AGWO only) to groundwater RCHRES,footer to sanitary sewer
PERLND  13                    5.000       RCHRES 113      3
PERLND  14                    5.000       RCHRES 114      3
PERLND  15                    5.000       RCHRES 115      3
*** Roadway into local storm sewer
IMPLND  13                    1.300       RCHRES  13      6
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IMPLND  14                      1.300       RCHRES  14      6
IMPLND  15                      1.300       RCHRES  15      6
***-------------------------------------------------------------
***URFs 16 to 18, MEDIUM DENSITY RESIDENTIAL, C-D , all Soils
*** Walk/Patio to lawn
IMPLND 103                      0.060       PERLND  16      4
IMPLND 103                      0.060       PERLND  17      4
IMPLND 103                      0.060       PERLND  18      4
*** Lawns/open space onto Roadway
PERLND  16                      3.850       IMPLND  16      2
PERLND  17                      3.850       IMPLND  17      2
PERLND  18                      3.850       IMPLND  18      2
*** Sloped Roof direct to storm sewer
IMPLND 101                      2.400       RCHRES  16      6
IMPLND 101                      2.400       RCHRES  17      6
IMPLND 101                      2.400       RCHRES  18      6
***Driveway onto road
IMPLND 104                      0.769       IMPLND  16      5
IMPLND 104                      0.769       IMPLND  17      5
IMPLND 104                      0.769       IMPLND  18      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  16                      5.000       RCHRES 116      7
PERLND  17                      5.000       RCHRES 117      7
PERLND  18                      5.000       RCHRES 118      7
*** Roadway into local storm sewer
IMPLND  16                      1.300       RCHRES  16      6
IMPLND  17                      1.300       RCHRES  17      6
IMPLND  18                      1.300       RCHRES  18      6
***-------------------------------------------------------------
***URFs 19 to 21, MEDIUM DENSITY RESIDENTIAL, D-C , all
Soils
*** Sloped Roof to lawn
IMPLND 101                      0.480       PERLND  19      4
IMPLND 101                      0.480       PERLND  20      4
IMPLND 101                      0.480       PERLND  21      4
*** Walk/Patio to lawn
IMPLND 103                      0.060       PERLND  19      4
IMPLND 103                      0.060       PERLND  20      4
IMPLND 103                      0.060       PERLND  21      4
*** Lawns/open space onto Roadway
PERLND  19                      3.850       IMPLND  19      2
PERLND  20                      3.850       IMPLND  20      2
PERLND  21                      3.850       IMPLND  21      2
***Driveway onto road
IMPLND 104                      0.769       IMPLND  19      5
IMPLND 104                      0.769       IMPLND  20      5
IMPLND 104                      0.769       IMPLND  21      5
*** Subsurface (AGWO) to RCHRES, footer to sanitary sewer
PERLND  19                      5.000       RCHRES 119      3
PERLND  20                      5.000       RCHRES 120      3
PERLND  21                      5.000       RCHRES 121      3
*** Roadway into local storm sewer
IMPLND  19                      1.300       RCHRES  19      6
IMPLND  20                      1.300       RCHRES  20      6
IMPLND  21                      1.300       RCHRES  21      6
***-------------------------------------------------------------
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***URFs 22 to 24, MEDIUM DENSITY RESIDENTIAL, D-D , all
Soils
*** Sloped Roof to lawn
IMPLND 101                     0.480       PERLND  22      4
IMPLND 101                     0.480       PERLND  23      4
IMPLND 101                     0.480       PERLND  24      4
*** Walk/Patio to lawn
IMPLND 103                     0.060       PERLND  22      4
IMPLND 103                     0.060       PERLND  23      4
IMPLND 103                     0.060       PERLND  24      4
*** Lawns/open space onto Roadway
PERLND  22                     3.850       IMPLND  22      2
PERLND  23                     3.850       IMPLND  23      2
PERLND  24                     3.850       IMPLND  24      2
***Driveway onto road
IMPLND 104                     0.769       IMPLND  22      5
IMPLND 104                     0.769       IMPLND  23      5
IMPLND 104                     0.769       IMPLND  24      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  22                     5.000       RCHRES 122      7
PERLND  23                     5.000       RCHRES 123      7
PERLND  24                     5.000       RCHRES 124      7
*** Roadway into local storm sewer
IMPLND  22                     1.300       RCHRES  22      6
IMPLND  23                     1.300       RCHRES  23      6
IMPLND  24                     1.300       RCHRES  24      6
***-----------------------------------------------------------
***URFs 25 to 27, HIGH DENSITY RESIDENTIAL, C-C , all
Soils
*** Walk/Patio to lawn
IMPLND 103                     0.143       PERLND  25      4
IMPLND 103                     0.143       PERLND  26      4
IMPLND 103                     0.143       PERLND  27      4
*** Lawns/open space onto Roadway
PERLND  25                     2.059       IMPLND  25      2
PERLND  26                     2.059       IMPLND  26      2
PERLND  27                     2.059       IMPLND  27      2
*** Sloped Roof direct to storm sewer
IMPLND 101                     3.200       RCHRES  25      6
IMPLND 101                     3.200       RCHRES  26      6
IMPLND 101                     3.200       RCHRES  27      6
***Driveway onto road
IMPLND 104                     0.647       IMPLND  25      5
IMPLND 104                     0.647       IMPLND  26      5
IMPLND 104                     0.647       IMPLND  27      5
*** Subsurface (AGWO) to groundwater RCHRES, footer to sanitary sewer
PERLND  25                     3.500       RCHRES 125      3
PERLND  26                     3.500       RCHRES 126      3
PERLND  27                     3.500       RCHRES 127      3
*** Roadway into local storm sewer
IMPLND  25                     1.700       RCHRES  25      6
IMPLND  26                     1.700       RCHRES  26      6
IMPLND  27                     1.700       RCHRES  27      6
***-----------------------------------------------------------
***URFs 28 to 30, HIGH DENSITY RESIDENTIAL, C-D , all Soils
*** Walk/Patio to lawn
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IMPLND 103                      0.143       PERLND  28      4
IMPLND 103                      0.143       PERLND  29      4
IMPLND 103                      0.143       PERLND  30      4
*** Lawns/open space onto Roadway
PERLND  28                      2.059       IMPLND  28      2
PERLND  29                      2.059       IMPLND  29      2
PERLND  30                      2.059       IMPLND  30      2
*** Sloped Roof direct to storm sewer
IMPLND 101                      3.200       RCHRES  28      6
IMPLND 101                      3.200       RCHRES  29      6
IMPLND 101                      3.200       RCHRES  30      6
***Driveway onto road
IMPLND 104                      0.647       IMPLND  28      5
IMPLND 104                      0.647       IMPLND  29      5
IMPLND 104                      0.647       IMPLND  30      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  28                      3.500       RCHRES 128      7
PERLND  29                      3.500       RCHRES 129      7
PERLND  30                      3.500       RCHRES 130      7
*** Roadway into local storm sewer
IMPLND  28                      1.700       RCHRES  28      6
IMPLND  29                      1.700       RCHRES  29      6
IMPLND  30                      1.700       RCHRES  30      6
***-------------------------------------------------------------
***URFs 31 to 33, HIGH DENSITY RESIDENTIAL, D-C , all
Soils
*** Walk/Patio to lawn
IMPLND 103                      0.143       PERLND  31      4
IMPLND 103                      0.143       PERLND  32      4
IMPLND 103                      0.143       PERLND  33      4
*** Sloped Roof to lawn
IMPLND 101                      0.914       PERLND  31      4
IMPLND 101                      0.914       PERLND  32      4
IMPLND 101                      0.914       PERLND  33      4
*** Lawns/open space onto Roadway
PERLND  31                      2.059       IMPLND  31      2
PERLND  32                      2.059       IMPLND  32      2
PERLND  33                      2.059       IMPLND  33      2
***Driveway onto road
IMPLND 104                      0.647       IMPLND  31      5
IMPLND 104                      0.647       IMPLND  32      5
IMPLND 104                      0.647       IMPLND  33      5
*** Subsurface (AGWO) to RCHRES, footer to sanitary sewer
PERLND  31                      3.500       RCHRES 131      3
PERLND  32                      3.500       RCHRES 132      3
PERLND  33                      3.500       RCHRES 133      3
*** Roadway into local storm sewer
IMPLND  31                      1.700       RCHRES  31      6
IMPLND  32                      1.700       RCHRES  32      6
IMPLND  33                      1.700       RCHRES  33      6
***-------------------------------------------------------------
***URFs 34 to 36, HIGH DENSITY RESIDENTIAL, D-D , all
Soils
*** Walk/Patio to lawn
IMPLND 103                      0.143       PERLND  34      4
IMPLND 103                      0.143       PERLND  35      4
```

```
IMPLND 103                     0.143       PERLND  36      4
*** Sloped Roof to lawn
IMPLND 101                     0.914       PERLND  34      4
IMPLND 101                     0.914       PERLND  35      4
IMPLND 101                     0.914       PERLND  36      4
*** Lawns/open space onto Roadway
PERLND  34                     2.059       IMPLND  34      2
PERLND  35                     2.059       IMPLND  35      2
PERLND  36                     2.059       IMPLND  36      2
***Driveway onto road
IMPLND 104                     0.647       IMPLND  34      5
IMPLND 104                     0.647       IMPLND  35      5
IMPLND 104                     0.647       IMPLND  36      5
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  34                     3.500       RCHRES 134      7
PERLND  35                     3.500       RCHRES 135      7
PERLND  36                     3.500       RCHRES 136      7
*** Roadway into local storm sewer
IMPLND  34                     1.700       RCHRES  34      6
IMPLND  35                     1.700       RCHRES  35      6
IMPLND  36                     1.700       RCHRES  36      6
***-------------------------------------------------------------
***URFs 37 to 39, HIGH RISE RESIDENTIAL, C-C , all Soils
*** Lawns/open space onto Roadway
PERLND  37                     5.556       IMPLND  37      2
PERLND  38                     5.556       IMPLND  38      2
PERLND  39                     5.556       IMPLND  39      2
*** Flat Roof direct to storm sewer
IMPLND 102                     0.900       RCHRES  37      6
IMPLND 102                     0.900       RCHRES  38      6
IMPLND 102                     0.900       RCHRES  39      6
***Driveway onto road
IMPLND 104                     0.555       IMPLND  37      5
IMPLND 104                     0.555       IMPLND  38      5
IMPLND 104                     0.555       IMPLND  39      5
***Parking onto road
IMPLND 105                     3.000       IMPLND  37      5
IMPLND 105                     3.000       IMPLND  38      5
IMPLND 105                     3.000       IMPLND  39      5
*** Subsurface (AGWO) to groundwater RCHRES, footer to sanitary sewer
PERLND  37                     5.000       RCHRES 137      3
PERLND  38                     5.000       RCHRES 138      3
PERLND  39                     5.000       RCHRES 139      3
*** Roadway into local storm sewer
IMPLND  37                     0.900       RCHRES  37      6
IMPLND  38                     0.900       RCHRES  38      6
IMPLND  39                     0.900       RCHRES  39      6
***-------------------------------------------------------------
END SCHEMATIC

***============================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
```

```
****          1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****          2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****          3 = PERLND subsurface flow (AGWO and part of IFWO) to a RCHRES
(connected footer)
****Note: In this case one-third of IFWO is assumed lost from the system, to
the sanitary sewer
****          4 = IMPLND RUNOFF to a PERLND (disconnected roof or walk/patio
to lawn)
****          5 = IMPLND RUNOFF TO AN IMPLND (driveway to roadway)
****          6 = IMPLND RUNOFF to a RCHRES (connected roof, roadway to storm
sewer)
****          7 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (disconnected
footer)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****           for flows into RCHRES. For flows from one parcel of land to
another
***            no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (footers
connected)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWATER IFWO      0.0000067      RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        0.67         RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    3
  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
```

```
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    5

  MASS-LINK        6
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6

  MASS-LINK        7
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (footers
disconnected)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    7
END MASS-LINK

***==============================================================================
===
***
EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
RCHRES   1 HYDR   ROVOL       1000000.      WDM2  1001 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL       1000000.      WDM2  1501 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL       1000000.      WDM2  1002 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL       1000000.      WDM2  1502 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL       1000000.      WDM2  1003 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL       1000000.      WDM2  1503 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL       1000000.      WDM2  1004 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL       1000000.      WDM2  1504 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL       1000000.      WDM2  1005 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL       1000000.      WDM2  1505 FLOW     METR      REPL
```

```
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  1006 FLOW      METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  1506 FLOW      METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  1007 FLOW      METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  1507 FLOW      METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  1008 FLOW      METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  1508 FLOW      METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  1009 FLOW      METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  1509 FLOW      METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  1010 FLOW      METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  1510 FLOW      METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  1011 FLOW      METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  1511 FLOW      METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  1012 FLOW      METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  1512 FLOW      METR      REPL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  1101 FLOW      METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  1601 FLOW      METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  1102 FLOW      METR      REPL
RCHRES 114 HYDR   ROVOL      1000000.      WDM2  1602 FLOW      METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  1103 FLOW      METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  1603 FLOW      METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  1104 FLOW      METR      REPL
RCHRES 116 HYDR   ROVOL      1000000.      WDM2  1604 FLOW      METR      REPL
RCHRES  17 HYDR   ROVOL      1000000.      WDM2  1105 FLOW      METR      REPL
RCHRES 117 HYDR   ROVOL      1000000.      WDM2  1605 FLOW      METR      REPL
RCHRES  18 HYDR   ROVOL      1000000.      WDM2  1106 FLOW      METR      REPL
RCHRES 118 HYDR   ROVOL      1000000.      WDM2  1606 FLOW      METR      REPL
RCHRES  19 HYDR   ROVOL      1000000.      WDM2  1107 FLOW      METR      REPL
RCHRES 119 HYDR   ROVOL      1000000.      WDM2  1607 FLOW      METR      REPL
RCHRES  20 HYDR   ROVOL      1000000.      WDM2  1108 FLOW      METR      REPL
RCHRES 120 HYDR   ROVOL      1000000.      WDM2  1608 FLOW      METR      REPL
RCHRES  21 HYDR   ROVOL      1000000.      WDM2  1109 FLOW      METR      REPL
RCHRES 121 HYDR   ROVOL      1000000.      WDM2  1609 FLOW      METR      REPL
RCHRES  22 HYDR   ROVOL      1000000.      WDM2  1110 FLOW      METR      REPL
RCHRES 122 HYDR   ROVOL      1000000.      WDM2  1610 FLOW      METR      REPL
RCHRES  23 HYDR   ROVOL      1000000.      WDM2  1111 FLOW      METR      REPL
RCHRES 123 HYDR   ROVOL      1000000.      WDM2  1611 FLOW      METR      REPL
RCHRES  24 HYDR   ROVOL      1000000.      WDM2  1112 FLOW      METR      REPL
RCHRES 124 HYDR   ROVOL      1000000.      WDM2  1612 FLOW      METR      REPL
RCHRES  25 HYDR   ROVOL      1000000.      WDM2  1201 FLOW      METR      REPL
RCHRES 125 HYDR   ROVOL      1000000.      WDM2  1701 FLOW      METR      REPL
RCHRES  26 HYDR   ROVOL      1000000.      WDM2  1202 FLOW      METR      REPL
RCHRES 126 HYDR   ROVOL      1000000.      WDM2  1702 FLOW      METR      REPL
RCHRES  27 HYDR   ROVOL      1000000.      WDM2  1203 FLOW      METR      REPL
RCHRES 127 HYDR   ROVOL      1000000.      WDM2  1703 FLOW      METR      REPL
RCHRES  28 HYDR   ROVOL      1000000.      WDM2  1204 FLOW      METR      REPL
RCHRES 128 HYDR   ROVOL      1000000.      WDM2  1704 FLOW      METR      REPL
RCHRES  29 HYDR   ROVOL      1000000.      WDM2  1205 FLOW      METR      REPL
RCHRES 129 HYDR   ROVOL      1000000.      WDM2  1705 FLOW      METR      REPL
RCHRES  30 HYDR   ROVOL      1000000.      WDM2  1206 FLOW      METR      REPL
RCHRES 130 HYDR   ROVOL      1000000.      WDM2  1706 FLOW      METR      REPL
RCHRES  31 HYDR   ROVOL      1000000.      WDM2  1207 FLOW      METR      REPL
RCHRES 131 HYDR   ROVOL      1000000.      WDM2  1707 FLOW      METR      REPL
RCHRES  32 HYDR   ROVOL      1000000.      WDM2  1208 FLOW      METR      REPL
RCHRES 132 HYDR   ROVOL      1000000.      WDM2  1708 FLOW      METR      REPL
RCHRES  33 HYDR   ROVOL      1000000.      WDM2  1209 FLOW      METR      REPL
RCHRES 133 HYDR   ROVOL      1000000.      WDM2  1709 FLOW      METR      REPL
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RCHRES  34 HYDR   ROVOL      1000000.      WDM2  1210 FLOW     METR      REPL
RCHRES 134 HYDR   ROVOL      1000000.      WDM2  1710 FLOW     METR      REPL
RCHRES  35 HYDR   ROVOL      1000000.      WDM2  1211 FLOW     METR      REPL
RCHRES 135 HYDR   ROVOL      1000000.      WDM2  1711 FLOW     METR      REPL
RCHRES  36 HYDR   ROVOL      1000000.      WDM2  1212 FLOW     METR      REPL
RCHRES 136 HYDR   ROVOL      1000000.      WDM2  1712 FLOW     METR      REPL
RCHRES  37 HYDR   ROVOL      1000000.      WDM2  1301 FLOW     METR      REPL
RCHRES 137 HYDR   ROVOL      1000000.      WDM2  1801 FLOW     METR      REPL
RCHRES  38 HYDR   ROVOL      1000000.      WDM2  1302 FLOW     METR      REPL
RCHRES 138 HYDR   ROVOL      1000000.      WDM2  1802 FLOW     METR      REPL
RCHRES  39 HYDR   ROVOL      1000000.      WDM2  1303 FLOW     METR      REPL
RCHRES 139 HYDR   ROVOL      1000000.      WDM2  1803 FLOW     METR      REPL
RCHRES   1 HTRCH  ROHEAT                   WDM3  1051 HEAT     METR      REPL
RCHRES 101 HTRCH  ROHEAT                   WDM3  1551 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                   WDM3  1052 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                   WDM3  1552 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                   WDM3  1053 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                   WDM3  1553 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                   WDM3  1054 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                   WDM3  1554 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                   WDM3  1055 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                   WDM3  1555 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                   WDM3  1056 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                   WDM3  1556 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                   WDM3  1057 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                   WDM3  1557 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                   WDM3  1058 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                   WDM3  1558 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                   WDM3  1059 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                   WDM3  1559 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                   WDM3  1060 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                   WDM3  1560 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                   WDM3  1061 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                   WDM3  1561 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                   WDM3  1062 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                   WDM3  1562 HEAT     METR      REPL
RCHRES  13 HTRCH  ROHEAT                   WDM3  1151 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                   WDM3  1651 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                   WDM3  1152 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                   WDM3  1652 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                   WDM3  1153 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                   WDM3  1653 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                   WDM3  1154 HEAT     METR      REPL
RCHRES 116 HTRCH  ROHEAT                   WDM3  1654 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                   WDM3  1155 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                   WDM3  1655 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                   WDM3  1156 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                   WDM3  1656 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                   WDM3  1157 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                   WDM3  1657 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                   WDM3  1158 HEAT     METR      REPL
RCHRES 120 HTRCH  ROHEAT                   WDM3  1658 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                   WDM3  1159 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                   WDM3  1659 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                   WDM3  1160 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                   WDM3  1660 HEAT     METR      REPL
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RCHRES  23 HTRCH  ROHEAT                          WDM3  1161 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                          WDM3  1661 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                          WDM3  1162 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                          WDM3  1662 HEAT     METR      REPL
RCHRES  25 HTRCH  ROHEAT                          WDM3  1251 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                          WDM3  1751 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                          WDM3  1252 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                          WDM3  1752 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                          WDM3  1253 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                          WDM3  1753 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                          WDM3  1254 HEAT     METR      REPL
RCHRES 128 HTRCH  ROHEAT                          WDM3  1754 HEAT     METR      REPL
RCHRES  29 HTRCH  ROHEAT                          WDM3  1255 HEAT     METR      REPL
RCHRES 129 HTRCH  ROHEAT                          WDM3  1755 HEAT     METR      REPL
RCHRES  30 HTRCH  ROHEAT                          WDM3  1256 HEAT     METR      REPL
RCHRES 130 HTRCH  ROHEAT                          WDM3  1756 HEAT     METR      REPL
RCHRES  31 HTRCH  ROHEAT                          WDM3  1257 HEAT     METR      REPL
RCHRES 131 HTRCH  ROHEAT                          WDM3  1757 HEAT     METR      REPL
RCHRES  32 HTRCH  ROHEAT                          WDM3  1258 HEAT     METR      REPL
RCHRES 132 HTRCH  ROHEAT                          WDM3  1758 HEAT     METR      REPL
RCHRES  33 HTRCH  ROHEAT                          WDM3  1259 HEAT     METR      REPL
RCHRES 133 HTRCH  ROHEAT                          WDM3  1759 HEAT     METR      REPL
RCHRES  34 HTRCH  ROHEAT                          WDM3  1260 HEAT     METR      REPL
RCHRES 134 HTRCH  ROHEAT                          WDM3  1760 HEAT     METR      REPL
RCHRES  35 HTRCH  ROHEAT                          WDM3  1261 HEAT     METR      REPL
RCHRES 135 HTRCH  ROHEAT                          WDM3  1761 HEAT     METR      REPL
RCHRES  36 HTRCH  ROHEAT                          WDM3  1262 HEAT     METR      REPL
RCHRES 136 HTRCH  ROHEAT                          WDM3  1762 HEAT     METR      REPL
RCHRES  37 HTRCH  ROHEAT                          WDM3  1351 HEAT     METR      REPL
RCHRES 137 HTRCH  ROHEAT                          WDM3  1851 HEAT     METR      REPL
RCHRES  38 HTRCH  ROHEAT                          WDM3  1352 HEAT     METR      REPL
RCHRES 138 HTRCH  ROHEAT                          WDM3  1852 HEAT     METR      REPL
RCHRES  39 HTRCH  ROHEAT                          WDM3  1353 HEAT     METR      REPL
RCHRES 139 HTRCH  ROHEAT                          WDM3  1853 HEAT     METR      REPL
END EXT TARGETS
***
END RUN
END OF DATA
```

```
RUN
***
***  Development of Unit Responce Functions for Existing Conditions
***  Hamilton Airport Employment Growth District - Project Number 64758
***  - Modeller: Matt Wilson
***
*** Note #1: This version simulates unit area response functions
(URFs)
***          for runoff from standard sized (10 hectare)
***          parcels of land
***
*** Note #2: Land parcel runoff is separated into surface and subsurface
***          components and these are routed to separate reaches.
***
*** Note #3: This UCI file will generate the non residential landuse URFs
***          This UCI file generates eleven land use designations, on
***          three general soil types.
***
***          All existing landuses within the study area are represented
***          with eight land use designations, all on C-D type soils.
***
GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPT LEVELS    3
  RESUME     0 RUN     1                        Units     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   hamilton airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF2p1.ech
           23   PER2p1.out
           24   IMP2p1.out
           25   RCH2p1.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP              INDELT 00:15
      <OPTYP AND ##>     ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      PERLND       1
      PERLND       2
      PERLND       3
      PERLND       4
      PERLND       5
      PERLND       6
      PERLND       7
      PERLND       8
```

```
      PERLND       9
      PERLND      10
      PERLND      11
      PERLND      12
***
      IMPLND       1
      IMPLND       2
      IMPLND       3
      IMPLND       4
      IMPLND       5
      IMPLND       6
      IMPLND       7
      IMPLND       8
      IMPLND       9
      IMPLND      10
      IMPLND      11
      IMPLND      12
      IMPLND      13
      IMPLND      14
      IMPLND      15
****
      PERLND      13
      PERLND      14
      PERLND      15
      PERLND      16
      PERLND      17
      PERLND      18
      PERLND      19
      PERLND      20
      PERLND      21
      PERLND      22
      PERLND      23
      PERLND      24
      PERLND      25
      PERLND      26
      PERLND      27
      PERLND      28
***  Roads must be simulated after
PERLNDS
      IMPLND      16
      IMPLND      17
      IMPLND      18
      IMPLND      19
      IMPLND      20
      IMPLND      21
      IMPLND      22
      RCHRES       1
      RCHRES       2
      RCHRES       3
      RCHRES       4
      RCHRES       5
      RCHRES       6
      RCHRES       7
      RCHRES       8
      RCHRES       9
      RCHRES      10
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      RCHRES      11
      RCHRES      12
      RCHRES      13
      RCHRES      14
      RCHRES      15
      RCHRES      16
      RCHRES      17
      RCHRES      18
      RCHRES      19
      RCHRES      20
      RCHRES      21
      RCHRES      22
      RCHRES      23
      RCHRES      24
      RCHRES      25
      RCHRES      26
      RCHRES      27
      RCHRES      28
      RCHRES     101
      RCHRES     102
      RCHRES     103
      RCHRES     104
      RCHRES     105
      RCHRES     106
      RCHRES     107
      RCHRES     108
      RCHRES     109
      RCHRES     110
      RCHRES     111
      RCHRES     112
      RCHRES     113
      RCHRES     114
      RCHRES     115
      RCHRES     116
      RCHRES     117
      RCHRES     118
      RCHRES     119
      RCHRES     120
      RCHRES     121
      RCHRES     122
      RCHRES     123
      RCHRES     124
      RCHRES     125
      RCHRES     126
      RCHRES     127
      RCHRES     128
      GENER        1
      GENER        2
      GENER        3
    END INGRP
END OPN SEQUENCE

***
==============================================================================
=====
```

```
PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
    1   28         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1   28         4    4         4    4
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
***  COMMERCIAL  LAND USES                                     ****
    1     DNTWN COMM B-C SOIL              2    2        23
    2     BIG BOX COMM B-C                 2    2        23
    3     STRIP COMM B-C SOIL              2    2        23
***  INST/GOV'T  LAND USES                             ****
    4     SMALL INST A-B SOIL              2    2        23
    5     SMALL INST B-C SOIL              2    2        23
    6     SMALL INST D SOIL                2    2        23
***  OPEN SPACE LAND USES                              ****
    7     PARK/OPEN A-B SOIL               2    2        23
    8     PARK/OPEN B-C SOIL               2    2        23
    9     PARK/OPEN D  SOIL                2    2        23
   10     VALLEYS ON A-B SOIL              2    2        23
   11     VALLEYS ON B-C SOIL              2    2        23
   12     VALLEYS ON D SOIL                2    2        23
***  TRANSPORTATION RELATED LAND USES                  ****
   13     HIGHWAY ON A-B SOIL              2    2        23
   14     HIGHWAY ON B-C SOIL              2    2        23
   15     HIGHWAY ON D SOIL                2    2        23
***  INDUSTRIAL LAND USES                 ****
   16     PRESTIGE ON A-B SOIL             2    2        23
   17     PRESTIGE ON B-C SOIL             2    2        23
   18     PRESTIGE ON D SOIL               2    2        23
   19     BIG BOX IND B-C SOIL             2    2        23
***  AGRICULTURAL LAND USES               ****
   20     TILLED A-B SOIL                  2    2        23
   21     TILLED B-C SOIL                  2    2        23
   22     TILLED C-D SOIL                  2    2        23
   23     PASTURE ON A-B SOIL              2    2        23
   24     PASTURE ON B-C SOIL              2    2        23
   25     PASTURE ON C-D SOIL              2    2        23
*** Eco INDUSTRIAL LAND USES                 ****
   26     Eco PRESTIGE ON A-B SOIL         2    2        23
   27     Eco PRESTIGE ON B-C SOIL         2    2        23
   28     Eco PRESTIGE ON D SOIL           2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
```

```
    1   28    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                             ***
***  COMMERCIAL    *****
    1    3     43.50       90.      0.75      1.00       100.
*** INSTITUTIONAL  *****
    4    6     43.50       90.      0.75      1.00       100.
***  OPEN SPACES   *****
    7   12     43.50       90.      0.25      1.00       100.
***  TRANSPORTATION*****
   13   15     43.50       90.      0.40      1.00       100.
*** INDUSTRIAL     *****
   16   19     43.50       90.      0.75      1.00       100.
*** AGRICULTURAL   *****
   20   25     43.50      125.      0.05      1.00       100.
***Eco INDUSTRIAL     *****
   26   28     43.50       90.      0.75      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   28      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
  *** Woodlots start with more snow pack    ***
    1   28      10.0        0.        0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   28      100.       0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
***
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1   28    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                     ***  A-B   SOILS   ***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4           0.25      300.     15.0       75.0    0.02        0.0
.995
***  OPEN SPACES   ***
    7           0.25      300.     15.0      150.0    0.02        0.0
```

```
.995
   10           0.60      300.     15.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   13           0.25      300.     15.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   16           0.25      300.     15.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   20           0.05      300.     15.0      200.0    0.02         0.0
.995
   23           0.20      300.     15.0      200.0    0.02         0.0
.995
***  Eco INDUSTRIAL     ***
   26           0.25      300.     15.0        5.0    0.02         0.0
.995
***
***
                                            ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3      0.25      200.      8.0        5.0    0.02         0.0
.995
***  INSTITUTIONAL ***
    5           0.25      200.      8.0       75.0    0.02         0.0
.995
***  OPEN SPACES   ***
    8           0.25      200.      8.0      150.0    0.02         0.0
.995
   11           0.60      200.      8.0      150.0    0.15         0.0
.995
***  TRANSPORTATION ***
   14           0.25      200.      8.0       20.0    0.02         0.0
.995
***  INDUSTRIAL     ***
   17           0.25      200.      8.0        5.0    0.02         0.0
.995
   19           0.25      200.      8.0        5.0    0.02         0.0
.995
***  AGRICULTURAL   ***
   21           0.05      200.      8.0      200.0    0.02         0.0
.995
   24           0.20      200.      8.0      200.0    0.02         0.0
.995
*** Eco INDUSTRIAL     ***
   27           0.25      200.      8.0        5.0    0.02         0.0
.995
***
***
                                            ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6           0.25      100.      4.0       75.0    0.02         0.0
```

```
.995
***  OPEN SPACES   ***
    9           0.25      100.      4.0      150.0    0.02        0.0
.995
   12           0.60      100.      4.0      150.0    0.15        0.0
.995
***  TRANSPORTATION ***
   15           0.25      100.      4.0       20.0    0.02        0.0
.995
***  INDUSTRIAL     ***
   18           0.25      100.      4.0        5.0    0.02        0.0
.995
***  AGRICULTURAL   ***
   22           0.05      100.      4.0      200.0    0.02        0.0
.995
   25           0.20      100.      4.0      200.0    0.02        0.0
.995
*** Eco INDUSTRIAL     ***
   28           0.25      100.      4.0        5.0    0.02        0.0
.995
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1   28  4.5        1.7         2.0      2.0         0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                      ***  A-B   SOILS   ***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            5.0      30.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    7            5.0      30.0     0.25        1.0     0.85
0.30
   10            5.0      30.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   13            5.0      30.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   16            5.0      30.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   20            4.0      30.0     0.40        1.0     0.85
0.20
   23            2.5      30.0     0.30        1.0     0.85     0.20
*** Eco INDUSTRIAL     ***
   26            5.0      30.0     0.25        1.0     0.85
0.30
***
***
```

```
                                       ***  B-C   SOILS   ***
***
***  COMMERCIAL    ***
    1    3       5.0      16.0     0.25        1.0     0.85
0.30
***  INSTITUTIONAL ***
    5            5.0      16.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    8            5.0      16.0     0.25        1.0     0.85
0.30
   11            5.0      16.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   14            5.0      16.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   17            5.0      16.0     0.25        1.0     0.85
0.30
   19            5.0      16.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   21            4.0      16.0     0.40        1.0     0.85
0.20
   24            2.5      16.0     0.30        1.0     0.85     0.20
*** Eco INDUSTRIAL     ***
   27            5.0      16.0     0.25        1.0     0.85
0.30
***
***
                                       ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6            5.0       6.0     0.25        1.0     0.85
0.30
***  OPEN SPACES   ***
    9            5.0       6.0     0.25        1.0     0.85
0.30
   12            5.0       6.0     0.35        1.0     0.85
0.60
***  TRANSPORTATION ***
   15            5.0       6.0     0.25        1.0     0.85
0.30
***  INDUSTRIAL     ***
   18            5.0       6.0     0.25        1.0     0.85
0.30
***  AGRICULTURAL   ***
   22            4.0       6.0     0.40        1.0     0.85
0.20
   25            2.5       6.0     0.30        1.0     0.85     0.20
***  INDUSTRIAL     ***
   28            5.0       6.0     0.25        1.0     0.85
0.30
  END PWAT-PARM4
```

```
  PWAT-PARM5
  < RANGE>       FZG      FZGL
***
    1   28       1.0
0.1
  END PWAT-PARM5
  ***
  MON-INTERCEP
    <PLS>   Only required if VCSFG=1 in PWAT-PARM1                         ***
    # -  #  Interception storage capacity at start of each month           ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC     ***
    1   28  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
  END MON-INTERCEP

  MON-UZSN
    <PLS>   Only required if VUZFG=1 in PWAT-PARM1                         ***
    # -  #  Upper zone storage at start of each month                      ***
            JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC     ***
    4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
    7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   20      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   23      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
   26      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

    1    3  9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
    5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
    8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   19       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   21       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   24       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
   27       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

    6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
    9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   18       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   22       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   25       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   28       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  END MON-UZSN

  ***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
  MON-MANNING
    <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    ***   LOW DENSITY RESIDENTIAL   ****
    1    3 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   MEDIUM DENSITY RESIDENTIAL   ****
    4    6 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
```

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    ***  HIGH DENSITY RESIDENTIAL   ****
    7    9 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  HIGH RISE    RESIDENTIAL   ****
   10   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  DOWNTOWN COMMERCIAL        ****
   13      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   BIG BOX COMMERCIAL        ****
   14      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   STRIP MALL COMMERCIAL     ****
   15      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  SMALL INSTITUTIONAL        ****
   16   18 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   PARK LAND                 ****
   19   21 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  VALLEY LAND                ****
   22   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   HIGHWAYS   ***
   25   27 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   PRESTIGE INDUSTRIAL       ****
   28   30 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   LARGE INDUSTRIAL  ****
   31      0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   TILLED AGRICULTURAL       ****
   32   34 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   PASTURE/FALLOW AGRICULTURAL ***
   35   37 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
  END MON-MANNING
  MON-INTERFLW
    <PLS >  Interflow Inflow Parameter for Start of Each Month ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
  END MON-INTERFLW
  MON-IRC
    <PLS >  INTERFLOW RECESSION CONSTANT ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   28  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
  END MON-IRC
***

  MON-LZETPARM
    <PLS >  ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1   28 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
  END MON-LZETPARM

  PWAT-STATE1
    <PLS >***
    # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    4            0.0       0.0      30.0       0.0     300.0      10.0
0.0
***  OPEN SPACES   ***
    7            0.0       0.0      30.0       0.0     300.0      10.0
0.0
```

```
   10            0.0       0.0      30.0       0.0      300.0      10.0
0.0
***  TRANSPORTATION ***
   13            0.0       0.0      30.0       0.0      300.0      10.0
0.0
***  INDUSTRIAL     ***
   16            0.0       0.0      30.0       0.0      300.0      10.0
0.0
***  AGRICULTURAL   ***
   20            0.0       0.0      30.0       0.0      300.0      10.0
0.0
   23            0.0       0.0      30.0       0.0      300.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   26            0.0       0.0      30.0       0.0      300.0      10.0
0.0
***
***
                                      ***  B-C   SOILS   ***
***
***
***  COMMERCIAL    ***
    1    3       0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  INSTITUTIONAL ***
    5            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  OPEN SPACES   ***
    8            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   11            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  TRANSPORTATION ***
   14            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  INDUSTRIAL     ***
   17            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   19            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  AGRICULTURAL   ***
   21            0.0       0.0      16.0       0.0      200.0      10.0
0.0
   24            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***  Eco INDUSTRIAL     ***
   27            0.0       0.0      16.0       0.0      200.0      10.0
0.0
***
***
                                      ***  C-D   SOILS   ***
***
***
***  COMMERCIAL    ***
***  INSTITUTIONAL ***
    6            0.0       0.0       6.0       0.0      100.0      10.0
```

```
0.0
***  OPEN SPACES   ***
    9           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   12           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  TRANSPORTATION ***
   15           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  INDUSTRIAL     ***
   18           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  AGRICULTURAL   ***
   22           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   25           0.0       0.0       6.0      0.0      100.0      10.0
0.0
***  INDUSTRIAL     ***
   28           0.0       0.0       6.0      0.0      100.0      10.0
0.0
  END PWAT-STATE1

  ***
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1   28    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1   28        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)   ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1   28  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1   28       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1   28    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1   28      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1   28       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
```

```
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1   28
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
    1   22         1    1         1
  101  102         1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   22         4    4         4             12
  101  102         4    4         4             12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     CDT1bc                       2    2        24
    2     CBB1bc                       2    2        24
    3     CSM1bc                       2    2        24
    4     EIS1ab                       2    2        24
    5     EIS1bc                       2    2        24
    6     EIS1cd                       2    2        24
    7     OPL0ab                       2    2        24
    8     OPL0bc                       2    2        24
    9     OPL0cd                       2    2        24
   10     OVL0ab                       2    2        24
   11     OVL0bc                       2    2        24
   12     OVL0cd                       2    2        24
   13     THC0ab                       2    2        24
   14     THC0bc                       2    2        24
   15     THC0cd                       2    2        24
   16     IPR1ab                       2    2        24
   17     IPR1bc                       2    2        24
   18     IPR1cd                       2    2        24
   19     IBB1bc                       2    2        24
   20     IPE1ab                       2    2        24
   21     IPE1bc                       2    2        24
   22     IPE1cd                       2    2        24
  101     FLAT ROOFS                   2    2        24
  102     INDUST/COMM PARKING          2    2        24
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   22    1
  101  102    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #              ELEV                                ***
*** 1-Flat roof,2-Ind/Comm Parking, 11 - 35 local roads ***
    1        43.50      90.      0.10      1.00      100.
```

```
    2        43.50       90.      0.10      1.00      100.
    3        43.50       90.      0.10      1.00      100.
    4        43.50       90.      0.10      1.00      100.
    5        43.50       90.      0.10      1.00      100.
    6        43.50       90.      0.10      1.00      100.
    7        43.50       90.      0.10      1.00      100.
    8        43.50       90.      0.10      1.00      100.
    9        43.50       90.      0.10      1.00      100.
   10        43.50       90.      0.10      1.00      100.
   11        43.50       90.      0.10      1.00      100.
   12        43.50       90.      0.10      1.00      100.
   13        43.50       90.      0.10      1.00      100.
   14        43.50       90.      0.10      1.00      100.
   15        43.50       90.      0.10      1.00      100.
   16        43.50       90.      0.10      1.00      100.
   17        43.50       90.      0.10      1.00      100.
   18        43.50       90.      0.10      1.00      100.
   19        43.50       90.      0.10      1.00      100.
   20        43.50       90.      0.10      1.00      100.
   21        43.50       90.      0.10      1.00      100.
   22        43.50       90.      0.10      1.00      100.
  101        43.50       90.      0.10      1.00      100.
  102        43.50       90.      0.10      1.00      100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   22      0.15     -0.99      0.20      1.50      .250      0.00
  101  102      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   22       0.0       0.0       0.0       0.2      500.       0.0
  101  102       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   22      100.       0.5       1.0
  101  102      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   22    1    1    0    0    0
  101  102    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
    1   22       50.    0.02        0.10       2.0
  101            20.    0.01        0.10       3.0
  102            25.    0.02        0.10       2.5
  END IWAT-PARM2
```

```
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   22       4.5       1.7
  101  102       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   22       0.0       0.0
  101  102       0.0       0.0
  END IWAT-STATE1

  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO           ***
    1  102    0    1
  END IWT-PARM1
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  102      150.       1.0       0.8
  END IWT-PARM2
  IWT-INIT
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  102       0.5
  END IWT-INIT
END IMPLND
                                 ***                     *****
                                 ***     RCHRES          *****
                                 ***                     *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  128    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  128    4    4         4                                      12
  END PRINT-INFO

***

  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX        IN  OUT ENGL METR LKFG ***
***   The first set of 25 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 25 RCHRESs (101-125) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   COMMERCIAL  CONFIGURATIONS    *****
    1     DOWNTOWN COMM ON BC     1         2    2        25    0
    2     BIG BOX  COMM ON BC     1         2    2        25    0
    3     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
```

```
    4     SMALL INSTIT. ON AB     1         2    2        25    0
    5     SMALL INSTIT. ON BC     1         2    2        25    0
    6     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
    7     PARK LAND ON AB         1         2    2        25    0
    8     PARK LAND ON BC         1         2    2        25    0
    9     PARK LAND ON CD         1         2    2        25    0
   10     VALLEY LAND ON AB       1         2    2        25    0
   11     VALLEY LAND ON BC       1         2    2        25    0
   12     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
   13     ROADS/HIGHWAYS AB       1         2    2        25    0
   14     ROADS/HIGHWAYS BC       1         2    2        25    0
   15     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
   16     PRESTIGE IND  AB        1         2    2        25    0
   17     PRESTIGE IND  BC        1         2    2        25    0
   18     PRESTIGE IND  CD        1         2    2        25    0
   19     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURAL CONFIGURATIONS    *****
   20     TILLED LAND   AB        1         2    2        25    0
   21     TILLED LAND   BC        1         2    2        25    0
   22     TILLED LAND   CD        1         2    2        25    0
   23     PASTURE/FALLOW AB       1         2    2        25    0
   24     PASTURE/FALLOW BC       1         2    2        25    0
   25     PASTURE/FALLOW CD       1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
   26     Eco PRESTIGE IND  AB    1         2    2        25    0
   27     Eco PRESTIGE IND  BC    1         2    2        25    0
   28     Eco PRESTIGE IND  CD    1         2    2        25    0
***   SUBSURFACE RCHRESs            *****
***   COMMERCIAL  CONFIGURATIONS    *****
  101     DOWNTOWN COMM ON BC     1         2    2        25    0
  102     BIG BOX  COMM ON BC     1         2    2        25    0
  103     STRIP MALLS   ON BC     1         2    2        25    0
***  INSTITUTIONAL CONFIGURATIONS    *****
  104     SMALL INSTIT. ON AB     1         2    2        25    0
  105     SMALL INSTIT. ON BC     1         2    2        25    0
  106     SMALL INSTIT. ON CD     1         2    2        25    0
***   OPEN SPACE  CONFIGURATIONS    *****
  107     PARK LAND ON AB         1         2    2        25    0
  108     PARK LAND ON BC         1         2    2        25    0
  109     PARK LAND ON CD         1         2    2        25    0
  110     VALLEY LAND ON AB       1         2    2        25    0
  111     VALLEY LAND ON BC       1         2    2        25    0
  112     VALLEY LAND ON CD       1         2    2        25    0
***  TRANSPORTATION CONFIGURATIONS    *****
  113     ROADS/HIGHWAYS AB       1         2    2        25    0
  114     ROADS/HIGHWAYS BC       1         2    2        25    0
  115     ROADS/HIGHWAYS CD       1         2    2        25    0
***   INDUSTRIAL  CONFIGURATIONS    *****
  116     PRESTIGE IND  AB        1         2    2        25    0
  117     PRESTIGE IND  BC        1         2    2        25    0
  118     PRESTIGE IND  CD        1         2    2        25    0
  119     BIG BOX  IND  BC        1         2    2        25    0
***   AGRICULTURE CONFIGURATIONS    *****
```

```
  120     TILLED LAND   AB        1         2    2        25    0
  121     TILLED LAND   BC        1         2    2        25    0
  122     TILLED LAND   CD        1         2    2        25    0
  123     PASTURE/FALLOW AB       1         2    2        25    0
  124     PASTURE/FALLOW BC       1         2    2        25    0
  125     PASTURE/FALLOW CD       1         2    2        25    0
***   Eco INDUSTRIAL  CONFIGURATIONS    *****
  126     Eco PRESTIGE IND  AB    1         2    2        25    0
  127     Eco PRESTIGE IND  BC    1         2    2        25    0
  128     Eco PRESTIGE IND  CD    1         2    2        25    0
  END GEN-INFO
                                ***                    ***
                                ***   HYDR SECTION   ***
                                ***                    ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1  128      1  1  1    4                                        3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   19    0   11    0.3000  6.000          0.0      0.5      1.00
   20   25    0   12    0.3000  6.000          0.0      0.5      1.00
   26   28    0   11    0.3000  6.000          0.0      0.5      1.00
  101  119    0   13    0.3000  6.000          0.0      0.5      1.00
  120  125    0   12    0.3000  6.000          0.0      0.5      1.00
  126  128    0   13    0.3000  6.000          0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   19 0.00001        4.3
   20   25 0.00001        4.3
   26   28 0.00001        4.3
  101  119 0.000001       4.3
  120  125 0.00001        4.3
  126  128 0.000001       4.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT      VOL  ****
    1  128
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
```

```
    # -  # BDFG TGFG TSTP ***
    1  128    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                         ***
    1  128      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   28      0.50       0.0
  101  128      4.50       0.0
  END HEAT-INIT
END RCHRES


***
=============================================================================


FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
  FTABLE     11
  ROW  COL  ***
    5    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      0.25     0.015  0.00004     0.340
      0.50     0.015  0.00008     0.820
      0.75     0.255  0.00071     9.910
      1.00     0.255  0.00135    27.830
  END FTABLE11
  FTABLE     12
  ROW  COL  ***
    3    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      0.25     0.015  0.00004     0.340
      1.00     0.060  0.00032     5.000
  END FTABLE12
  FTABLE     13
  ROW  COL  ***
    2    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      1.00     0.001  0.00015     100.00
  END FTABLE13
END FTABLES


***==============================================================================
```

```
===



GENER
  OPCODE
    # -  #  Op- ***
           code ***
    1    3   16
  END OPCODE
END GENER

***
==============================================================================

EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
                   ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR              DIV  PERLND   1  28 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND   1  22 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND 101 102 EXTNL  PREC
WDM1   141 AIRT     METR              SAME PERLND   1  28 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND   1  22 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND 101 102 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME RCHRES   1 128 EXTNL  GATMP
WDM1   181 WIND     METR              DIV  PERLND   1  28 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND   1  22 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND 101 102 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  RCHRES   1 128 EXTNL  WIND
WDM1   131 SOLR     METR              DIV  PERLND   1  28 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND   1  22 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND 101 102 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  RCHRES   1 128 EXTNL  SOLRAD
WDM1   164 PET      METR              DIV  PERLND   1  28 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND   1  22 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND 101 102 EXTNL  PETINP
WDM1   121 DEWT     METR              SAME PERLND   1  28 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND   1  22 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND 101 102 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME RCHRES   1 128 EXTNL  DEWTMP
WDM1   171 CLDC     METR              SAME PERLND   1  28 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND   1  22 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND 101 102 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME RCHRES   1 128 EXTNL  CLOUD
END EXT SOURCES
***

***===========================================================================
===

***  This is where the URFs are developed.
```

```
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 6 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.

SCHEMATIC
<-Source->                 <--Area-->       <-Target->  <ML->  ***
<Name>   #                 <-factor->       <Name>   #      #  ***
***-----------------------------------------------------------------
***URFs  1 to  3, DOWNTOWN, BIG BOX and STRIP COMMERCIAL, B-C
Soils
*** Lawns/open space onto Roadway
PERLND   1                      0.132       IMPLND   1      2
PERLND   2                      0.167       IMPLND   2      2
PERLND   3                      0.105       IMPLND   3      2
*** Flat Roof to storm sewer
IMPLND 101                      5.200       RCHRES   1      5
IMPLND 102                      2.900       RCHRES   2      5
IMPLND 101                      1.700       RCHRES   3      5
***Driveway or parking onto road
IMPLND 102                      0.132       IMPLND   1      4
IMPLND 102                      4.750       IMPLND   2      4
IMPLND 102                      3.263       IMPLND   3      4
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   1                      0.500       RCHRES 101      6
PERLND   2                      0.200       RCHRES 102      6
PERLND   3                      0.200       RCHRES 103      6
*** Roadway into local storm sewer
IMPLND   1                      3.800       RCHRES   1      5
IMPLND   2                      1.200       RCHRES   2      5
IMPLND   3                      1.900       RCHRES   3      5
***-----------------------------------------------------------------
***URFs 4 to 6 , SMALL INSTITUTIONAL,  all Soils
*** Lawns/open space onto Roadway
PERLND   4                      7.556       IMPLND   4      2
PERLND   5                      7.556       IMPLND   5      2
PERLND   6                      7.556       IMPLND   6      2
*** Flat Roof to storm sewer
IMPLND 101                      0.900       RCHRES   4      5
IMPLND 101                      0.900       RCHRES   5      5
IMPLND 101                      0.900       RCHRES   6      5
*** Parking onto road
IMPLND 102                      1.556       IMPLND   4      4
IMPLND 102                      1.556       IMPLND   5      4
IMPLND 102                      1.556       IMPLND   6      4
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   4                      6.800       RCHRES 104      6
```

```
PERLND   5                     6.800       RCHRES 105      6
PERLND   6                     6.800       RCHRES 106      6
*** Roadway into local storm sewer
IMPLND   4                     0.900       RCHRES   4      5
IMPLND   5                     0.900       RCHRES   5      5
IMPLND   6                     0.900       RCHRES   6      5
***--------------------------------------------------------------
***URFs  7 to 9 , OPEN SPACES/PARKS/CORRIDORS on all Soils
*** Lawns/open space onto Roadway
PERLND   7                    18.000       IMPLND   7      2
PERLND   8                    18.000       IMPLND   8      2
PERLND   9                    18.000       IMPLND   9      2
*** Parking onto road
IMPLND 102                     1.000       IMPLND   7      4
IMPLND 102                     1.000       IMPLND   8      4
IMPLND 102                     1.000       IMPLND   9      4
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND   7                     9.000       RCHRES 107      6
PERLND   8                     9.000       RCHRES 108      6
PERLND   9                     9.000       RCHRES 109      6
*** Roadway into local storm sewer
IMPLND   7                     0.500       RCHRES   7      5
IMPLND   8                     0.500       RCHRES   8      5
IMPLND   9                     0.500       RCHRES   9      5
***--------------------------------------------------------------
***URFs 10 to 12, VALLEY LANDS on all Soils
*** Lawns/open space onto Roadway
PERLND  10                    32.330       IMPLND  10      2
PERLND  11                    32.330       IMPLND  11      2
PERLND  12                    32.330       IMPLND  12      2
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  10                     9.700       RCHRES 110      6
PERLND  11                     9.700       RCHRES 111      6
PERLND  12                     9.700       RCHRES 112      6
*** Roadway into local storm sewer
IMPLND  10                     0.300       RCHRES  10      5
IMPLND  11                     0.300       RCHRES  11      5
IMPLND  12                     0.300       RCHRES  12      5
***--------------------------------------------------------------
***URFs 13 to 15, ROADS/HIGHWAYS on all Soils
*** Roads to adjacent grassed area
*** For study area 5 use 70% roadway/30% open.
IMPLND  13                     2.333       PERLND  13      3
IMPLND  14                     2.333       PERLND  14      3
IMPLND  15                     2.333       PERLND  15      3
*** Surface runoff from grassed area to storm sewer
PERLND  13                     3.000       RCHRES  13      1
PERLND  14                     3.000       RCHRES  14      1
PERLND  15                     3.000       RCHRES  15      1
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  13                     3.000       RCHRES 113      6
PERLND  14                     3.000       RCHRES 114      6
PERLND  15                     3.000       RCHRES 115      6
***--------------------------------------------------------------
***URFs 16 to 18, PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
```

```
PERLND  16                     2.857       IMPLND  16      2
PERLND  17                     2.857       IMPLND  17      2
PERLND  18                     2.857       IMPLND  18      2
*** Flat Roof to storm sewer
IMPLND 101                     3.000       RCHRES  16      5
IMPLND 101                     3.000       RCHRES  17      5
IMPLND 101                     3.000       RCHRES  18      5
***Parking onto road
IMPLND 102                     6.143       IMPLND  16      4
IMPLND 102                     6.143       IMPLND  17      4
IMPLND 102                     6.143       IMPLND  18      4
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  16                     2.000       RCHRES 116      6
PERLND  17                     2.000       RCHRES 117      6
PERLND  18                     2.000       RCHRES 118      6
*** Roadway into local storm sewer
IMPLND  16                     0.700       RCHRES  16      5
IMPLND  17                     0.700       RCHRES  17      5
IMPLND  18                     0.700       RCHRES  18      5
***-------------------------------------------------------------
***URFs 19 , BIG BOX INDUSTRIAL,  B-C Soils
*** Lawns/open space onto Roadway
PERLND  19                     1.167       IMPLND  19      2
*** Flat Roof to storm sewer
IMPLND 101                     4.500       RCHRES  19      5
*** Parking onto road
IMPLND 102                     7.000       IMPLND  19      4
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  19                     0.700       RCHRES 119      6
*** Roadway into local storm sewer
IMPLND  19                     0.600       RCHRES  19      5
***-------------------------------------------------------------
***URFs 20 to 25, AGRICULTURAL LANDS
*** Surface and subsurface flow to an agricultural drain, all Soils
*** Tilled Land
PERLND  20                    10.000       RCHRES  20      1
PERLND  20                    10.000       RCHRES 120      6
PERLND  21                    10.000       RCHRES  21      1
PERLND  21                    10.000       RCHRES 121      6
PERLND  22                    10.000       RCHRES  22      1
PERLND  22                    10.000       RCHRES 122      6
*** Pasture/Fallow
PERLND  23                    10.000       RCHRES  23      1
PERLND  23                    10.000       RCHRES 123      6
PERLND  24                    10.000       RCHRES  24      1
PERLND  24                    10.000       RCHRES 124      6
PERLND  25                    10.000       RCHRES  25      1
PERLND  25                    10.000       RCHRES 125      6
***-------------------------------------------------------------
***URFs 26 to 28, Eco PRESTIGE INDUSTRIAL,  all Soils
*** Lawns/open space onto Roadway
PERLND  26                     6.000       IMPLND  20      2
PERLND  27                     6.000       IMPLND  21      2
PERLND  28                     6.000       IMPLND  22      2
*** Flat Roof to storm sewer
IMPLND 101                     2.500       RCHRES  26      5
```

```
IMPLND 101                    2.500       RCHRES  27      5
IMPLND 101                    2.500       RCHRES  28      5
***Parking onto road
IMPLND 102                    8.000       IMPLND  20      4
IMPLND 102                    8.000       IMPLND  21      4
IMPLND 102                    8.000       IMPLND  22      4
*** Subsurface (AGWO+IFWO) to groundwater RCHRES
PERLND  26                    3.000       RCHRES 126      6
PERLND  27                    3.000       RCHRES 127      6
PERLND  28                    3.000       RCHRES 128      6
*** Roadway into local storm sewer
IMPLND  20                    0.500       RCHRES  26      5
IMPLND  21                    0.500       RCHRES  27      5
IMPLND  22                    0.500       RCHRES  28      5
***--------------------------------------------------------------

END SCHEMATIC

***=============================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
****           1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****           2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****           3 = IMPLND RUNOFF to a PERLND (highway to grassed
ROW
****           4 = IMPLND RUNOFF TO AN IMPLND (parking  to roadway)
****           5 = IMPLND RUNOFF to a RCHRES (roadway to storm
sewer)
****           6 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (agricultural
runoff)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****            for flows into RCHRES. For flows from one parcel of land to
another
***             no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
```

```
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    3

  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    5

  MASS-LINK        6
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (agr. or
highway)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6
END MASS-LINK

***=============================================================================
===

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->
***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #
***

*** ADD AGWO AND IFWO TOGETHER USING GENER TO GET 6901,6902,6903
PERLND  13 PWATER IFWO                     GENER    1     INPUT  ONE
```

```
PERLND  13 PWATER AGWO                           GENER    1      INPUT  TWO
PERLND  14 PWATER IFWO                           GENER    2      INPUT  ONE
PERLND  14 PWATER AGWO                           GENER    2      INPUT  TWO
PERLND  15 PWATER IFWO                           GENER    3      INPUT  ONE
PERLND  15 PWATER AGWO                           GENER    3      INPUT  TWO

END NETWORK

***==============================================================================
===

EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
RCHRES   1 HYDR   ROVOL      1000000.      WDM2  2001 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL      1000000.      WDM2  2501 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL      1000000.      WDM2  2101 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL      1000000.      WDM2  2601 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL      1000000.      WDM2  2201 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL      1000000.      WDM2  2701 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL      1000000.      WDM2  3001 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL      1000000.      WDM2  3501 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL      1000000.      WDM2  3002 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL      1000000.      WDM2  3502 FLOW     METR      REPL
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  3003 FLOW     METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  3503 FLOW     METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  4001 FLOW     METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  4501 FLOW     METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  4002 FLOW     METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  4502 FLOW     METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  4003 FLOW     METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  4503 FLOW     METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  4101 FLOW     METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  4601 FLOW     METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  4102 FLOW     METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  4602 FLOW     METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  4103 FLOW     METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  4603 FLOW     METR      REPL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  5001 FLOW     METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  5501 FLOW     METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  5002 FLOW     METR      REPL
RCHRES 114 HYDR   ROVOL      1000000.      WDM2  5502 FLOW     METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  5003 FLOW     METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  5503 FLOW     METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  6001 FLOW     METR      REPL
RCHRES 116 HYDR   ROVOL      1000000.      WDM2  6501 FLOW     METR      REPL
RCHRES  17 HYDR   ROVOL      1000000.      WDM2  6002 FLOW     METR      REPL
RCHRES 117 HYDR   ROVOL      1000000.      WDM2  6502 FLOW     METR      REPL
RCHRES  18 HYDR   ROVOL      1000000.      WDM2  6003 FLOW     METR      REPL
RCHRES 118 HYDR   ROVOL      1000000.      WDM2  6503 FLOW     METR      REPL
RCHRES  19 HYDR   ROVOL      1000000.      WDM2  6101 FLOW     METR      REPL
RCHRES 119 HYDR   ROVOL      1000000.      WDM2  6601 FLOW     METR      REPL
RCHRES  20 HYDR   ROVOL      1000000.      WDM2  6201 FLOW     METR      REPL
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```
RCHRES 120 HYDR   ROVOL       1000000.      WDM2  6701 FLOW     METR      REPL
RCHRES  21 HYDR   ROVOL       1000000.      WDM2  6202 FLOW     METR      REPL
RCHRES 121 HYDR   ROVOL       1000000.      WDM2  6702 FLOW     METR      REPL
RCHRES  22 HYDR   ROVOL       1000000.      WDM2  6203 FLOW     METR      REPL
RCHRES 122 HYDR   ROVOL       1000000.      WDM2  6703 FLOW     METR      REPL
RCHRES  23 HYDR   ROVOL       1000000.      WDM2  6301 FLOW     METR      REPL
RCHRES 123 HYDR   ROVOL       1000000.      WDM2  6801 FLOW     METR      REPL
RCHRES  24 HYDR   ROVOL       1000000.      WDM2  6302 FLOW     METR      REPL
RCHRES 124 HYDR   ROVOL       1000000.      WDM2  6802 FLOW     METR      REPL
RCHRES  25 HYDR   ROVOL       1000000.      WDM2  6303 FLOW     METR      REPL
RCHRES 125 HYDR   ROVOL       1000000.      WDM2  6803 FLOW     METR      REPL
RCHRES  26 HYDR   ROVOL       1000000.      WDM2  6004 FLOW     METR      REPL
RCHRES 126 HYDR   ROVOL       1000000.      WDM2  6504 FLOW     METR      REPL
RCHRES  27 HYDR   ROVOL       1000000.      WDM2  6005 FLOW     METR      REPL
RCHRES 127 HYDR   ROVOL       1000000.      WDM2  6505 FLOW     METR      REPL
RCHRES  28 HYDR   ROVOL       1000000.      WDM2  6006 FLOW     METR      REPL
RCHRES 128 HYDR   ROVOL       1000000.      WDM2  6506 FLOW     METR      REPL
RCHRES   1 HTRCH  ROHEAT                    WDM3  2051 HEAT     METR      REPL
RCHRES 101 HTRCH  ROHEAT                    WDM3  2551 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                    WDM3  2151 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                    WDM3  2651 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                    WDM3  2251 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                    WDM3  2751 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                    WDM3  3051 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                    WDM3  3551 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                    WDM3  3052 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                    WDM3  3552 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                    WDM3  3053 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                    WDM3  3553 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                    WDM3  4051 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                    WDM3  4551 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                    WDM3  4052 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                    WDM3  4552 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                    WDM3  4053 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                    WDM3  4553 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                    WDM3  4151 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                    WDM3  4651 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                    WDM3  4152 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                    WDM3  4652 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                    WDM3  4153 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                    WDM3  4653 HEAT     METR      REPL
RCHRES  13 HTRCH  ROHEAT                    WDM3  5051 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                    WDM3  5551 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                    WDM3  5052 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                    WDM3  5552 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                    WDM3  5053 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                    WDM3  5553 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                    WDM3  6051 HEAT     METR      REPL
RCHRES 116 HTRCH  ROHEAT                    WDM3  6551 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                    WDM3  6052 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                    WDM3  6552 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                    WDM3  6053 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                    WDM3  6553 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                    WDM3  6151 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                    WDM3  6651 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                    WDM3  6251 HEAT     METR      REPL
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```
RCHRES 120 HTRCH  ROHEAT                       WDM3  6751 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                       WDM3  6252 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                       WDM3  6752 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                       WDM3  6253 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                       WDM3  6753 HEAT     METR      REPL
RCHRES  23 HTRCH  ROHEAT                       WDM3  6351 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                       WDM3  6851 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                       WDM3  6352 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                       WDM3  6852 HEAT     METR      REPL
RCHRES  25 HTRCH  ROHEAT                       WDM3  6353 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                       WDM3  6853 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                       WDM3  6054 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                       WDM3  6554 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                       WDM3  6055 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                       WDM3  6555 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                       WDM3  6056 HEAT     METR      REPL
RCHRES 128 HTRCH  ROHEAT                       WDM3  6556 HEAT     METR      REPL
PERLND  13 PWATER SURO                         WDM2  6401 SAB      METR      REPL
GENER    1 OUTPUT TIMSER                       WDM2  6901 GWAB     METR      REPL
PERLND  14 PWATER SURO                         WDM2  6402 SBC      METR      REPL
GENER    2 OUTPUT TIMSER                       WDM2  6902 GWBC     METR      REPL
PERLND  15 PWATER SURO                         WDM2  6403 SCD      METR      REPL
GENER    3 OUTPUT TIMSER                       WDM2  6903 GWCD     METR      REPL
IMPLND  13 IWATER SURO                         WDM2  6404 ROAD     METR      REPL
END EXT TARGETS

*** ==========================================================================

END RUN
```

```
RUN
***
***  Development of Unit Responce Functions for Existing Conditions
***  Hamilton Airport Employment Growth District - Project Number 64758
***   - Modeller: Matt Wilson
***
*** Note #1: This version simulates unit area response functions
(URFs)
***          for runoff from standard sized (10 hectare)
***          parcels of land.
***
*** Note #2: Land parcel runoff is separated into surface and subsurface
***          components and these are routed to separate reaches.
***
*** Note #3: This UCI file will generate the RLD, RMD, RHD and RHR URFs
***          This UCI file generates fifteen land use designations, on
***          three general soil types.  Four levels of connectivity are
***          simulated for residential areas including ditches. These
***          are four different connectivities that were not simulated
***          in URF1P1.uci. This reqires the use of special ditch PERLNDS.
***
***Note #4:  All existing landuses within the study area are represented
***          with eight land use designations, all on C-D type soils.
***
GLOBAL
  TWWF EXISTING CONDITIONS URFs for 1991 to 1996
  <--8X--><--START-DATE/TIME-> *** <---END-DATE/TIME-->
  START       1991             END    1996
  RUN INTERP OUTPUT LEVEL    3
  RESUME     0 RUN     1                   UNIT SYSTEM     2
END GLOBAL

FILES
***   Meteorological inputs from WDM1 and WDM3, all URFs sent to WDM2
<FTYP>  UNIT#   FILE NAME ***
WDM1       21   hamilton airport.wdm
WDM2       28   URF-f1.wdm
WDM3       29   URF-t1.wdm
MESSU      22   URF3p1.ech
           23   PER3p1.out
           24   IMP3p1.out
           25   RCH3p1.out
END FILES

OPN SEQUENCE
    <-------19X------->  ***  <IDT>
    INGRP               INDELT 00:15
      <OPTYP AND ##>      ***
***  Walks/Patio,roofs, and driveways must be simulated first
      IMPLND     101
      IMPLND     102
      IMPLND     103
      IMPLND     104
      IMPLND     105
      PERLND       1
      PERLND       2
```

```
PERLND       3
PERLND       4
PERLND       5
PERLND       6
PERLND       7
PERLND       8
PERLND       9
PERLND      10
PERLND      11
PERLND      12
PERLND      13
PERLND      14
PERLND      15
PERLND      16
PERLND      17
PERLND      18
PERLND      19
PERLND      20
PERLND      21
PERLND      22
PERLND      23
PERLND      24
PERLND      25
PERLND      26
PERLND      27
PERLND      28
PERLND      29
PERLND      30
PERLND      31
PERLND      32
PERLND      33
PERLND      34
PERLND      35
PERLND      36
PERLND      37
PERLND      38
PERLND      39
IMPLND       1
IMPLND       2
IMPLND       3
IMPLND       4
IMPLND       5
IMPLND       6
IMPLND       7
IMPLND       8
IMPLND       9
IMPLND      10
IMPLND      11
IMPLND      12
IMPLND      13
IMPLND      14
IMPLND      15
IMPLND      16
IMPLND      17
IMPLND      18
IMPLND      19
```

```
      IMPLND      20
      IMPLND      21
      IMPLND      22
      IMPLND      23
      IMPLND      24
      IMPLND      25
      IMPLND      26
      IMPLND      27
      IMPLND      28
      IMPLND      29
      IMPLND      30
      IMPLND      31
      IMPLND      32
      IMPLND      33
      IMPLND      34
      IMPLND      35
      IMPLND      36
      IMPLND      37
      IMPLND      38
      IMPLND      39
***  Ditch PERLNDS simulated after IMPLNDS and Other
PERLNDS
      PERLND      40
      PERLND      41
      PERLND      42
      PERLND      43
      PERLND      44
      PERLND      45
      PERLND      46
      PERLND      47
      PERLND      48
      PERLND      49
      PERLND      50
      PERLND      51
      PERLND      52
      PERLND      53
      PERLND      54
      PERLND      55
      PERLND      56
      PERLND      57
      RCHRES       1
      RCHRES       2
      RCHRES       3
      RCHRES       4
      RCHRES       5
      RCHRES       6
      RCHRES       7
      RCHRES       8
      RCHRES       9
      RCHRES      10
      RCHRES      11
      RCHRES      12
      RCHRES      13
      RCHRES      14
      RCHRES      15
      RCHRES      16
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RCHRES      17
RCHRES      18
RCHRES      19
RCHRES      20
RCHRES      21
RCHRES      22
RCHRES      23
RCHRES      24
RCHRES      25
RCHRES      26
RCHRES      27
RCHRES      28
RCHRES      29
RCHRES      30
RCHRES      31
RCHRES      32
RCHRES      33
RCHRES      34
RCHRES      35
RCHRES      36
RCHRES      37
RCHRES      38
RCHRES      39
RCHRES     101
RCHRES     102
RCHRES     103
RCHRES     104
RCHRES     105
RCHRES     106
RCHRES     107
RCHRES     108
RCHRES     109
RCHRES     110
RCHRES     111
RCHRES     112
RCHRES     113
RCHRES     114
RCHRES     115
RCHRES     116
RCHRES     117
RCHRES     118
RCHRES     119
RCHRES     120
RCHRES     121
RCHRES     122
RCHRES     123
RCHRES     124
RCHRES     125
RCHRES     126
RCHRES     127
RCHRES     128
RCHRES     129
RCHRES     130
RCHRES     131
RCHRES     132
RCHRES     133
```

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      RCHRES     134
      RCHRES     135
      RCHRES     136
      RCHRES     137
      RCHRES     138
      RCHRES     139
    END INGRP
END OPN SEQUENCE
***
PERLND
  ACTIVITY
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC   ***
    1   57         1    1         1    1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC
PIVL***YR
    1   57         4    4         4    4
12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-PLS-ID (20 CHAR)->            IU   OU ENGL METR  ***
    1     RLD5ab                           2    2        23
    2     RLD5bc                           2    2        23
    3     RLD5cd                           2    2        23
    4     RLD6ab                           2    2        23
    5     RLD6bc                           2    2        23
    6     RLD6cd                           2    2        23
    7     RLD7ab                           2    2        23
    8     RLD7bc                           2    2        23
    9     RLD7cd                           2    2        23
   10     RLD8ab                           2    2        23
   11     RLD8bc                           2    2        23
   12     RLD8cd                           2    2        23
   13     RMD5ab                           2    2        23
   14     RMD5bc                           2    2        23
   15     RMD5cd                           2    2        23
   16     RMD6ab                           2    2        23
   17     RMD6bc                           2    2        23
   18     RMD6cd                           2    2        23
   19     RMD7ab                           2    2        23
   20     RMD7bc                           2    2        23
   21     RMD7cd                           2    2        23
   22     RMD8ab                           2    2        23
   23     RMD8bc                           2    2        23
   24     RMD8cd                           2    2        23
   25     RHD5ab                           2    2        23
   26     RHD5bc                           2    2        23
   27     RHD5cd                           2    2        23
   28     RHD6ab                           2    2        23
   29     RHD6bc                           2    2        23
   30     RHD6cd                           2    2        23
   31     RHD7ab                           2    2        23
   32     RHD7bc                           2    2        23
   33     RHD7cd                           2    2        23
```

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    34      RHD8ab                              2    2        23
    35      RHD8bc                              2    2        23
    36      RHD8cd                              2    2        23
    37      RHR2ab                              2    2        23
    38      RHR2bc                              2    2        23
    39      RHR2cd                              2    2        23
    40      RLD7abditch                         2    2        23
    41      RLD7bcdirch                         2    2        23
    42      RLD7cdditch                         2    2        23
    43      RLD8abditch                         2    2        23
    44      RLD8bcditch                         2    2        23
    45      RLD8cdditch                         2    2        23
    46      RMD7abditch                         2    2        23
    47      RMD7bcditch                         2    2        23
    48      RMD7cdditch                         2    2        23
    49      RMD8abditch                         2    2        23
    50      RMD8bcditch                         2    2        23
    51      RMD8cdditch                         2    2        23
    52      RHD7abditch                         2    2        23
    53      RHD7bcditch                         2    2        23
    54      RHD7cdditch                         2    2        23
    55      RHD8abditch                         2    2        23
    56      RHD8bcditch                         2    2        23
    57      RHD8cdditch                         2    2        23
  END GEN-INFO
***
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
    # -  # FLAG ***
    1   57    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                               ***
***  RESIDENTIAL   *****
    1   57     43.50       90.      0.75      1.00       100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   57      0.15      0.00     0.20       1.50      .250      1.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   57      10.0        0.       0.0      0.2       500.      0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   57      100.       0.5       1.0
  END SNOW-INIT2
***
***   PWATER BLOCK   ***
***
```

```
  PWAT-PARM1
  < RANGE> CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE IFFC***
    ***  MONTHLY VARYING PARAMETERS ARE NOT IN EFFECT, TABLES ARE AVAILABLE
    ***  FOR LATER USE
    1   57    1    1    1    1    0    0    0    0    0    1
  END PWAT-PARM1
  PWAT-PARM2
  < RANGE><-FOREST-><--LZSN--><-INFILT-><--LSUR--><--SLSUR-><--KVARY-
><***AGWRC>
***
                                      ***  A-B   SOILS   ***
***
***  RESIDENTIAL   ***
    1          0.25      300.     15.0       25.0    0.02        0.0
.995
    4          0.25      300.     15.0       25.0    0.02        0.0
.995
    7          0.25      300.     15.0       25.0    0.02        0.0
.995
   10          0.25      300.     15.0       25.0    0.02        0.0
.995
   13          0.25      300.     15.0       25.0    0.02        0.0
.995
   16          0.25      300.     15.0       25.0    0.02        0.0
.995
   19          0.25      300.     15.0       25.0    0.02        0.0
.995
   22          0.25      300.     15.0       25.0    0.02        0.0
.995
   25          0.25      300.     15.0       25.0    0.02        0.0
.995
   28          0.25      300.     15.0       25.0    0.02        0.0
.995
   31          0.25      300.     15.0       25.0    0.02        0.0
.995
   34          0.25      300.     15.0       25.0    0.02        0.0
.995
   37          0.25      300.     15.0      100.0    0.02        0.0
.995
   40          0.25      300.     15.0      100.0    0.02        0.0
.995
   43          0.25      300.     15.0      100.0    0.02        0.0
.995
   46          0.25      300.     15.0      100.0    0.02        0.0
.995
   49          0.25      300.     15.0      100.0    0.02        0.0
.995
   52          0.25      300.     15.0      100.0    0.02        0.0
.995
   55          0.25      300.     15.0      100.0    0.02        0.0
.995
***
                                      ***  B-C   SOILS   ***
***
***  RESIDENTIAL   ***
    2          0.25      200.      8.0       25.0    0.02        0.0
```

```
.995
    5           0.25       200.       8.0        25.0    0.02         0.0
.995
    8           0.25       200.       8.0        25.0    0.02         0.0
.995
   11           0.25       200.       8.0        25.0    0.02         0.0
.995
   14           0.25       200.       8.0        25.0    0.02         0.0
.995
   17           0.25       200.       8.0        25.0    0.02         0.0
.995
   20           0.25       200.       8.0        25.0    0.02         0.0
.995
   23           0.25       200.       8.0        25.0    0.02         0.0
.995
   26           0.25       200.       8.0        25.0    0.02         0.0
.995
   29           0.25       200.       8.0        25.0    0.02         0.0
.995
   32           0.25       200.       8.0        25.0    0.02         0.0
.995
   35           0.25       200.       8.0        25.0    0.02         0.0
.995
   38           0.25       200.       8.0       100.0    0.02         0.0
.995
   41           0.25       200.       8.0       100.0    0.02         0.0
.995
   44           0.25       200.       8.0       100.0    0.02         0.0
.995
   47           0.25       200.       8.0       100.0    0.02         0.0
.995
   50           0.25       200.       8.0       100.0    0.02         0.0
.995
   53           0.25       200.       8.0       100.0    0.02         0.0
.995
   56           0.25       200.       8.0       100.0    0.02         0.0
.995
***
                                            ***  C-D   SOILS   ***
***
***  RESIDENTIAL   ***
    3           0.25       100.       4.0        25.0    0.02         0.0
.995
    6           0.25       100.       4.0        25.0    0.02         0.0
.995
    9           0.25       100.       4.0        25.0    0.02         0.0
.995
   12           0.25       100.       4.0        25.0    0.02         0.0
.995
   15           0.25       100.       4.0        25.0    0.02         0.0
.995
   18           0.25       100.       4.0        25.0    0.02         0.0
.995
   21           0.25       100.       4.0        25.0    0.02         0.0
.995
   24           0.25       100.       4.0        25.0    0.02         0.0
```

```
.995
   27           0.25      100.      4.0        25.0    0.02         0.0
.995
   30           0.25      100.      4.0        25.0    0.02         0.0
.995
   33           0.25      100.      4.0        25.0    0.02         0.0
.995
   36           0.25      100.      4.0        25.0    0.02         0.0
.995
   39           0.25      100.      4.0       100.0    0.02         0.0
.995
   42           0.25      100.      4.0       100.0    0.02         0.0
.995
   45           0.25      100.      4.0       100.0    0.02         0.0
.995
   48           0.25      100.      4.0       100.0    0.02         0.0
.995
   51           0.25      100.      4.0       100.0    0.02         0.0
.995
   54           0.25      100.      4.0       100.0    0.02         0.0
.995
   57           0.25      100.      4.0       100.0    0.02         0.0
.995
***
  END PWAT-PARM2
  PWAT-PARM3
  < RANGE><PETMAX  ><PETMIN  ><INFEXP  ><INFLD***><DEEPFR  ><BASETP
><AGWETP  >
    1   57  4.5        1.7         2.0      2.0         0.13      0.00
0.00
  END PWAT-PARM3
  PWAT-PARM4
  < RANGE><--CEPSC-><--UZSN--><--NSUR--><--INTFW-><---IRC--><--LZETP->  ***
***
                                      ***  A-B   SOILS   ***
***
    1            5.0      30.0     0.25        1.0     0.85
0.30
    4            5.0      30.0     0.25        1.0     0.85
0.30
    7            5.0      30.0     0.25        1.0     0.85
0.30
   10            5.0      30.0     0.25        1.0     0.85
0.30
   13            5.0      30.0     0.25        1.0     0.85
0.30
   16            5.0      30.0     0.25        1.0     0.85
0.30
   19            5.0      30.0     0.25        1.0     0.85
0.30
   22            5.0      30.0     0.25        1.0     0.85
0.30
   25            5.0      30.0     0.25        1.0     0.85
0.30
   28            5.0      30.0     0.25        1.0     0.85
0.30
```

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   31             5.0       30.0      0.25        1.0      0.85
0.30
   34             5.0       30.0      0.25        1.0      0.85
0.30
   37             5.0       30.0      0.25        1.0      0.85
0.30
   40             5.0       30.0      0.25        1.0      0.85
0.30
   43             5.0       30.0      0.25        1.0      0.85
0.30
   46             5.0       30.0      0.25        1.0      0.85
0.30
   49             5.0       30.0      0.25        1.0      0.85
0.30
   52             5.0       30.0      0.25        1.0      0.85
0.30
   55             5.0       30.0      0.25        1.0      0.85
0.30
***
                                                ***  B-C   SOILS   ***
***
***  RESIDENTIAL   ***
    2             5.0       16.0      0.25        1.0      0.85
0.30
    5             5.0       16.0      0.25        1.0      0.85
0.30
    8             5.0       16.0      0.25        1.0      0.85
0.30
   11             5.0       16.0      0.25        1.0      0.85
0.30
   14             5.0       16.0      0.25        1.0      0.85
0.30
   17             5.0       16.0      0.25        1.0      0.85
0.30
   20             5.0       16.0      0.25        1.0      0.85
0.30
   23             5.0       16.0      0.25        1.0      0.85
0.30
   26             5.0       16.0      0.25        1.0      0.85
0.30
   29             5.0       16.0      0.25        1.0      0.85
0.30
   32             5.0       16.0      0.25        1.0      0.85
0.30
   35             5.0       16.0      0.25        1.0      0.85
0.30
   38             5.0       16.0      0.25        1.0      0.85
0.30
   41             5.0       16.0      0.25        1.0      0.85
0.30
   44             5.0       16.0      0.25        1.0      0.85
0.30
   47             5.0       16.0      0.25        1.0      0.85
0.30
   50             5.0       16.0      0.25        1.0      0.85
0.30
```

```
   53             5.0      16.0     0.25        1.0     0.85
0.30
   56             5.0      16.0     0.25        1.0     0.85
0.30
***
                                       ***  C-D   SOILS   ***
***
***  RESIDENTIAL   ***
    3             5.0       8.0     0.25        1.0     0.85
0.30
    6             5.0       8.0     0.25        1.0     0.85
0.30
    9             5.0       8.0     0.25        1.0     0.85
0.30
   12             5.0       8.0     0.25        1.0     0.85
0.30
   15             5.0       8.0     0.25        1.0     0.85
0.30
   18             5.0       8.0     0.25        1.0     0.85
0.30
   21             5.0       8.0     0.25        1.0     0.85
0.30
   24             5.0       8.0     0.25        1.0     0.85
0.30
   27             5.0       8.0     0.25        1.0     0.85
0.30
   30             5.0       8.0     0.25        1.0     0.85
0.30
   33             5.0       8.0     0.25        1.0     0.85
0.30
   36             5.0       8.0     0.25        1.0     0.85
0.30
   39             5.0       8.0     0.25        1.0     0.85
0.30
   42             5.0       8.0     0.25        1.0     0.85
0.30
   45             5.0       8.0     0.25        1.0     0.85
0.30
   48             5.0       8.0     0.25        1.0     0.85
0.30
   51             5.0       8.0     0.25        1.0     0.85
0.30
   54             5.0       8.0     0.25        1.0     0.85
0.30
   57             5.0       8.0     0.25        1.0     0.85
0.30
***
  END PWAT-PARM4
  PWAT-PARM5
  < RANGE>        FZG      FZGL
***
    1   57        1.0
0.1
  END PWAT-PARM5
  ***
  ***
```

```
MON-INTERCEP
  <PLS>   Only required if VCSFG=1 in PWAT-PARM1                      ***
  # -  #  Interception storage capacity at start of each month        ***
          JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
  1   57  2.0  2.0  2.0  3.0  4.0  5.0  5.0  5.0  5.0  4.0  3.0  2.0
END MON-INTERCEP

MON-UZSN
  <PLS>   Only required if VUZFG=1 in PWAT-PARM1                      ***
  # -  #  Upper zone storage at start of each month                   ***
          JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
  1      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
  4      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
  7      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 10      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 13      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 16      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 19      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 22      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 25      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 28      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 31      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 34      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 37      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 40      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 43      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 46      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 49      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 52      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0
 55      18.1 16.0 18.1 24.0 32.0 40.0 45.9 48.0 45.9 40.0 32.0 24.0

  2       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  5       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
  8       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 11       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 14       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 17       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 20       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 23       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 26       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 29       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 32       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 35       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 38       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 41       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 44       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 47       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 50       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 53       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0
 56       9.1  8.0  9.1 12.9 16.0 20.0 22.9 24.0 22.9 20.0 16.0 12.0

  3       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  6       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  9       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 12       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
 15       4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
```

```
   18        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   21        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   24        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   27        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   30        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   33        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   36        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   39        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   42        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   45        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   48        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   51        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   54        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
   57        4.5  4.0  4.5  6.0  8.0 10.0 11.5 12.0 11.5 10.0  8.0  6.0
  END MON-UZSN

  ***  THE FOLLOWING MONTHLY TABLES ARE NOT CURRENTLY USED
  ***
  MON-MANNING
    <PLS >  MANNING'S N AT START OF EACH MONTH FOR ALL TILLED FIELDS ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    ***   LOW DENSITY RESIDENTIAL   ****
    1   12 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***   MEDIUM DENSITY RESIDENTIAL   ****
   13   24 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  HIGH DENSITY RESIDENTIAL   ****
   25   36 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  HIGH RISE    RESIDENTIAL   ****
   37   39 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***  DITCHES                    ****
   40   57 0.40 0.40 0.40 0.40 0.50 0.50 0.50 0.50 0.50 0.45 0.40 0.40
    ***                             ****
  END MON-MANNING
  MON-INTERFLW
    <PLS >  Interflow Inflow Parameter for Start of Each Month ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   57 0.70 0.20 0.70 1.50 1.00 1.00 1.00 0.20 0.20 0.20 0.50 0.50
  END MON-INTERFLW
  MON-IRC
    <PLS >  INTERFLOW RECESSION CONSTANT ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC***
    1   57  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90  .90
  END MON-IRC
***

  MON-LZETPARM
    <PLS >  ***
    # -  #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC ***
    1   57 0.10 0.10 0.10 0.13 0.20 0.45 0.75 0.85 0.85 0.75 0.50 0.20
  END MON-LZETPARM

  PWAT-STATE1
    <PLS >***
                                  ***  A-B   SOILS   ***
    # -  ****   CEPS      SURS       UZS      IFWS       LZS      AGWS
GWVS
```

```
     1            0.0       0.0      30.0      0.0      300.0      10.0
0.0
     4            0.0       0.0      30.0      0.0      300.0      10.0
0.0
     7            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    10            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    13            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    16            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    19            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    22            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    25            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    28            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    31            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    34            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    37            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    40            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    43            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    46            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    49            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    52            0.0       0.0      30.0      0.0      300.0      10.0
0.0
    55            0.0       0.0      30.0      0.0      300.0      10.0
0.0
***
                                     ***  B-C   SOILS   ***
***
     2            0.0       0.0      16.0      0.0      200.0      10.0
0.0
     5            0.0       0.0      16.0      0.0      200.0      10.0
0.0
     8            0.0       0.0      16.0      0.0      200.0      10.0
0.0
    11            0.0       0.0      16.0      0.0      200.0      10.0
0.0
    14            0.0       0.0      16.0      0.0      200.0      10.0
0.0
    17            0.0       0.0      16.0      0.0      200.0      10.0
0.0
    20            0.0       0.0      16.0      0.0      200.0      10.0
0.0
    23            0.0       0.0      16.0      0.0      200.0      10.0
```

```
0.0
   26           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   29           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   32           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   35           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   38           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   41           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   44           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   47           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   50           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   53           0.0       0.0      16.0      0.0      200.0      10.0
0.0
   56           0.0       0.0      16.0      0.0      200.0      10.0
0.0
***
                                  ***  C-D   SOILS   ***
***
    3           0.0       0.0       6.0      0.0      100.0      10.0
0.0
    6           0.0       0.0       6.0      0.0      100.0      10.0
0.0
    9           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   12           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   15           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   18           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   21           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   24           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   27           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   30           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   33           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   36           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   39           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   42           0.0       0.0       6.0      0.0      100.0      10.0
0.0
   45           0.0       0.0       6.0      0.0      100.0      10.0
0.0
```

```
   48            0.0       0.0       6.0      0.0      100.0      10.0
0.0
   51            0.0       0.0       6.0      0.0      100.0      10.0
0.0
   54            0.0       0.0       6.0      0.0      100.0      10.0
0.0
   57            0.0       0.0       6.0      0.0      100.0      10.0
0.0
***
  END PWAT-STATE1
  ***
  *** SECTION PSTEMP ***
  PSTEMP-PARM1
    # -  # SLTV ULTV LGTV TSOP ***
    1   57    0    0    1    1
  END PSTEMP-PARM1
  PSTEMP-PARM2
    # -  #      ASLT      BSLT     ULTP1     ULTP2     LGTP1     LGTP2 ***
    1   57        1.        .8       0.0       0.5       4.5
  END PSTEMP-PARM2
  MON-LGTP1
    <PLS > MONTHLY VALUES FOR LOWER/GROUNDWATER TEMPERATURES (C)   ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
    1   57  5.5  6.0  6.5  10.  13.  15.  16. 15.5  14.  12.  8.0  6.0
  END MON-LGTP1
  PSTEMP-TEMPS
    # -  #     AIRTC     SLTMP     ULTMP     LGTMP ***
    1   57       1.0       2.0       1.0       4.5
  END PSTEMP-TEMPS
  ***
  *** SECTION PWTGAS ***
  PWT-PARM1
    # -  #  IDV  ICV  GDV  GVC ***
    1   57    0    0    0    0
  END PWT-PARM1
  PWT-PARM2
    # -  #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P ***
    1   57      150.       8.0       0.2       4.0       0.2
  END PWT-PARM2
  PWT-TEMPS
    # -  #     SOTMP     IOTMP     AOTMP   ***
    1   57       0.5      1.50      4.50
  END PWT-TEMPS
  PWT-GASES
    # -  #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2***
    1   57
  END PWT-GASES
END PERLND
******************** IMPERLND  *******************************
IMPLND
  ACTIVITY
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL  ***
    1   39          1    1         1
  101  105          1    1         1
  END ACTIVITY
  PRINT-INFO
```

```
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> ATMP SNOW IWAT  SLD  IWG IQAL PIVL  PYR  ***
    1   39         4    4         4             12
  101  105         4    4         4             12
  END PRINT-INFO
  GEN-INFO
*** IMPLND 1-39 represent local roads - 101-105 as indicated
  < RANGE><-PLS-ID (20 CHAR)->        IU   OU ENGL METR  ***
    1     RLD5ab                       2    2         24
    2     RLD5bc                       2    2         24
    3     RLD5cd                       2    2         24
    4     RLD6ab                       2    2         24
    5     RLD6bc                       2    2         24
    6     RLD6cd                       2    2         24
    7     RLD7ab                       2    2         24
    8     RLD7bc                       2    2         24
    9     RLD7cd                       2    2         24
   10     RLD8ab                       2    2         24
   11     RLD8bc                       2    2         24
   12     RLD8cd                       2    2         24
   13     RMD5ab                       2    2         24
   14     RMD5bc                       2    2         24
   15     RMD5cd                       2    2         24
   16     RMD6ab                       2    2         24
   17     RMD6bc                       2    2         24
   18     RMD6cd                       2    2         24
   19     RMD7ab                       2    2         24
   20     RMD7bc                       2    2         24
   21     RMD7cd                       2    2         24
   22     RMD8ab                       2    2         24
   23     RMD8bc                       2    2         24
   24     RMD8cd                       2    2         24
   25     RHD5ab                       2    2         24
   26     RHD5bc                       2    2         24
   27     RHD5cd                       2    2         24
   28     RHD6ab                       2    2         24
   29     RHD6bc                       2    2         24
   30     RHD6cd                       2    2         24
   31     RHD7ab                       2    2         24
   32     RHD7bc                       2    2         24
   33     RHD7cd                       2    2         24
   34     RHD8ab                       2    2         24
   35     RHD8bc                       2    2         24
   36     RHD8cd                       2    2         24
   37     RHR2ab                       2    2         24
   38     RHR2bc                       2    2         24
   39     RHR2cd                       2    2         24
  101     SLOPED ROOFS                 2    2         24
  102     FLAT ROOFS                   2    2         24
  103     SIDEWALK/PATIO               2    2         24
  104     DRIVEWAY                     2    2         24
  105     HIGHRISE PARKING             2    2         24
  END GEN-INFO
***   START SNOW BLOCK  ***
  ICE-FLAG
    <PLS > ICE- ***
```

```
    # -  # FLAG ***
    1   39    1
  101  105    1
  END ICE-FLAG
  SNOW-PARM1
    <PLS >  LATITUDE     MEAN-     SHADE    SNOWCF    COVIND***
    #    #                ELEV                                ***
*** 101-roofsloped,102-flatroof,103-sidewalk/patio,104-driveway,1-39-
localroads ***
    1         43.50       90.       0.40      1.00      100.
    2         43.50       90.       0.40      1.00      100.
    3         43.50       90.       0.40      1.00      100.
    4         43.50       90.       0.40      1.00      100.
    5         43.50       90.       0.40      1.00      100.
    6         43.50       90.       0.40      1.00      100.
    7         43.50       90.       0.40      1.00      100.
    8         43.50       90.       0.40      1.00      100.
    9         43.50       90.       0.40      1.00      100.
   10         43.50       90.       0.40      1.00      100.
   11         43.50       90.       0.40      1.00      100.
   12         43.50       90.       0.40      1.00      100.
   13         43.50       90.       0.40      1.00      100.
   14         43.50       90.       0.40      1.00      100.
   15         43.50       90.       0.40      1.00      100.
   16         43.50       90.       0.40      1.00      100.
   17         43.50       90.       0.40      1.00      100.
   18         43.50       90.       0.40      1.00      100.
   19         43.50       90.       0.40      1.00      100.
   20         43.50       90.       0.40      1.00      100.
   21         43.50       90.       0.40      1.00      100.
   22         43.50       90.       0.40      1.00      100.
   23         43.50       90.       0.40      1.00      100.
   24         43.50       90.       0.40      1.00      100.
   25         43.50       90.       0.40      1.00      100.
   26         43.50       90.       0.40      1.00      100.
   27         43.50       90.       0.40      1.00      100.
   28         43.50       90.       0.40      1.00      100.
   29         43.50       90.       0.40      1.00      100.
   30         43.50       90.       0.40      1.00      100.
   31         43.50       90.       0.40      1.00      100.
   32         43.50       90.       0.40      1.00      100.
   33         43.50       90.       0.40      1.00      100.
   34         43.50       90.       0.40      1.00      100.
   35         43.50       90.       0.40      1.00      100.
   36         43.50       90.       0.40      1.00      100.
   37         43.50       90.       0.40      1.00      100.
   38         43.50       90.       0.40      1.00      100.
   39         43.50       90.       0.40      1.00      100.
  101         43.50       90.       0.20      1.00      100.
  102         43.50       90.       0.10      1.00      100.
  103         43.50       90.       0.40      1.00      100.
  104         43.50       90.       0.40      1.00      100.
  105         43.50       90.       0.40      1.00      100.
  END SNOW-PARM1
  SNOW-PARM2
    <PLS >***
```

```
    # -  #     RDCSN     TSNOW    SNOEVP    CCFACT    MWATER    MGMELT***
    1   39      0.15     -0.99      0.20      1.50      .250      0.00
  101  105      0.15     -0.99      0.20      1.50      .250      0.00
  END SNOW-PARM2
  SNOW-INIT1
    <PLS >***
    # -  # PACK-SNOW  PACK-ICE PACK-WATR    RDENPF      DULL    PAKTMP***
    1   39       0.0       0.0       0.0       0.2      500.       0.0
  101  105       0.0       0.0       0.0       0.2      500.       0.0
  END SNOW-INIT1
  SNOW-INIT2
    <PLS >***
    # -  #    COVINX    XLNMLT    SKYCLR***
    1   39      100.       0.5       1.0
  101  105      100.       0.5       1.0
  END SNOW-INIT2

  IWAT-PARM1
  < RANGE> CSNO RTOP  VRS  VNN RTLI
***
    1   39    1    1    0    0    0
  101  105    1    1    0    0    0
  END IWAT-PARM1
  IWAT-PARM2
  < RANGE>      LSUR     SLSUR      NSUR     RETSC
***
*** 101-roofsloped,102-flatroof,103-sidewalk/patio,104-driveway,1-39-
localroads ***
    1   39       50.    0.02        0.10       2.0
  101            10.    0.30        0.10       1.0
  102            20.    0.01        0.10       3.0
  103             1.    0.02        0.10       2.0
  104            10.    0.02        0.10       2.0
  105            20.    0.02        0.10       2.5
  END IWAT-PARM2
  IWAT-PARM3
  < RANGE>    PETMAX    PETMIN
***
    1   39       4.5       1.7
  101  105       4.5       1.7
  END IWAT-PARM3
  IWAT-STATE1
  < RANGE>      RETS      SURS
***
    1   39       0.0       0.0
  101  105       0.0       0.0
  END IWAT-STATE1
  *** SECTION IWTGAS ***
  IWT-PARM1
    # -  # WTFV CSNO           ***
    1  105    0    1
  END IWT-PARM1
  IWT-PARM2
    # -  #      ELEV      AWTF      BWTF  ***
    1  105      150.       1.0       0.8
  END IWT-PARM2
```

```
  IWT-INIT
    # -  #     SOTMP     SODOX     SOCO2   ***
    1  105       0.5
  END IWT-INIT
END IMPLND
                                 ***                     *****
                                 ***     RCHRES          *****
                                 ***                     *****
RCHRES
  ACTIVITY
  < RANGE> HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG  ***
    1  139    1    1         1
  END ACTIVITY
  PRINT-INFO
*** 2-EACH PIVL,3-DAILY,4-MONTHLY,5-ANNUALLY,6-NEVER  ***
  < RANGE> HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  ***
    1  139    4    4         4                                      12
  END PRINT-INFO
  GEN-INFO
  < RANGE><-RCH-ID (20 CHAR)->  NEX         IN  OUT ENGL METR LKFG ***
***   The first set of 39 RCHRESs simulate local storm sewers and roadside
ditches
***   The second set of 39 RCHRESs (101-139) receive subsurface runoff
(AGWO+IFWO)
***
***   SURFACE RUNOFF RCHRESs - Storm Sewers or ditches
***   RESIDENTIAL CONFIGURATIONS    *****
    1     RLD5ab                  1         2    2         25    0
    2     RLD5bc                  1         2    2         25    0
    3     RLD5cd                  1         2    2         25    0
    4     RLD6ab                  1         2    2         25    0
    5     RLD6bc                  1         2    2         25    0
    6     RLD6cd                  1         2    2         25    0
    7     RLD7ab                  1         2    2         25    0
    8     RLD7bc                  1         2    2         25    0
    9     RLD7cd                  1         2    2         25    0
   10     RLD8ab                  1         2    2         25    0
   11     RLD8bc                  1         2    2         25    0
   12     RLD8cd                  1         2    2         25    0
   13     RMD5ab                  1         2    2         25    0
   14     RMD5bc                  1         2    2         25    0
   15     RMD5cd                  1         2    2         25    0
   16     RMD6ab                  1         2    2         25    0
   17     RMD6bc                  1         2    2         25    0
   18     RMD6cd                  1         2    2         25    0
   19     RMD7ab                  1         2    2         25    0
   20     RMD7bc                  1         2    2         25    0
   21     RMD7cd                  1         2    2         25    0
   22     RMD8ab                  1         2    2         25    0
   23     RMD8bc                  1         2    2         25    0
   24     RMD8cd                  1         2    2         25    0
   25     RHD5ab                  1         2    2         25    0
   26     RHD5bc                  1         2    2         25    0
   27     RHD5cd                  1         2    2         25    0
   28     RHD6ab                  1         2    2         25    0
   29     RHD6bc                  1         2    2         25    0
```

```
    30     RHD6cd                   1         2    2        25    0
    31     RHD7ab                   1         2    2        25    0
    32     RHD7bc                   1         2    2        25    0
    33     RHD7cd                   1         2    2        25    0
    34     RHD8ab                   1         2    2        25    0
    35     RHD8bc                   1         2    2        25    0
    36     RHD8cd                   1         2    2        25    0
    37     RHR2ab                   1         2    2        25    0
    38     RHR2bc                   1         2    2        25    0
    39     RHR2cd                   1         2    2        25    0
***   GROUNDWATER REACHES              *****
   101     RLD5ab                   1         2    2        25    0
   102     RLD5bc                   1         2    2        25    0
   103     RLD5cd                   1         2    2        25    0
   104     RLD6ab                   1         2    2        25    0
   105     RLD6bc                   1         2    2        25    0
   106     RLD6cd                   1         2    2        25    0
   107     RLD7ab                   1         2    2        25    0
   108     RLD7bc                   1         2    2        25    0
   109     RLD7cd                   1         2    2        25    0
   110     RLD8ab                   1         2    2        25    0
   111     RLD8bc                   1         2    2        25    0
   112     RLD8cd                   1         2    2        25    0
   113     RMD5ab                   1         2    2        25    0
   114     RMD5bc                   1         2    2        25    0
   115     RMD5cd                   1         2    2        25    0
   116     RMD6ab                   1         2    2        25    0
   117     RMD6bc                   1         2    2        25    0
   118     RMD6cd                   1         2    2        25    0
   119     RMD7ab                   1         2    2        25    0
   120     RMD7bc                   1         2    2        25    0
   121     RMD7cd                   1         2    2        25    0
   122     RMD8ab                   1         2    2        25    0
   123     RMD8bc                   1         2    2        25    0
   124     RMD8cd                   1         2    2        25    0
   125     RHD5ab                   1         2    2        25    0
   126     RHD5bc                   1         2    2        25    0
   127     RHD5cd                   1         2    2        25    0
   128     RHD6ab                   1         2    2        25    0
   129     RHD6bc                   1         2    2        25    0
   130     RHD6cd                   1         2    2        25    0
   131     RHD7ab                   1         2    2        25    0
   132     RHD7bc                   1         2    2        25    0
   133     RHD7cd                   1         2    2        25    0
   134     RHD8ab                   1         2    2        25    0
   135     RHD8bc                   1         2    2        25    0
   136     RHD8cd                   1         2    2        25    0
   137     RHR2ab                   1         2    2        25    0
   138     RHR2bc                   1         2    2        25    0
   139     RHR2cd                   1         2    2        25    0
  END GEN-INFO
                                ***                      ***
                                ***   HYDR SECTION       ***
                                ***                      ***
  HYDR-PARM1
  < RANGE>  VC A1 A2 A3   V1 V2 V3 V4 V5      T1 T2 T3 T4 T5  *** F1 F2 F3 F4
```

```
F5
  ***  SIMPLE REACH WITH OUTFLOW=F(VOL) ,Q IS FOUND IN FTABLE COLUMN 4
***
    1   39      1  1  1    4                                       3
  101  139      1  1  1    4                                       3
  END HYDR-PARM1
  HYDR-PARM2
  < RANGE>  DSN FTBN<---LEN--><--DELTH-><--STCOR-><---KS---><--DB50-->  ***
    1   39    0   11    0.3000  6.000          0.0      0.5      1.00
  101  139    0   13    0.3000  6.000          0.0      0.5      1.00
  END HYDR-PARM2
  HYDR-INIT
  < RANGE><---VOL-->  Cat<-----COLIND(5F5.0)----->--5X-<----OUTDGT(5F5.0)---
***>
    1   39 0.00001         4.3
  101  139 0.000001        4.3
  END HYDR-INIT

***

  ADCALC-DATA
    # -  #     CRRAT       VOL  ****
    1  139
1.5
  END ADCALC-DATA

***

                              *** HTRCH FOR WATER TEMPERATURE
***
                              ***
***
  HT-BED-FLAGS
    # -  # BDFG TGFG TSTP ***
    1  139    0    1   55
  END HT-BED-FLAGS
  HEAT-PARM
    # -  #      ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP ***
                   M         M                                         ***
    1  139      150.        0.     1.000      9.37      10.0      1.00
  END HEAT-PARM
  HEAT-INIT
    RCHRES        TW    AIRTMP ***
    # -  #     deg C     deg C ***
    1   39      0.50       0.0
  101  139      4.50       0.0
  END HEAT-INIT
END RCHRES


                         ***                      ***
                         ***  FTABLES SECTION     ***
                         ***                      ***
FTABLES
<--DEPTH-><--AREA--><-VOLUME-><-------------F(VOL)***(NCOLS-
3)F10.0------------>
```

```
  FTABLE     11
  ROW  COL  ***
    5    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      0.25     0.015  0.00004     0.340
      0.50     0.015  0.00008     0.820
      0.75     0.255  0.00071     9.910
      1.00     0.255  0.00135    27.830
  END FTABLE11
  FTABLE     13
  ROW  COL  ***
    2    4
   <DEPTH>    <AREA>  <VOLUME>    <FLOW>  ***
      0.00      0.00  0.00000     0.000
      1.00     0.001  0.00015     100.00
  END FTABLE13
END FTABLES
***
EXT SOURCES
<-VOLUME-> <MEMBER> SSYSSGAP<--MULT-->TRAN <-TARGET VOLS> <-GRP> <-MEMBER->
***
<NAME>   # <NAME> # TEM STRG<-FACTOR->STRG <NAME>   #   #        <NAME> # #
***
                   ***** PERLND/IMPLND INPUTS  *******
***
***    Adjust WDM (source) file numbers, as appropriate
WDM1   155 PREC     METR              DIV  PERLND   1  57 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND   1  39 EXTNL  PREC
WDM1   155 PREC     METR              DIV  IMPLND 101 105 EXTNL  PREC
WDM1   141 AIRT     METR              SAME PERLND   1  57 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND   1  39 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME IMPLND 101 105 ATEMP  AIRTMP
WDM1   141 AIRT     METR              SAME RCHRES   1 139 EXTNL  GATMP
WDM1   181 WIND     METR              DIV  PERLND   1  57 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND   1  39 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  IMPLND 101 105 EXTNL  WINMOV
WDM1   181 WIND     METR              DIV  RCHRES   1 139 EXTNL  WIND
WDM1   131 SOLR     METR              DIV  PERLND   1  57 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND   1  39 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  IMPLND 101 105 EXTNL  SOLRAD
WDM1   131 SOLR     METR              DIV  RCHRES   1 139 EXTNL  SOLRAD
WDM1   164 PET      METR              DIV  PERLND   1  57 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND   1  39 EXTNL  PETINP
WDM1   164 PET      METR              DIV  IMPLND 101 105 EXTNL  PETINP
WDM1   121 DEWT     METR              SAME PERLND   1  57 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND   1  39 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME IMPLND 101 105 EXTNL  DTMPG
WDM1   121 DEWT     METR              SAME RCHRES   1 139 EXTNL  DEWTMP
WDM1   171 CLDC     METR              SAME PERLND   1  57 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND   1  39 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME IMPLND 101 105 EXTNL  CLOUD
WDM1   171 CLDC     METR              SAME RCHRES   1 139 EXTNL  CLOUD
END EXT SOURCES
***
***==============================================================================
```

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===
***  This is where the URFs are developed.
***  SURO is generally drained to storm sewers (RCHRESs) or to roads
(IMPLNDs).
***  IFWO and AGWO are generally drained to a groundwater reservoir (RCHRES)
***  for discharge to streams and collector
sewers.
***  Agricultural runoff (PERO) is drained directly to a stream or ditch.
***  Note use of 7 different MASS LINKS depending on connectivity of segments.
***  Note:  Area Factor is for # of hectares for each land parcel
***         that drains directly to a reach.  For parcels that drain to other
***         land segments the factor is a concentration (or dilution) factor.
***         Conversions from depth units (mm) to m3/ha are made in the mass
link
***         block, for land parcels draining to reaches.
SCHEMATIC
<-Source->                <--Area-->       <-Target->  <ML->  ***
<Name>   #                <-factor->       <Name>   #      #  ***
***-----------------------------------------------------------------
***URFs  1 to  3, LOW DENSITY RESIDENTIAL, C-Cstorm , all
Soils
*** Walk/Patio (0.1 ha) to lawn(7.0 hectares)=0.014
IMPLND 103                     0.014       PERLND   1      4
IMPLND 103                     0.014       PERLND   2      4
IMPLND 103                     0.014       PERLND   3      4
*** Lawns/open space (7 ha.) onto Roadway (0.9 ha)= 7.78 conc.
factor
PERLND   1                     7.778       IMPLND   1      2
PERLND   2                     7.778       IMPLND   2      2
PERLND   3                     7.778       IMPLND   3      2
*** Sloped Roof(1.3 hectares) to storm sewer RCHRES
IMPLND 101                     1.300       RCHRES   1      6
IMPLND 101                     1.300       RCHRES   2      6
IMPLND 101                     1.300       RCHRES   3      6
***Driveway (0.7 ha.) to roadway (0.9ha)= 0.778
IMPLND 104                     0.778       IMPLND   1      5
IMPLND 104                     0.778       IMPLND   2      5
IMPLND 104                     0.778       IMPLND   3      5
*** Subsurface (100%AGWO+100%IFWO)(7ha) to groundwater
RCHRES
PERLND   1                     7.000       RCHRES 101      3
PERLND   2                     7.000       RCHRES 102      3
PERLND   3                     7.000       RCHRES 103      3
*** Subsurface (33%IFWO)(7ha) to Surface RCHRES, i.e.,footer to storm sewer
PERLND   1      ***            7.000       RCHRES   1      8
PERLND   2      ***            7.000       RCHRES   2      8
PERLND   3      ***            7.000       RCHRES   3      8
*** Roadway (0.9 ha) into local storm sewer
IMPLND   1                     0.900       RCHRES   1      6
IMPLND   2                     0.900       RCHRES   2      6
IMPLND   3                     0.900       RCHRES   3      6
***-----------------------------------------------------------------
***URFs  4 to  6, LOW DENSITY RESIDENTIAL, D-Cstorm, all Soils
*** Walk/Patio (0.1 ha) to lawn (7.0 ha)
IMPLND 103                     0.014       PERLND   4      4
IMPLND 103                     0.014       PERLND   5      4
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IMPLND 103                     0.014       PERLND   6      4
*** Sloped Roof (1.3 ha) to lawn (7.0 ha)
IMPLND 101                     0.186       PERLND   4      4
IMPLND 101                     0.186       PERLND   5      4
IMPLND 101                     0.186       PERLND   6      4
*** Lawns/open space (7.0ha) onto Roadway (0.9 ha)
PERLND   4                     7.778       IMPLND   4      2
PERLND   5                     7.778       IMPLND   5      2
PERLND   6                     7.778       IMPLND   6      2
***Driveway (0.7ha)onto road (0.9ha)
IMPLND 104                     0.778       IMPLND   4      5
IMPLND 104                     0.778       IMPLND   5      5
IMPLND 104                     0.778       IMPLND   6      5
*** Subsurface (100%AGWO+100%IFWO)(7ha) to groundwater
RCHRES
PERLND   4                     7.000       RCHRES 104      3
PERLND   5                     7.000       RCHRES 105      3
PERLND   6                     7.000       RCHRES 106      3
*** Subsurface (33%IFWO)(7ha) to Surface RCHRES, i.e.,footer to storm sewer
PERLND   4           ***       7.000       RCHRES   4      8
PERLND   5           ***       7.000       RCHRES   5      8
PERLND   6           ***       7.000       RCHRES   6      8
*** Roadway (0.9ha) into local storm sewer
IMPLND   4                     0.900       RCHRES   4      6
IMPLND   5                     0.900       RCHRES   5      6
IMPLND   6                     0.900       RCHRES   6      6
***-------------------------------------------------------------
***URFs  7 to  9, LOW DENSITY RESIDENTIAL, D-Csan w/ditches, all
Soils
*** Walk/Patio (0.1ha)to lawn (6.43ha)
IMPLND 103                    0.0156       PERLND   7      4
IMPLND 103                    0.0156       PERLND   8      4
IMPLND 103                    0.0156       PERLND   9      4
*** Sloped Roof (1.3 ha) to lawn (6.43ha)
IMPLND 101                     0.202       PERLND   7      4
IMPLND 101                     0.202       PERLND   8      4
IMPLND 101                     0.202       PERLND   9      4
*** Lawns/open space (6.43 ha) into Ditch
(0.57ha)
PERLND   7                    11.281       PERLND  40      9
PERLND   8                    11.281       PERLND  41      9
PERLND   9                    11.281       PERLND  42      9
***Driveway (0.7ha) onto road (0.9ha)
IMPLND 104                     0.778       IMPLND   7      5
IMPLND 104                     0.778       IMPLND   8      5
IMPLND 104                     0.778       IMPLND   9      5
*** Subsurface (100%AGWO+67%IFWO) to GROUNDWATER RCHRES, footer to sanitary
PERLND   7                     6.430       RCHRES 107      8
PERLND   8                     6.430       RCHRES 108      8
PERLND   9                     6.430       RCHRES 109      8
*** Roadway (0.9ha) into local Ditch (0.57ha)
IMPLND   7                     1.579       PERLND  40      4
IMPLND   8                     1.579       PERLND  41      4
IMPLND   9                     1.579       PERLND  42      4
*** Ditch (0.57ha) to SURFACE RCHRES, Ditch to Storm Sewer
PERLND  40                     0.570       RCHRES   7      1
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PERLND  41                     0.570       RCHRES   8      1
PERLND  42                     0.570       RCHRES   9      1
*** Ditch Seepage to GROUNDWATER RCHRES
PERLND  40                     0.570       RCHRES 107      7
PERLND  41                     0.570       RCHRES 108      7
PERLND  42                     0.570       RCHRES 109      7
***-----------------------------------------------------------
***URFs 10 to 12, LOW DENSITY RESIDENTIAL, D-D w/ditches, all
Soils
*** Walk/Patio (0.1ha) to lawn (6.43 ha)
IMPLND 103                    0.0156       PERLND  10      4
IMPLND 103                    0.0156       PERLND  11      4
IMPLND 103                    0.0156       PERLND  12      4
*** Sloped Roof (1.3 ha) to lawn (6.43 ha)
IMPLND 101                     0.202       PERLND  10      4
IMPLND 101                     0.202       PERLND  11      4
IMPLND 101                     0.202       PERLND  12      4
*** Lawns/open space (6.43 ha) into Ditch
(0.57ha)
PERLND  10                    11.281       PERLND  43      9
PERLND  11                    11.281       PERLND  44      9
PERLND  12                    11.281       PERLND  45      9
***Driveway (0.7 ha) onto road (0.9ha)
IMPLND 104                     0.778       IMPLND  10      5
IMPLND 104                     0.778       IMPLND  11      5
IMPLND 104                     0.778       IMPLND  12      5
*** Subsurface (100%AGWO+IFWO) to groundwater RCHRES
PERLND  10                     6.430       RCHRES 110      7
PERLND  11                     6.430       RCHRES 111      7
PERLND  12                     6.430       RCHRES 112      7
*** Roadway (0.9 ha) into Ditch (0.57ha)
IMPLND  10                     1.579       PERLND  43      4
IMPLND  11                     1.579       PERLND  44      4
IMPLND  12                     1.579       PERLND  45      4
*** Ditch to SURFACE RCHRES, Ditch to Storm Sewer
PERLND  43                     0.570       RCHRES  10      1
PERLND  44                     0.570       RCHRES  11      1
PERLND  45                     0.570       RCHRES  12      1
*** Ditch Seepage to GROUNDWATER RCHRES
PERLND  43                     0.570       RCHRES 110      7
PERLND  44                     0.570       RCHRES 111      7
PERLND  45                     0.570       RCHRES 112      7
***-----------------------------------------------------------
***URFs 13 to 15, MEDIUM DENSITY RESIDENTIAL, C-Cstorm, all Soils
*** Walk/Patio (0.3ha) to lawn (5.0 ha)
IMPLND 103                     0.060       PERLND  13      4
IMPLND 103                     0.060       PERLND  14      4
IMPLND 103                     0.060       PERLND  15      4
*** Lawns/open space (5.0 ha) onto Roadway (1.3ha)
PERLND  13                     3.846       IMPLND  13      2
PERLND  14                     3.846       IMPLND  14      2
PERLND  15                     3.846       IMPLND  15      2
*** Sloped Roof (2.4ha) direct to storm sewer
IMPLND 101                     2.400       RCHRES  13      6
IMPLND 101                     2.400       RCHRES  14      6
IMPLND 101                     2.400       RCHRES  15      6
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***Driveway (1.0ha)onto road (1.3ha)
IMPLND 104                    0.769       IMPLND  13      5
IMPLND 104                    0.769       IMPLND  14      5
IMPLND 104                    0.769       IMPLND  15      5
*** Subsurface (100%AGWO+100%IFWO) to groundwater
RCHRES
PERLND  13                    5.000       RCHRES 113      3
PERLND  14                    5.000       RCHRES 114      3
PERLND  15                    5.000       RCHRES 115      3
*** Subsurface (33%IFWO) to SURFACE RCHRES, footer to Storm Sewer
PERLND  13          ***       5.000       RCHRES  13      8
PERLND  14          ***       5.000       RCHRES  14      8
PERLND  15          ***       5.000       RCHRES  15      8
*** Roadway into local storm sewer
IMPLND  13                    1.300       RCHRES  13      6
IMPLND  14                    1.300       RCHRES  14      6
IMPLND  15                    1.300       RCHRES  15      6
***-------------------------------------------------------------
***URFs 16 to 18, MEDIUM DENSITY RESIDENTIAL,D-Cstorm, all Soils
*** Walk/Patio (0.3ha) to lawn (5.0ha)
IMPLND 103                    0.060       PERLND  16      4
IMPLND 103                    0.060       PERLND  17      4
IMPLND 103                    0.060       PERLND  18      4
*** Sloped Roof (2.4ha) direct to lawn (5.0ha)
IMPLND 101                    0.480       PERLND  16      4
IMPLND 101                    0.480       PERLND  17      4
IMPLND 101                    0.480       PERLND  18      4
*** Lawns/open space (5.0ha) onto Roadway (1.3ha)
PERLND  16                    3.846       IMPLND  16      2
PERLND  17                    3.846       IMPLND  17      2
PERLND  18                    3.846       IMPLND  18      2
***Driveway (1.0ha) onto road (1.3ha)
IMPLND 104                    0.769       IMPLND  16      5
IMPLND 104                    0.769       IMPLND  17      5
IMPLND 104                    0.769       IMPLND  18      5
*** Subsurface (100%AGWO+100%IFWO) to groundwater RCHRES
PERLND  16                    5.000       RCHRES 116      3
PERLND  17                    5.000       RCHRES 117      3
PERLND  18                    5.000       RCHRES 118      3
*** Subsurface (33%IFWO) to Surface RCHRES, footer to storm sewer
PERLND  16         ***        5.000       RCHRES  16      8
PERLND  17         ***        5.000       RCHRES  17      8
PERLND  18         ***        5.000       RCHRES  18      8
*** Roadway into local storm sewer
IMPLND  16                    1.300       RCHRES  16      6
IMPLND  17                    1.300       RCHRES  17      6
IMPLND  18                    1.300       RCHRES  18      6
***-------------------------------------------------------------
***URFs 19 to 21, MEDIUM DENSITY RESIDENTIAL, D-Csan w/ditches, all
Soils
*** Walk/Patio (0.3ha) to lawn (4.43ha)
IMPLND 103                    0.068       PERLND  19      4
IMPLND 103                    0.068       PERLND  20      4
IMPLND 103                    0.068       PERLND  21      4
*** Sloped Roof (2.4ha) to lawn (4.43ha)
IMPLND 101                    0.542       PERLND  19      4
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IMPLND 101                     0.542       PERLND  20      4
IMPLND 101                     0.542       PERLND  21      4
*** Lawns/open space (4.43ha) into Ditch (0.57ha)
PERLND  19                     7.772       PERLND  46      9
PERLND  20                     7.772       PERLND  47      9
PERLND  21                     7.772       PERLND  48      9
***Driveway  (1.0ha) onto road (1.3ha)
IMPLND 104                     0.769       IMPLND  19      5
IMPLND 104                     0.769       IMPLND  20      5
IMPLND 104                     0.769       IMPLND  21      5
*** Subsurface (100%AGWO+67%IFWO) to GROUNDWATER RCHRES, footer to sanitary
PERLND  19                     4.430       RCHRES 119      8
PERLND  20                     4.430       RCHRES 120      8
PERLND  21                     4.430       RCHRES 121      8
*** Roadway (1.3ha) into local Ditch (0.57 ha)
IMPLND  19                     2.281       PERLND  46      4
IMPLND  20                     2.281       PERLND  47      4
IMPLND  21                     2.281       PERLND  48      4
*** Ditch to SURFACE RCHRES, Ditch to Storm Sewer
PERLND  46                     0.570       RCHRES  19      1
PERLND  47                     0.570       RCHRES  20      1
PERLND  48                     0.570       RCHRES  21      1
*** Ditch Seepage to GROUNDWATER RCHRES
PERLND  46                     0.570       RCHRES 119      7
PERLND  47                     0.570       RCHRES 120      7
PERLND  48                     0.570       RCHRES 121      7
***-------------------------------------------------------------
***URFs 22 to 24, MEDIUM DENSITY RESIDENTIAL, D-Dw/ditches , all
Soils
*** Walk/Patio (0.3ha) to lawn (4.43ha)
IMPLND 103                     0.068       PERLND  22      4
IMPLND 103                     0.068       PERLND  23      4
IMPLND 103                     0.068       PERLND  24      4
*** Sloped Roof (2.4ha) to lawn (4.43ha)
IMPLND 101                     0.542       PERLND  22      4
IMPLND 101                     0.542       PERLND  23      4
IMPLND 101                     0.542       PERLND  24      4
*** Lawns/open space (4.43ha) into Ditch (0.57ha)
PERLND  22                     7.772       PERLND  49      9
PERLND  23                     7.772       PERLND  50      9
PERLND  24                     7.772       PERLND  51      9
***Driveway (1.0ha) onto road (1.3ha)
IMPLND 104                     0.769       IMPLND  22      5
IMPLND 104                     0.769       IMPLND  23      5
IMPLND 104                     0.769       IMPLND  24      5
*** Subsurface (100%AGWO+IFWO) to groundwater RCHRES
PERLND  22                     4.430       RCHRES 122      7
PERLND  23                     4.430       RCHRES 123      7
PERLND  24                     4.430       RCHRES 124      7
*** Roadway (1.3ha) into Ditch (0.57ha)
IMPLND  22                     2.281       PERLND  49      4
IMPLND  23                     2.281       PERLND  50      4
IMPLND  24                     2.281       PERLND  51      4
*** Ditch to SURFACE RCHRES, Ditch to Storm Sewer
PERLND  49                     0.570       RCHRES  22      1
PERLND  50                     0.570       RCHRES  23      1
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PERLND  51                      0.570       RCHRES  24      1
*** Ditch Seepage to GROUNDWATER RCHRES
PERLND  49                      0.570       RCHRES 122      7
PERLND  50                      0.570       RCHRES 123      7
PERLND  51                      0.570       RCHRES 124      7
***-----------------------------------------------------------
***URFs 25 to 27, HIGH DENSITY RESIDENTIAL, C-Cstorm , all
Soils
*** Walk/Patio (0.5ha) to lawn (3.5ha)
IMPLND 103                      0.143       PERLND  25      4
IMPLND 103                      0.143       PERLND  26      4
IMPLND 103                      0.143       PERLND  27      4
*** Lawns/open space (3.5ha) onto Roadway (1.7ha)
PERLND  25                      2.059       IMPLND  25      2
PERLND  26                      2.059       IMPLND  26      2
PERLND  27                      2.059       IMPLND  27      2
*** Sloped Roof (3.2ha) direct to storm sewer
IMPLND 101                      3.200       RCHRES  25      6
IMPLND 101                      3.200       RCHRES  26      6
IMPLND 101                      3.200       RCHRES  27      6
***Driveway (1.1ha) onto road (1.7ha)
IMPLND 104                      0.647       IMPLND  25      5
IMPLND 104                      0.647       IMPLND  26      5
IMPLND 104                      0.647       IMPLND  27      5
*** Subsurface (100%AGWO+100%IFWO) to groundwater
RCHRES
PERLND  25                      3.500       RCHRES 125      3
PERLND  26                      3.500       RCHRES 126      3
PERLND  27                      3.500       RCHRES 127      3
*** Subsurface (33%IFWO) to Surface RCHRES, footer to storm sewer
PERLND  25          ***         3.500       RCHRES  25      8
PERLND  26          ***         3.500       RCHRES  26      8
PERLND  27          ***         3.500       RCHRES  27      8
*** Roadway into local storm sewer
IMPLND  25                      1.700       RCHRES  25      6
IMPLND  26                      1.700       RCHRES  26      6
IMPLND  27                      1.700       RCHRES  27      6
***-----------------------------------------------------------
***URFs 28 to 30, HIGH DENSITY RESIDENTIAL, D-Cstorm, all Soils
*** Walk/Patio (0.5ha) to lawn (3.5ha)
IMPLND 103                      0.143       PERLND  28      4
IMPLND 103                      0.143       PERLND  29      4
IMPLND 103                      0.143       PERLND  30      4
*** Sloped Roof (3.2ha) to lawn PERLND (3.5ha)
IMPLND 101                      0.914       PERLND  28      4
IMPLND 101                      0.914       PERLND  29      4
IMPLND 101                      0.914       PERLND  30      4
*** Lawns/open space (3.5ha) onto Roadway (1.7ha)
PERLND  28                      2.059       IMPLND  28      2
PERLND  29                      2.059       IMPLND  29      2
PERLND  30                      2.059       IMPLND  30      2
***Driveway (1.1ha) onto road (1.7ha)
IMPLND 104                      0.647       IMPLND  28      5
IMPLND 104                      0.647       IMPLND  29      5
IMPLND 104                      0.647       IMPLND  30      5
*** Subsurface (100%AGWO+100%IFWO) to groundwater RCHRES
```

```
PERLND  28                    3.500       RCHRES 128      3
PERLND  29                    3.500       RCHRES 129      3
PERLND  30                    3.500       RCHRES 130      3
*** Subsurface (33%IFWO) to surface RCHRES, footer to storm sewer
PERLND  28         ***        3.500       RCHRES  28      8
PERLND  29         ***        3.500       RCHRES  29      8
PERLND  30         ***        3.500       RCHRES  30      8
*** Roadway into local storm sewer
IMPLND  28                    1.700       RCHRES  28      6
IMPLND  29                    1.700       RCHRES  29      6
IMPLND  30                    1.700       RCHRES  30      6
***-----------------------------------------------------------------
***URFs 31 to 33, HIGH DENSITY RESIDENTIAL, D-Csanitary w/ditches, all
Soils
*** Walk/Patio (0.5ha) to lawn (2.93ha)
IMPLND 103                    0.171       PERLND  31      4
IMPLND 103                    0.171       PERLND  32      4
IMPLND 103                    0.171       PERLND  33      4
*** Sloped Roof (3.2ha) to lawn (2.93ha)
IMPLND 101                    1.092       PERLND  31      4
IMPLND 101                    1.092       PERLND  32      4
IMPLND 101                    1.092       PERLND  33      4
*** Lawns/open space (2.93ha) into Ditch (0.57ha)
PERLND  31                    5.140       PERLND  52      9
PERLND  32                    5.140       PERLND  53      9
PERLND  33                    5.140       PERLND  54      9
***Driveway (1.1ha) onto road (1.7ha)
IMPLND 104                    0.647       IMPLND  31      5
IMPLND 104                    0.647       IMPLND  32      5
IMPLND 104                    0.647       IMPLND  33      5
*** Subsurface (100%AGWO+67%IFWO) to GROUNDWATER RCHRES, footer to sanitary
PERLND  31                    2.930       RCHRES 131      8
PERLND  32                    2.930       RCHRES 132      8
PERLND  33                    2.930       RCHRES 133      8
*** Roadway (1.7ha) into local Ditch (0.57ha)
IMPLND  31                    2.982       PERLND  52      4
IMPLND  32                    2.982       PERLND  53      4
IMPLND  33                    2.982       PERLND  54      4
*** Ditch to SURFACE RCHRES, Ditch to Storm Sewer
PERLND  52                    0.570       RCHRES  31      1
PERLND  53                    0.570       RCHRES  32      1
PERLND  54                    0.570       RCHRES  33      1
*** Ditch Seepage to GROUNDWATER RCHRES
PERLND  52                    0.570       RCHRES 131      7
PERLND  53                    0.570       RCHRES 132      7
PERLND  54                    0.570       RCHRES 133      7
***-----------------------------------------------------------------
***URFs 34 to 36, HIGH DENSITY RESIDENTIAL, D-Dw/ditches, all
Soils
*** Walk/Patio (0.5ha) to lawn (2.93ha)
IMPLND 103                    0.171       PERLND  34      4
IMPLND 103                    0.171       PERLND  35      4
IMPLND 103                    0.171       PERLND  36      4
*** Sloped Roof (3.2ha) to lawn (2.93ha)
IMPLND 101                    1.092       PERLND  34      4
IMPLND 101                    1.092       PERLND  35      4
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```
IMPLND 101                     1.092       PERLND  36       4
*** Lawns/open space (2.93ha) into Ditch (0.57ha)
PERLND  34                     5.140       PERLND  55       9
PERLND  35                     5.140       PERLND  56       9
PERLND  36                     5.140       PERLND  57       9
***Driveway onto road
IMPLND 104                     0.647       IMPLND  34       5
IMPLND 104                     0.647       IMPLND  35       5
IMPLND 104                     0.647       IMPLND  36       5
*** Subsurface (100%AGWO+IFWO) to groundwater RCHRES
PERLND  34                     2.930       RCHRES 134       7
PERLND  35                     2.930       RCHRES 135       7
PERLND  36                     2.930       RCHRES 136       7
*** Roadway (1.7ha) into Ditch (0.57ha)
IMPLND  34                     2.982       PERLND  55       4
IMPLND  35                     2.982       PERLND  56       4
IMPLND  36                     2.982       PERLND  57       4
*** Ditch to SURFACE RCHRES, Ditch to Storm Sewer
PERLND  55                     0.570       RCHRES  34       1
PERLND  56                     0.570       RCHRES  35       1
PERLND  57                     0.570       RCHRES  36       1
*** Ditch Seepage to GROUNDWATER RCHRES
PERLND  55                     0.570       RCHRES 134       7
PERLND  56                     0.570       RCHRES 135       7
PERLND  57                     0.570       RCHRES 136       7
***------------------------------------------------------------
***URFs 37 to 39, HIGH RISE RESIDENTIAL, C-Cstorm , all
Soils
*** Lawns/open space (5.0ha) onto Roadway (0.9ha)
PERLND  37                     5.556       IMPLND  37       2
PERLND  38                     5.556       IMPLND  38       2
PERLND  39                     5.556       IMPLND  39       2
*** Flat Roof (0.9ha) direct to storm sewer
IMPLND 102                     0.900       RCHRES  37       6
IMPLND 102                     0.900       RCHRES  38       6
IMPLND 102                     0.900       RCHRES  39       6
***Driveway (0.5ha) onto road (0.9ha)
IMPLND 104                     0.556       IMPLND  37       5
IMPLND 104                     0.556       IMPLND  38       5
IMPLND 104                     0.556       IMPLND  39       5
***Parking (2.7ha) onto road (0.9ha)
IMPLND 105                     3.000       IMPLND  37       5
IMPLND 105                     3.000       IMPLND  38       5
IMPLND 105                     3.000       IMPLND  39       5
*** Subsurface (100%AGWO+100%IFWO) to groundwater
RCHRES,
PERLND  37                     5.000       RCHRES 137       3
PERLND  38                     5.000       RCHRES 138       3
PERLND  39                     5.000       RCHRES 139       3
*** Subsurface (33%IFWO) to Surface RCHRES, footer to storm sewer
PERLND  37           ***       5.000       RCHRES  37       8
PERLND  38           ***       5.000       RCHRES  38       8
PERLND  39           ***       5.000       RCHRES  39       8
*** Roadway into local storm sewer
IMPLND  37                     0.900       RCHRES  37       6
IMPLND  38                     0.900       RCHRES  38       6
```

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IMPLND  39                    0.900       RCHRES  39      6
***----------------------------------------------------------------
END SCHEMATIC

***===============================================================================
===

MASS-LINK

****  MASS LINKS are configured as follows:
****          1 = PERLND SURFACE RUNOFF to a local RCHRES (agriculture to a
agr. drain)
****          2 = PERLND SURFACE RUNOFF to an IMPLND (lawns etc. to local
roadway)
****          3 = PERLND subsurface flow (AGWO only) to a RCHRES (connected
footer)
****Note: In this case IFWO is assumed lost from the system, to the sanitary
sewer
****          4 = IMPLND RUNOFF to a PERLND (disconnected roof or walk/patio
to lawn)
****          5 = IMPLND RUNOFF TO AN IMPLND (driveway to roadway)
****          6 = IMPLND RUNOFF to a RCHRES (connected roof, roadway to storm
sewer)
****          7 = PERLND subsurface flow (AGWO+IFWO) to RCHRES (disconnected
footer)
****          8 = PERLND subsurface flow (33%IFWO) to RCHRES (footer to storm
sewer)
****          9 = PERLND surface runoff to a Ditch
(PERLND)
****    Note:  Multiplication Factor converts mm to Mm3 for 1 hectare
areas
****           for flows into RCHRES. For flows from one parcel of land to
another
***            no factor is used, concentration/dilution are treated in
SCHEMATIC.

  MASS-LINK        1
*** PERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    1
  MASS-LINK        2
*** PERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    2
  MASS-LINK        3
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (footers connected to
sani)
```

```
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    3
  MASS-LINK        4
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to PERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO        1.00         PERLND         EXTNL  SURLI
  END MASS-LINK    4

  MASS-LINK        5
*** IMPERVIOUS SEGMENT SURFACE RUNOFF as LATERAL INFLOW to IMPERVIOUS SEGMENT
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      1.00           IMPLND         EXTNL  SURLI
  END MASS-LINK    5

  MASS-LINK        6
*** IMPERVIOUS SEGMENT SURFACE RUNOFF to RCHRES
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
IMPLND     IWATER SURO      0.00001        RCHRES         INFLOW IVOL
IMPLND     IWTGAS SOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    6

  MASS-LINK        7
*** PERVIOUS SEGMENT SUBSURFACE RUNOFF to RCHRES (footers
disconnected)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWATER IFWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWTGAS IOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
  END MASS-LINK    7

  MASS-LINK        8
*** PERVIOUS SEGMENT SUBSURFACE IFWO RUNOFF to RCHRES (footers to Storm
Sewer)
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
```

```
***
PERLND     PWATER AGWO      0.00001        RCHRES         INFLOW IVOL
PERLND     PWATER IFWO      0.0000067      RCHRES         INFLOW IVOL
PERLND     PWTGAS AOHT        1.0          RCHRES         INFLOW IHEAT
PERLND     PWTGAS IOHT        0.67         RCHRES         INFLOW IHEAT
  END MASS-LINK    8

  MASS-LINK        9
*** PERVIOUS SEGMENT SURFACE RUNOFF to DITCH
<Srce>     <-Grp> <-Member-><--Mult-->     <Targ>         <-Grp> <-Member->
***
<Name>     <Name> <Name> # #<-factor->     <Name>         <Name> <Name> # #
***
PERLND     PWATER SURO         1.0         PERLND         EXTNL  SURLI
  END MASS-LINK    9
END MASS-LINK

***==============================================================================
===
***
EXT TARGETS
<-volume-> <-grp> <-member-><--mult-->Tran <-volume-> <member> tsys aggr Amd
***
<name>   #        <name> # #<-factor->strg <name>   # <name>    tem strg
strg***
***   RCHRES OUTPUT TO THE WDM  Flow rate is factored to yield m3/interval***
***   LOW DENSITY
RESIDENTIAL
RCHRES   1 HYDR   ROVOL      1000000.      WDM2  1013 FLOW     METR      REPL
RCHRES 101 HYDR   ROVOL      1000000.      WDM2  1513 FLOW     METR      REPL
RCHRES   2 HYDR   ROVOL      1000000.      WDM2  1014 FLOW     METR      REPL
RCHRES 102 HYDR   ROVOL      1000000.      WDM2  1514 FLOW     METR      REPL
RCHRES   3 HYDR   ROVOL      1000000.      WDM2  1015 FLOW     METR      REPL
RCHRES 103 HYDR   ROVOL      1000000.      WDM2  1515 FLOW     METR      REPL
RCHRES   4 HYDR   ROVOL      1000000.      WDM2  1016 FLOW     METR      REPL
RCHRES 104 HYDR   ROVOL      1000000.      WDM2  1516 FLOW     METR      REPL
RCHRES   5 HYDR   ROVOL      1000000.      WDM2  1017 FLOW     METR      REPL
RCHRES 105 HYDR   ROVOL      1000000.      WDM2  1517 FLOW     METR      REPL
RCHRES   6 HYDR   ROVOL      1000000.      WDM2  1018 FLOW     METR      REPL
RCHRES 106 HYDR   ROVOL      1000000.      WDM2  1518 FLOW     METR      REPL
RCHRES   7 HYDR   ROVOL      1000000.      WDM2  1019 FLOW     METR      REPL
RCHRES 107 HYDR   ROVOL      1000000.      WDM2  1519 FLOW     METR      REPL
RCHRES   8 HYDR   ROVOL      1000000.      WDM2  1020 FLOW     METR      REPL
RCHRES 108 HYDR   ROVOL      1000000.      WDM2  1520 FLOW     METR      REPL
RCHRES   9 HYDR   ROVOL      1000000.      WDM2  1021 FLOW     METR      REPL
RCHRES 109 HYDR   ROVOL      1000000.      WDM2  1521 FLOW     METR      REPL
RCHRES  10 HYDR   ROVOL      1000000.      WDM2  1022 FLOW     METR      REPL
RCHRES 110 HYDR   ROVOL      1000000.      WDM2  1522 FLOW     METR      REPL
RCHRES  11 HYDR   ROVOL      1000000.      WDM2  1023 FLOW     METR      REPL
RCHRES 111 HYDR   ROVOL      1000000.      WDM2  1523 FLOW     METR      REPL
RCHRES  12 HYDR   ROVOL      1000000.      WDM2  1024 FLOW     METR      REPL
RCHRES 112 HYDR   ROVOL      1000000.      WDM2  1524 FLOW     METR      REPL
***   MEDIUM DENSITY RESIDENTIAL
RCHRES  13 HYDR   ROVOL      1000000.      WDM2  1113 FLOW     METR      REPL
RCHRES 113 HYDR   ROVOL      1000000.      WDM2  1613 FLOW     METR      REPL
RCHRES  14 HYDR   ROVOL      1000000.      WDM2  1114 FLOW     METR      REPL
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RCHRES 114 HYDR   ROVOL      1000000.      WDM2  1614 FLOW     METR      REPL
RCHRES  15 HYDR   ROVOL      1000000.      WDM2  1115 FLOW     METR      REPL
RCHRES 115 HYDR   ROVOL      1000000.      WDM2  1615 FLOW     METR      REPL
RCHRES  16 HYDR   ROVOL      1000000.      WDM2  1116 FLOW     METR      REPL
RCHRES 116 HYDR   ROVOL      1000000.      WDM2  1616 FLOW     METR      REPL
RCHRES  17 HYDR   ROVOL      1000000.      WDM2  1117 FLOW     METR      REPL
RCHRES 117 HYDR   ROVOL      1000000.      WDM2  1617 FLOW     METR      REPL
RCHRES  18 HYDR   ROVOL      1000000.      WDM2  1118 FLOW     METR      REPL
RCHRES 118 HYDR   ROVOL      1000000.      WDM2  1618 FLOW     METR      REPL
RCHRES  19 HYDR   ROVOL      1000000.      WDM2  1119 FLOW     METR      REPL
RCHRES 119 HYDR   ROVOL      1000000.      WDM2  1619 FLOW     METR      REPL
RCHRES  20 HYDR   ROVOL      1000000.      WDM2  1120 FLOW     METR      REPL
RCHRES 120 HYDR   ROVOL      1000000.      WDM2  1620 FLOW     METR      REPL
RCHRES  21 HYDR   ROVOL      1000000.      WDM2  1121 FLOW     METR      REPL
RCHRES 121 HYDR   ROVOL      1000000.      WDM2  1621 FLOW     METR      REPL
RCHRES  22 HYDR   ROVOL      1000000.      WDM2  1122 FLOW     METR      REPL
RCHRES 122 HYDR   ROVOL      1000000.      WDM2  1622 FLOW     METR      REPL
RCHRES  23 HYDR   ROVOL      1000000.      WDM2  1123 FLOW     METR      REPL
RCHRES 123 HYDR   ROVOL      1000000.      WDM2  1623 FLOW     METR      REPL
RCHRES  24 HYDR   ROVOL      1000000.      WDM2  1124 FLOW     METR      REPL
RCHRES 124 HYDR   ROVOL      1000000.      WDM2  1624 FLOW     METR      REPL
***     HIGH DENSITY RESIDENTIAL
RCHRES  25 HYDR   ROVOL      1000000.      WDM2  1213 FLOW     METR      REPL
RCHRES 125 HYDR   ROVOL      1000000.      WDM2  1713 FLOW     METR      REPL
RCHRES  26 HYDR   ROVOL      1000000.      WDM2  1214 FLOW     METR      REPL
RCHRES 126 HYDR   ROVOL      1000000.      WDM2  1714 FLOW     METR      REPL
RCHRES  27 HYDR   ROVOL      1000000.      WDM2  1215 FLOW     METR      REPL
RCHRES 127 HYDR   ROVOL      1000000.      WDM2  1715 FLOW     METR      REPL
RCHRES  28 HYDR   ROVOL      1000000.      WDM2  1216 FLOW     METR      REPL
RCHRES 128 HYDR   ROVOL      1000000.      WDM2  1716 FLOW     METR      REPL
RCHRES  29 HYDR   ROVOL      1000000.      WDM2  1217 FLOW     METR      REPL
RCHRES 129 HYDR   ROVOL      1000000.      WDM2  1717 FLOW     METR      REPL
RCHRES  30 HYDR   ROVOL      1000000.      WDM2  1218 FLOW     METR      REPL
RCHRES 130 HYDR   ROVOL      1000000.      WDM2  1718 FLOW     METR      REPL
RCHRES  31 HYDR   ROVOL      1000000.      WDM2  1219 FLOW     METR      REPL
RCHRES 131 HYDR   ROVOL      1000000.      WDM2  1719 FLOW     METR      REPL
RCHRES  32 HYDR   ROVOL      1000000.      WDM2  1220 FLOW     METR      REPL
RCHRES 132 HYDR   ROVOL      1000000.      WDM2  1720 FLOW     METR      REPL
RCHRES  33 HYDR   ROVOL      1000000.      WDM2  1221 FLOW     METR      REPL
RCHRES 133 HYDR   ROVOL      1000000.      WDM2  1721 FLOW     METR      REPL
RCHRES  34 HYDR   ROVOL      1000000.      WDM2  1222 FLOW     METR      REPL
RCHRES 134 HYDR   ROVOL      1000000.      WDM2  1722 FLOW     METR      REPL
RCHRES  35 HYDR   ROVOL      1000000.      WDM2  1223 FLOW     METR      REPL
RCHRES 135 HYDR   ROVOL      1000000.      WDM2  1723 FLOW     METR      REPL
RCHRES  36 HYDR   ROVOL      1000000.      WDM2  1224 FLOW     METR      REPL
RCHRES 136 HYDR   ROVOL      1000000.      WDM2  1724 FLOW     METR      REPL
***     HIGH RISE RESIDENTIAL
RCHRES  37 HYDR   ROVOL      1000000.      WDM2  1304 FLOW     METR      REPL
RCHRES 137 HYDR   ROVOL      1000000.      WDM2  1804 FLOW     METR      REPL
RCHRES  38 HYDR   ROVOL      1000000.      WDM2  1305 FLOW     METR      REPL
RCHRES 138 HYDR   ROVOL      1000000.      WDM2  1805 FLOW     METR      REPL
RCHRES  39 HYDR   ROVOL      1000000.      WDM2  1306 FLOW     METR      REPL
RCHRES 139 HYDR   ROVOL      1000000.      WDM2  1806 FLOW     METR      REPL
***   LOW DENSITY
RESIDENTIAL
RCHRES   1 HTRCH  ROHEAT                   WDM3  1063 HEAT     METR      REPL
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RCHRES 101 HTRCH  ROHEAT                     WDM3  1563 HEAT     METR      REPL
RCHRES   2 HTRCH  ROHEAT                     WDM3  1064 HEAT     METR      REPL
RCHRES 102 HTRCH  ROHEAT                     WDM3  1564 HEAT     METR      REPL
RCHRES   3 HTRCH  ROHEAT                     WDM3  1065 HEAT     METR      REPL
RCHRES 103 HTRCH  ROHEAT                     WDM3  1565 HEAT     METR      REPL
RCHRES   4 HTRCH  ROHEAT                     WDM3  1066 HEAT     METR      REPL
RCHRES 104 HTRCH  ROHEAT                     WDM3  1566 HEAT     METR      REPL
RCHRES   5 HTRCH  ROHEAT                     WDM3  1067 HEAT     METR      REPL
RCHRES 105 HTRCH  ROHEAT                     WDM3  1567 HEAT     METR      REPL
RCHRES   6 HTRCH  ROHEAT                     WDM3  1068 HEAT     METR      REPL
RCHRES 106 HTRCH  ROHEAT                     WDM3  1568 HEAT     METR      REPL
RCHRES   7 HTRCH  ROHEAT                     WDM3  1069 HEAT     METR      REPL
RCHRES 107 HTRCH  ROHEAT                     WDM3  1569 HEAT     METR      REPL
RCHRES   8 HTRCH  ROHEAT                     WDM3  1070 HEAT     METR      REPL
RCHRES 108 HTRCH  ROHEAT                     WDM3  1570 HEAT     METR      REPL
RCHRES   9 HTRCH  ROHEAT                     WDM3  1071 HEAT     METR      REPL
RCHRES 109 HTRCH  ROHEAT                     WDM3  1571 HEAT     METR      REPL
RCHRES  10 HTRCH  ROHEAT                     WDM3  1072 HEAT     METR      REPL
RCHRES 110 HTRCH  ROHEAT                     WDM3  1572 HEAT     METR      REPL
RCHRES  11 HTRCH  ROHEAT                     WDM3  1073 HEAT     METR      REPL
RCHRES 111 HTRCH  ROHEAT                     WDM3  1573 HEAT     METR      REPL
RCHRES  12 HTRCH  ROHEAT                     WDM3  1074 HEAT     METR      REPL
RCHRES 112 HTRCH  ROHEAT                     WDM3  1574 HEAT     METR      REPL
***   MEDIUM DENSITY RESIDENTIAL
RCHRES  13 HTRCH  ROHEAT                     WDM3  1163 HEAT     METR      REPL
RCHRES 113 HTRCH  ROHEAT                     WDM3  1663 HEAT     METR      REPL
RCHRES  14 HTRCH  ROHEAT                     WDM3  1164 HEAT     METR      REPL
RCHRES 114 HTRCH  ROHEAT                     WDM3  1664 HEAT     METR      REPL
RCHRES  15 HTRCH  ROHEAT                     WDM3  1165 HEAT     METR      REPL
RCHRES 115 HTRCH  ROHEAT                     WDM3  1665 HEAT     METR      REPL
RCHRES  16 HTRCH  ROHEAT                     WDM3  1166 HEAT     METR      REPL
RCHRES 116 HTRCH  ROHEAT                     WDM3  1666 HEAT     METR      REPL
RCHRES  17 HTRCH  ROHEAT                     WDM3  1167 HEAT     METR      REPL
RCHRES 117 HTRCH  ROHEAT                     WDM3  1667 HEAT     METR      REPL
RCHRES  18 HTRCH  ROHEAT                     WDM3  1168 HEAT     METR      REPL
RCHRES 118 HTRCH  ROHEAT                     WDM3  1668 HEAT     METR      REPL
RCHRES  19 HTRCH  ROHEAT                     WDM3  1169 HEAT     METR      REPL
RCHRES 119 HTRCH  ROHEAT                     WDM3  1669 HEAT     METR      REPL
RCHRES  20 HTRCH  ROHEAT                     WDM3  1170 HEAT     METR      REPL
RCHRES 120 HTRCH  ROHEAT                     WDM3  1670 HEAT     METR      REPL
RCHRES  21 HTRCH  ROHEAT                     WDM3  1171 HEAT     METR      REPL
RCHRES 121 HTRCH  ROHEAT                     WDM3  1671 HEAT     METR      REPL
RCHRES  22 HTRCH  ROHEAT                     WDM3  1172 HEAT     METR      REPL
RCHRES 122 HTRCH  ROHEAT                     WDM3  1672 HEAT     METR      REPL
RCHRES  23 HTRCH  ROHEAT                     WDM3  1173 HEAT     METR      REPL
RCHRES 123 HTRCH  ROHEAT                     WDM3  1673 HEAT     METR      REPL
RCHRES  24 HTRCH  ROHEAT                     WDM3  1174 HEAT     METR      REPL
RCHRES 124 HTRCH  ROHEAT                     WDM3  1674 HEAT     METR      REPL
***     HIGH DENSITY RESIDENTIAL
RCHRES  25 HTRCH  ROHEAT                     WDM3  1263 HEAT     METR      REPL
RCHRES 125 HTRCH  ROHEAT                     WDM3  1763 HEAT     METR      REPL
RCHRES  26 HTRCH  ROHEAT                     WDM3  1264 HEAT     METR      REPL
RCHRES 126 HTRCH  ROHEAT                     WDM3  1764 HEAT     METR      REPL
RCHRES  27 HTRCH  ROHEAT                     WDM3  1265 HEAT     METR      REPL
RCHRES 127 HTRCH  ROHEAT                     WDM3  1765 HEAT     METR      REPL
RCHRES  28 HTRCH  ROHEAT                     WDM3  1266 HEAT     METR      REPL
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RCHRES 128 HTRCH  ROHEAT                    WDM3  1766 HEAT     METR      REPL
RCHRES  29 HTRCH  ROHEAT                    WDM3  1267 HEAT     METR      REPL
RCHRES 129 HTRCH  ROHEAT                    WDM3  1767 HEAT     METR      REPL
RCHRES  30 HTRCH  ROHEAT                    WDM3  1268 HEAT     METR      REPL
RCHRES 130 HTRCH  ROHEAT                    WDM3  1768 HEAT     METR      REPL
RCHRES  31 HTRCH  ROHEAT                    WDM3  1269 HEAT     METR      REPL
RCHRES 131 HTRCH  ROHEAT                    WDM3  1769 HEAT     METR      REPL
RCHRES  32 HTRCH  ROHEAT                    WDM3  1270 HEAT     METR      REPL
RCHRES 132 HTRCH  ROHEAT                    WDM3  1770 HEAT     METR      REPL
RCHRES  33 HTRCH  ROHEAT                    WDM3  1271 HEAT     METR      REPL
RCHRES 133 HTRCH  ROHEAT                    WDM3  1771 HEAT     METR      REPL
RCHRES  34 HTRCH  ROHEAT                    WDM3  1272 HEAT     METR      REPL
RCHRES 134 HTRCH  ROHEAT                    WDM3  1772 HEAT     METR      REPL
RCHRES  35 HTRCH  ROHEAT                    WDM3  1273 HEAT     METR      REPL
RCHRES 135 HTRCH  ROHEAT                    WDM3  1773 HEAT     METR      REPL
RCHRES  36 HTRCH  ROHEAT                    WDM3  1274 HEAT     METR      REPL
RCHRES 136 HTRCH  ROHEAT                    WDM3  1774 HEAT     METR      REPL
***     HIGH RISE RESIDENTIAL
RCHRES  37 HTRCH  ROHEAT                    WDM3  1354 HEAT     METR      REPL
RCHRES 137 HTRCH  ROHEAT                    WDM3  1854 HEAT     METR      REPL
RCHRES  38 HTRCH  ROHEAT                    WDM3  1355 HEAT     METR      REPL
RCHRES 138 HTRCH  ROHEAT                    WDM3  1855 HEAT     METR      REPL
RCHRES  39 HTRCH  ROHEAT                    WDM3  1356 HEAT     METR      REPL
RCHRES 139 HTRCH  ROHEAT                    WDM3  1856 HEAT     METR      REPL
END EXT TARGETS
***
END RUN
END OF DATA
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Post Development URF Water Balance

Annual Water Balance
Volume for single Ha (m3)

Paramter (m3)	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc
SUPY	6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2
RO	1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7
ET	3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6
AGWO	1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8
IGWI	241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1

Paramter (m3)	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc
SUPY	6352.2	6457.2	6457.2	6457.2	6458.4	6458.4	6458.4	6447.2	6447.2	6447.2	6458.8	6458.8
RO	2287.4	546.2	644.1	1084.8	159.3	214.0	574.6	4063.4	4297.6	4546.5	35.8	194.5
ET	2887.4	3367.2	3449.3	3380.3	4208.8	4220.9	4129.9	1423.6	1414.4	1389.4	3335.7	3458.5
AGWO	1099.0	1978.1	1856.1	1603.9	1745.8	1674.6	1471.2	729.6	568.4	404.6	2325.7	2149.1
IGWI	170.8	319.0	298.9	256.3	279.5	268.0	233.8	117.3	91.6	65.2	375.9	346.6

Paramter (m3)	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
SUPY	6458.8	6458.8	6458.8	6458.8	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
RO	742.5	35.9	194.9	747.6	3964.3	3989.8	4097.2	3461.1	3499.4	3660.3
ET	3368.1	3335.7	3458.5	3367.8	1965.8	1979.4	1954.3	2212.9	2233.4	2196.0
AGWO	1857.5	2325.7	2148.8	1853.7	432.0	402.7	338.8	648.0	604.1	508.2
IGWI	297.7	375.9	346.5	297.1	68.4	63.4	52.6	102.5	95.2	78.9

Paramter (m3)	SUPY	RO	ET	AGWO	IGWI
RLD5ab	6342.284	1630.028	3002.472	1524.401	241.2787
RLD5bc	6342.284	1716.935	3048.665	1426.467	224.731
RLD5cd	6,342.28	2,037.11	2,991.76	1,222.86	190.12
RMD5ab	6370.827	2702.913	2408.885	1116.222	176.8102
RMD5bc	6370.827	2779.836	2436.763	1040.715	163.9625
RMD5cd	6370.827	3030.502	2387.963	883.9055	137.545
RHD5ab	6392.235	3505.031	1963.044	812.6406	128.8248
RHD5bc	6392.235	3579.668	1975.139	751.4084	118.371
RHD5cd	6392.235	3781.583	1931.634	627.0151	97.74588
CSMbc	6436.398	4893.223	1454.345	80.5434	12.68667
EISab	6352.242	1907.249	2921.204	1361.249	215.3897
EISbc	6352.242	1976.745	2965.584	1276.793	201.1464
EIScd	6352.242	2287.42	2887.432	1098.978	170.7773
OPLab	6457.192	546.2266	3367.234	1978.146	318.951
OPLbc	6457.192	644.0884	3449.261	1856.069	298.8945
OPLcd	6457.192	1084.78	3380.293	1603.907	256.2825
OVLab	6458.365	159.2779	4208.805	1745.808	279.5265
OVLbc	6458.365	214.0201	4220.894	1674.563	268.0482
OVLcd	6458.365	574.6243	4129.941	1471.196	233.7587
THCab	6447.154	4063.399	1423.619	729.5554	117.3458
THCbc	6447.154	4297.629	1414.423	568.4193	91.63584
THCcd	6447.154	4546.538	1389.373	404.6265	65.24177
AGT0ab	6458.802	35.84667	3335.703	2325.662	375.8617
AGT0bc	6458.802	194.4667	3458.492	2149.105	346.5633
AGT0cd	6458.802	742.5483	3368.133	1857.482	297.6767
AGPab	6458.802	35.855	3335.705	2325.657	375.8617
AGP0bc	6458.802	194.87	3458.472	2148.83	346.5233
AGP0cd	6458.802	747.5517	3367.813	1853.705	297.0883
IPRab	6413.576	3964.282	1965.784	432.0157	68.355
IPRbc	6413.576	3989.828	1979.42	402.717	63.43333
IPRcd	6413.576	4097.195	1954.34	338.7797	52.60867
IPEab	6399.309	3461.107	2212.913	648.0235	102.5325
IPEbc	6399.309	3499.401	2233.393	604.0755	95.15
IPEcd	6399.309	3660.264	2195.959	508.1695	78.913

Post With LID URF WaterBalance

Existing

AGT0ab	AGT0bc	AGT0cd
6458.8	6458.8	6458.8
35.8	194.5	742.5
3335.7	3458.5	3368.1
2325.7	2149.1	1857.5
375.9	346.6	297.7

Post

	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
Suply	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
RO	4063.4	4297.6	4546.5	3964.3	3989.8	4097.2	3461.1	3499.4	3660.3
ET	1423.6	1414.4	1389.4	1965.8	1979.4	1954.3	2212.9	2233.4	2196.0
Agwo	729.6	568.4	404.6	432.0	402.7	338.8	648.0	604.1	508.2
Igwi	117.3	91.6	65.2	68.4	63.4	52.6	102.5	95.2	78.9
	846.9	660.1	469.9	500.4	466.2	391.4	750.6	699.2	587.1
		658.9			452.6			679.0	

LID - 5mm

AGT0ab	AGT0bc	AGT0cd	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
6458.8	6458.8	6458.8	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
35.8	194.5	742.5	1617.5	1851.7	2100.6	1488.6	1516.5	1630.8	956.3	998.0	1167.7
3335.7	3458.5	3368.1	2402.0	2392.8	2367.7	3017.2	3026.5	2991.5	3270.0	3284.0	3233.3
2325.7	2149.1	1857.5	2197.1	2036.0	1872.2	1856.6	1829.7	1768.7	2096.2	2055.9	1964.3
375.9	346.6	297.7	117.3	91.6	65.2	66.2	61.7	51.4	99.3	92.5	77.1
2701.5	2495.7	2155.2	2314.5	2127.6	1937.4	1922.8	1891.4	1820.0	2195.5	2148.5	2041.4
	2450.8			2126.5			1878.1			2128.5	

LID - 6mm

AGT0ab	AGT0bc	AGT0cd	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
6458.8	6458.8	6458.8	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
35.8	194.5	742.5	1416.5	1650.7	1899.6	1288.4	1316.3	1430.6	755.3	797.0	966.7
3335.7	3458.5	3368.1	2482.4	2473.2	2448.1	3097.3	3106.6	3071.5	3350.4	3364.4	3313.7
2325.7	2149.1	1857.5	2317.7	2156.6	1992.8	1976.7	1949.8	1888.8	2216.8	2176.5	2084.9
375.9	346.6	297.7	117.3	91.6	65.2	66.2	61.7	51.4	99.3	92.5	77.1
2701.5	2495.7	2155.2	2435.1	2248.2	2058.0	2042.9	2011.5	1940.2	2316.1	2269.1	2162.0
	2450.8			2247.1			1998.2			2249.1	

LID - 7mm

AGT0ab	AGT0bc	AGT0cd	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
6458.8	6458.8	6458.8	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
35.8	194.5	742.5	1230.8	1465.0	1713.9	1101.7	1129.5	1243.9	569.6	611.3	781.0
3335.7	3458.5	3368.1	2556.7	2547.5	2522.4	3172.0	3181.3	3146.2	3424.7	3438.7	3388.0
2325.7	2149.1	1857.5	2429.1	2268.0	2104.2	2088.7	2061.9	2000.8	2328.2	2287.9	2196.3
375.9	346.6	297.7	117.3	91.6	65.2	66.2	61.7	51.4	99.3	92.5	77.1
2701.5	2495.7	2155.2	2546.5	2359.6	2169.4	2155.0	2123.6	2052.2	2427.5	2380.5	2273.4
	2450.8			2358.5			2110.3			2360.5	

LID - 8mm

AGT0ab	AGT0bc	AGT0cd	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
6458.8	6458.8	6458.8	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
35.8	194.5	742.5	1068.3	1302.5	1551.4	939.1	966.9	1081.3	407.1	448.8	618.5
3335.7	3458.5	3368.1	2621.7	2612.5	2587.4	3237.0	3246.3	3211.3	3489.7	3503.7	3453.0
2325.7	2149.1	1857.5	2526.6	2365.5	2201.7	2186.3	2159.4	2098.4	2425.7	2385.4	2293.8
375.9	346.6	297.7	117.3	91.6	65.2	66.2	61.7	51.4	99.3	92.5	77.1
2701.5	2495.7	2155.2	2644.0	2457.1	2266.9	2252.5	2221.1	2149.7	2525.1	2478.0	2370.9
	2450.8			2456.0			2207.8			2458.0	

LID - 9mm

AGT0ab	AGT0bc	AGT0cd	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
6458.8	6458.8	6458.8	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
35.8	194.5	742.5	905.8	1140.0	1388.9	776.6	804.4	918.8	244.6	286.3	456.0
3335.7	3458.5	3368.1	2686.7	2677.5	2652.4	3302.0	3311.3	3276.3	3554.7	3568.7	3518.0
2325.7	2149.1	1857.5	2624.1	2463.0	2299.2	2283.8	2257.0	2195.9	2523.2	2482.9	2391.3
375.9	346.6	297.7	117.3	91.6	65.2	66.2	61.7	51.4	99.3	92.5	77.1
2701.5	2495.7	2155.2	2741.5	2554.6	2364.4	2350.0	2318.7	2247.3	2622.6	2575.5	2468.4
	2450.8			2553.5			2305.3			2555.5	

LID - 10mm

AGT0ab	AGT0bc	AGT0cd	THCab	THCbc	THCcd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
6458.8	6458.8	6458.8	6447.2	6447.2	6447.2	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
35.8	194.5	742.5	743.3	977.5	1226.4	614.0	641.8	756.2	82.1	123.8	293.5
3335.7	3458.5	3368.1	2751.7	2742.5	2717.4	3367.0	3376.3	3341.3	3619.7	3633.7	3583.0
2325.7	2149.1	1857.5	2721.6	2560.5	2396.7	2381.4	2354.5	2293.4	2620.7	2580.5	2488.8
375.9	346.6	297.7	117.3	91.6	65.2	66.2	61.7	51.4	99.3	92.5	77.1
2701.5	2495.7	2155.2	2839.0	2652.1	2461.9	2447.6	2416.2	2344.8	2720.1	2673.0	2565.9
	2450.8			2651.0			2402.9			2653.0	

Pre-Development URF WaterBalance

Annual Water Balance
Volume for single Ha (m3)

Paramter (m3)	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd
SUPY	6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2	6352.2
RO	1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7	2287.4
ET	3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6	2887.4
AGWO	1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8	1099.0
IGWI	241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1	170.8

Paramter (m3)	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
SUPY	6457.2	6457.2	6457.2	6458.4	6458.4	6458.4	6447.2	6447.2	6458.8	6458.8	6458.8	6458.8	6458.8	6458.8
RO	546.2	644.1	1084.8	159.3	214.0	574.6	4063.4	4546.5	35.8	194.5	742.5	35.9	194.9	747.6
ET	3367.2	3449.3	3380.3	4208.8	4220.9	4129.9	1423.6	1389.4	3335.7	3458.5	3368.1	3335.7	3458.5	3367.8
AGWO	1978.1	1856.1	1603.9	1745.8	1674.6	1471.2	729.6	404.6	2325.7	2149.1	1857.5	2325.7	2148.8	1853.7
IGWI	319.0	298.9	256.3	279.5	268.0	233.8	117.3	65.2	375.9	346.6	297.7	375.9	346.5	297.1

Paramter (m3)	SUPY	RO	ET	AGWO	IGWI
RLD5ab	6342.284	1630.028	3002.472	1524.401	241.2787
RLD5bc	6342.284	1716.935	3048.665	1426.467	224.731
RLD5cd	6,342.28	2,037.11	2,991.76	1,222.86	190.12
RMD5ab	6370.827	2702.913	2408.885	1116.222	176.8102
RMD5bc	6370.827	2779.836	2436.763	1040.715	163.9625
RMD5cd	6370.827	3030.502	2387.963	883.9055	137.545
RHD5ab	6392.235	3505.031	1963.044	812.6406	128.8248
RHD5bc	6392.235	3579.668	1975.139	751.4084	118.371
RHD5cd	6392.235	3781.583	1931.634	627.0151	97.74588
CSMbc	6436.398	4893.223	1454.345	80.5434	12.68667
EISab	6352.242	1907.249	2921.204	1361.249	215.3897
EISbc	6352.242	1976.745	2965.584	1276.793	201.1464
EIScd	6352.242	2287.42	2887.432	1098.978	170.7773
OPLab	6457.192	546.2266	3367.234	1978.146	318.951
OPLbc	6457.192	644.0884	3449.261	1856.069	298.8945
OPLcd	6457.192	1084.78	3380.293	1603.907	256.2825
OVLab	6458.365	159.2779	4208.805	1745.808	279.5265
OVLbc	6458.365	214.0201	4220.894	1674.563	268.0482
OVLcd	6458.365	574.6243	4129.941	1471.196	233.7587
THCab	6447.154	4063.399	1423.619	729.5554	117.3458
THCcd	6447.154	4546.538	1389.373	404.6265	65.24177
AGT0ab	6458.802	35.84667	3335.703	2325.662	375.8617
AGT0bc	6458.802	194.4667	3458.492	2149.105	346.5633
AGT0cd	6458.802	742.5483	3368.133	1857.482	297.6767
AGPab	6458.802	35.855	3335.705	2325.657	375.8617
AGP0bc	6458.802	194.87	3458.472	2148.83	346.5233
AGP0cd	6458.802	747.5517	3367.813	1853.705	297.0883

ORIGINAL DATA OUTPUT FROM HSPF
REQ"D INPUT FROM HSPF OUTPUT
CALCULATED **AVERAGES:**

URF's as per Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] AGWO																												
1991-1996	JAN	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SUPLY + SURLI = (Pervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	39.9	39.9	39.9	41.6	41.6	41.6	44.5	44.5	44.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	122.2	122.2	122.2	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.1	11.1	11.1	11.6	11.6	11.6	12.4	12.4	12.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	34.3	34.3	34.3	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	28.1	28.1	28.1	29.1	29.1	29.1	30.9	30.9	30.9	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	78.7	78.7	78.7	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	76.5	76.5	76.5	79.3	79.3	79.3	84.3	84.3	84.3	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	217.1	217.1	217.1	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	73.2	73.2	73.2	75.7	75.7	75.7	80.3	80.3	80.3	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	200.5	200.5	200.5	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	61.6	61.6	61.6	63.6	63.6	63.6	67.3	67.3	67.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	164.3	164.3	164.3	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	97.9	97.9	97.9	101.4	101.4	101.4	107.7	107.7	107.7	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	273.4	273.4	273.4	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	62.0	62.0	62.0	64.0	64.0	64.0	67.7	67.7	67.7	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	164.8	164.8	164.8	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.6	42.6	42.6	44.0	44.0	44.0	46.5	46.5	46.5	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	112.0	112.0	112.0	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	82.6	82.6	82.6	85.5	85.5	85.5	90.9	90.9	90.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	233.0	233.0	233.0	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.9	46.9	46.9	48.5	48.5	48.5	51.5	51.5	51.5	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	181.6	181.6	181.6	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.5	14.5	14.5	15.0	15.0	15.0	15.9	15.9	15.9	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	40.8	40.8	40.8	14.2	14.2	14.2	14.2	14.2
	ANNUAL	636.8	636.8	636.8	659.3	659.3	659.3	699.9	699.9	699.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	1,822.6	1,822.6	1,822.6	645.9	645.9	645.9	645.9	645.9

SUPLY + SURLI = (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	65.7	67.1	77.7	65.2	66.1	72.2	60.9	61.5	65.6	153.0	92.9	93.6	101.4	73.7	74.5	79.2	38.3	39.7	50.8	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	18.9	18.9	19.2	18.7	18.7	19.0	17.5	17.5	17.7	43.6	26.6	26.6	26.9	21.2	21.2	21.6	11.1	11.3	11.8	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	44.9	45.1	46.8	44.6	44.7	45.8	41.9	42.0	42.9	97.6	61.2	61.3	62.5	49.4	49.8	51.4	28.2	28.6	33.4	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	123.3	123.8	129.0	122.5	122.8	126.4	115.0	115.3	118.4	268.3	167.9	168.3	171.0	135.7	136.5	140.1	76.7	78.8	85.6	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	115.5	116.8	133.7	114.9	115.8	126.0	108.1	109.0	116.3	244.5	154.8	155.3	166.6	125.9	126.5	145.0	73.7	74.8	113.8	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	95.7	98.2	119.2	95.2	97.0	108.9	89.8	91.5	99.3	199.6	127.3	128.2	145.4	104.0	105.0	138.8	61.6	63.6	125.1	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	156.0	158.5	181.3	155.2	157.0	171.0	145.9	147.6	158.4	335.2	210.7	211.7	229.2	170.5	171.8	201.6	97.7	99.1	143.5	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	96.0	98.3	117.4	95.6	97.2	108.5	90.2	91.8	99.7	198.1	126.7	127.5	145.7	103.5	104.6	140.1	61.8	63.2	118.9	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	65.6	65.9	68.8	65.3	65.4	67.5	61.6	61.8	63.7	135.1	86.6	86.7	88.3	70.9	71.1	73.1	42.5	42.7	45.6	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	132.4	133.9	152.6	131.7	133.0	144.4	123.8	125.3	133.2	287.8	180.1	180.8	199.5	145.3	146.3	186.6	82.0	83.0	87.4	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	102.5	103.1	106.6	101.9	102.1	104.4	95.6	95.8	97.6	226.1	140.8	141.2	143.0	113.5	114.1	117.0	63.0	65.0	69.5	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	23.2	23.3	23.6	23.0	23.1	23.3	21.6	21.7	21.8	50.6	31.7	31.9	31.9	25.6	26.0	26.1	14.5	15.2	15.7	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
	ANNUAL	1,039.6	1,052.7	1,176.0	1,034.0	1,043.0	1,117.3	971.9	980.7	1,034.7	2,239.4	1,407.3	1,413.1	1,511.4	1,139.1	1,147.5	1,320.6	651.1	664.9	901.0	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

Runoff = SURO+IFWO (pervious areas) **REQ MANUAL SUMMATION OF SURO + IFWO**

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	57.0	75.9	0.3	1.6	6.6	0.3	1.6
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	16.4	21.8	0.1	0.3	1.7	0.1	0.3
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	19.9	33.7	0.1	0.3	1.8	0.1	0.3
1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	67.0	102.0	0.3	1.6	7.4	0.3	1.6
1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	84.1	113.2	0.7	2.7	9.7	0.7	2.7
1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	74.3	93.3	0.6	2.6	8.3	0.6	2.6
1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	112.7	149.9	0.4	2.8	10.7	0.4	2.8
1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	75.4	88.9	0.3	1.9	7.8	0.3	1.9
1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	35.3	47.0	0.3	1.3	3.8	0.3	1.3
1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	92.9	114.9	0.2	2.7	9.0	0.2	2.7
1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	70.8	94.1	0.3	1.4	6.2	0.3	1.4
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	15.7	20.9	0.1	0.3	1.4	0.1	0.3
	ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	721.6	955.7	3.6	19.4	74.3	3.6	19.5

Runoff = SURO (impervious areas)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
	ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0

(IMPEV)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
	ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0

(TAET)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8
1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2
1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4
1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.3	25.0	23.3	24.3	24.4	23.3	24.3
1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	52.4	50.5	44.6	47.5	45.8	44.6	47.5
1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	64.3	60.2	51.3	53.0	50.7	51.3	53.0
1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	77.0	71.5	61.1	63.1	61.3	61.1	63.1
1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	73.1	66.6	55.6	58.8	56.1	55.6	58.8
1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	48.5	44.9	38.4	38.4	36.3	38.4	38.4
1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	37.4	36.0	30.7	31.4	31.8	30.7	31.4
1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.7	14.6	13.5	13.8	14.3	13.5	13.8
1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1
	ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	409.5	385.9	333.6	345.8	336.8	333.6	345.8

(AGWO)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	41.7	29.9	18.3	17.1	14.8	18.3	17.1
1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	37.0	26.3	16.2	15.3	13.3	16.2	15.3
1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	38.4	27.5	16.6	15.6	13.8	16.6	15.6
1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	39.1	27.9	16.5	15.6	13.9	16.5	15.6
1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	46.2	32.6	19.3	18.3	16.2	19.3	18.3
1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	45.1	31.7	19.2	17.9	15.6	19.2	17.9
1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	47.1	33.0	20.6	18.9	16.3	20.6	18.9
1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	48.2	33.9	21.3	19.2	16.6	21.3	19.2
1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	44.4	31.4	19.6	17.7	15.1	19.6	17.7
1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	47.3	34.0	21.1	19.0	16.1	21.1	19.0
1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	50.0	36.1	22.1	20.1	17.0	22.1	20.1
1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	50.2	36.2	21.9	20.2	17.2	21.9	20.2
	ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	534.6	380.6	232.6	214.9	185.7	232.6	214.9

(AGWI)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	46.5	31.6	22.8	22.6	19.7	22.8	22.6
1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	18.0	12.4	6.1	6.1	6.3	6.1	6.1
1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	32.6	24.5	11.4	11.0	10.8	11.4	11.0
1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	86.1	59.5	33.7	32.3	29.4	33.7	32.3
1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	55.7	37.8	26.5	23.6	18.5	26.5	23.6
1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	42.3	28.8	19.9	17.0	13.5	19.9	17.0
1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	61.2	42.1	29.5	25.1	21.4	29.5	25.1
1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	35.7	27.5	15.5	13.2	11.4	15.5	13.2
1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	30.9	24.1	13.4	11.7	9.4	13.4	11.7
1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	75.8	56.6	33.8	31.2	25.2	33.8	31.1
1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	70.7	50.3	31.0	30.2	26.2	31.0	30.2
1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	21.4	15.5	7.7	8.1	7.5	7.7	8.1
	ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	576.8	410.7	251.5	231.9	199.2	251.5	231.9

(IGWI)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	6.9	4.7	3.4	3.4	2.9	3.4	3.4
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	2.7	1.8	0.9	0.9	0.9	0.9	0.9
1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	4.9	3.7	1.7	1.6	1.6	1.7	1.6
1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	12.9	8.9	5.0	4.8	4.4	5.0	4.8
1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	8.3	5.6	4.0	3.5	2.8	4.0	3.5
1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	6.3	4.3	3.0	2.5	2.0	3.0	2.5
1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	9.1	6.3	4.4	3.8	3.2	4.4	3.7
1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	5.3	4.1	2.3	2.0	1.7	2.3	2.0
1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	4.6	3.6	2.0	1.7	1.4	2.0	1.7
1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	11.3	8.5	5.1	4.7	3.8	5.1	4.7
1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	10.6	7.5	4.6	4.5	3.9	4.6	4.5
1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	3.2	2.3	1.2	1.2	1.1	1.2	1.2
	ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	86.2	61.4	37.6	34.7	29.8	37.6	34.7

Adjustments to Eliminate SURLI from Balance

URF's as per Watershed Land Uses

		Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
	Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
	Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Adjustment Factor = SURLI/(SURLI+SUPY) (Pervious)

[mm]	1991-1996	JAN	0.0124	0.0124	0.0124	0.0513	0.0513	0.0513	0.1141	0.1141	0.1141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6777	0.6777	0.6777	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.0125	0.0125	0.0125	0.0516	0.0516	0.0516	0.1148	0.1148	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6790	0.6790	0.6790	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.0109	0.0109	0.0109	0.0451	0.0451	0.0451	0.1012	0.1012	0.1012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6473	0.6473	0.6473	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.0111	0.0111	0.0111	0.0458	0.0458	0.0458	0.1027	0.1027	0.1027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6514	0.6514	0.6514	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.0105	0.0105	0.0105	0.0435	0.0435	0.0435	0.0978	0.0978	0.0978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6388	0.6388	0.6388	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.0101	0.0101	0.0101	0.0418	0.0418	0.0418	0.0942	0.0942	0.0942	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6291	0.6291	0.6291	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.0108	0.0108	0.0108	0.0448	0.0448	0.0448	0.1005	0.1005	0.1005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.0100	0.0100	0.0100	0.0415	0.0415	0.0415	0.0936	0.0936	0.0936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6274	0.6274	0.6274	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.0098	0.0098	0.0098	0.0408	0.0408	0.0408	0.0921	0.0921	0.0921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6234	0.6234	0.6234	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6496	0.6496	0.6496	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.0108	0.0108	0.0108	0.0447	0.0447	0.0447	0.1004	0.1004	0.1004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6563	0.6563	0.6563	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6505	0.6505	0.6505	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.0108	0.0108	0.0108	0.0445	0.0445	0.0445	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000

Adjustment Factor = SURLI/(SURLI+SUPY) (Impervious)

[mm]	1991-1996	JAN	0.4256	0.4380	0.5149	0.4219	0.4291	0.4773	0.3804	0.3864	0.4251	0.7536	0.5943	0.5974	0.6282	0.4884	0.4941	0.5241	0.0165	0.0507	0.2572	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.4164	0.4165	0.4266	0.4126	0.4124	0.4196	0.3705	0.3711	0.3783	0.7475	0.5865	0.5865	0.5901	0.4795	0.4802	0.4902	0.0063	0.0237	0.0709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.3817	0.3842	0.4065	0.3782	0.3793	0.3947	0.3385	0.3391	0.3537	0.7157	0.5464	0.5474	0.5559	0.4385	0.4422	0.4597	0.0145	0.0285	0.1681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.3861	0.3889	0.4134	0.3824	0.3840	0.4014	0.3422	0.3439	0.3610	0.7179	0.5494	0.5504	0.5574	0.4423	0.4458	0.4599	0.0132	0.0392	0.1160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.3733	0.3803	0.4585	0.3696	0.3746	0.4252	0.3303	0.3356	0.3776	0.7039	0.5322	0.5337	0.5655	0.4248	0.4278	0.5007	0.0181	0.0317	0.3637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.3633	0.3792	0.4887	0.3598	0.3718	0.4404	0.3211	0.3341	0.3862	0.6947	0.5212	0.5244	0.5810	0.4141	0.4196	0.5610	0.0106	0.0417	0.5128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.3791	0.3889	0.4656	0.3759	0.3831	0.4334	0.3362	0.3438	0.3883	0.7110	0.5403	0.5425	0.5774	0.4317	0.4362	0.5194	0.0086	0.0225	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.3608	0.3754	0.4774	0.3577	0.3687	0.4343	0.3192	0.3312	0.3844	0.6901	0.5154	0.5186	0.5786	0.4072	0.4133	0.5618	0.0076	0.0284	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.3568	0.3595	0.3869	0.3538	0.3554	0.3749	0.3152	0.3169	0.3374	0.6877	0.5127	0.5134	0.5220	0.4050	0.4067	0.4230	0.0080	0.0132	0.0753	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.3832	0.3900	0.4651	0.3801	0.3859	0.4346	0.3403	0.3482	0.3872	0.7163	0.5468	0.5483	0.5908	0.4381	0.4418	0.5626	0.0047	0.0165	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.3914	0.3945	0.4146	0.3879	0.3890	0.4026	0.3473	0.3485	0.3607	0.7240	0.5568	0.5581	0.5636	0.4501	0.4533	0.4667	0.0089	0.0398	0.1016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.3859	0.3888	0.3968	0.3819	0.3840	0.3882	0.3420	0.3438	0.3467	0.7186	0.5503	0.5530	0.5541	0.4436	0.4530	0.4547	0.0148	0.0619	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.3803	0.3880	0.4522	0.3769	0.3824	0.4234	0.3372	0.3431	0.3774	0.7123	0.5422	0.5441	0.5738	0.4345	0.4386	0.5122	0.0106	0.0311	0.2850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

[mm]	1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

[mm]	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

[mm]	1991-1996	JAN	0.5	0.5	0.5	2.0	2.0	2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.5	3.5	3.5	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.3	49.3	49.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.2	3.2	3.2	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	46.3	46.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3	38.3	38.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.0	1.0	1.0	4.3	4.3	4.3	9.7	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	62.5	62.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	38.5	38.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.7	1.7	1.7	3.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	26.3	26.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.7	3.7	3.7	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.1	2.1	2.1	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	41.0	41.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.8	6.8	6.8	28.1	28.1	28.1	63.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.0	417.0	417.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

SURLI = SURLI (Impervious)

[mm]	1991-1996	JAN	16.1	16.5	19.4	15.9	16.2	18.0	14.3	14.6	16.0	28.4	22.4	22.5	23.7	18.4	18.6	19.8	0.6	1.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	4.6	4.6	4.7	4.5	4.5	4.6	4.1	4.1	4.2	8.2	6.5	6.5	6.5	5.3	5.3	5.4	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	10.6	10.7	11.3	10.5	10.5	11.0	9.4	9.4	9.8	19.9	15.2	15.2	15.4	12.2	12.3	12.8	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	29.2	29.4	31.3	28.9	29.1	30.4	25.9	26.0	27.3	54.3	41.6	41.6	42.2	33.5	33.7	34.8	1.0	3.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	27.0	27.5	33.2	26.8	27.1	30.8	23.9	24.3	27.3	51.0	38.5	38.6	40.9	30.8	31.0	36.3	1.3	2.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	22.1	23.1	29.8	21.9	22.7	26.8	19.6	20.4	23.5	42.3	31.8	32.0	35.4	25.2	25.6	34.2	0.6	2.5	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	36.7	37.7	45.1	36.4	37.1	42.0	32.6	33.3	37.6	68.9	52.3	52.6	55.9	41.8	42.3	50.3	0.8	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	22.1	23.0	29.3	22.0	22.6	26.7	19.6	20.3	23.6	42.4	31.6	31.8	35.5	25.0	25.4	34.5	0.5	1.7	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	15.1	15.2	16.3	14.9	15.0	15.8	13.3	13.4	14.2	29.0	21.6	21.7	22.0	17.1	17.2	17.8	0.3	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	31.3	31.8	38.0	31.0	31.5	35.5	27.8	28.4	31.6	58.5	44.6	44.8	48.2	35.8	36.1	45.9	0.4	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	24.4	24.6	25.9	24.2	24.3	25.1	21.7	21.7	22.5	45.2	34.7	34.8	35.2	28.1	28.3	29.1	0.6	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	5.5	5.5	5.7	5.4	5.5	5.5	4.9	4.9	4.9	10.2	7.8	7.9	7.9	6.3	6.5	6.5	0.2	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	245.0	250.0	291.3	242.8	246.3	272.8	217.2	221.0	243.1	458.9	349.3	350.5	369.6	279.9	282.6	330.0	6.9	20.0	183.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

Runoff = SURO+IFWO (pervious areas)

[mm]	1991-1996	JAN	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	18.4	24.5	0.3	1.6	6.6	0.3	1.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	5.3	7.0	0.1	0.3	1.7	0.1	0.3
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	7.0	11.9	0.1	0.3	1.8	0.1	0.3
	1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	23.4	35.5	0.3	1.6	7.4	0.3	1.6
	1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	30.4	40.9	0.7	2.7	9.7	0.7	2.7
	1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	27.6	34.6	0.6	2.6	8.3	0.6	2.6
	1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	39.9	53.1	0.4	2.8	10.7	0.4	2.8
	1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	28.1	33.1	0.3	1.9	7.8	0.3	1.9
	1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	13.3	17.7	0.3	1.3	3.8	0.3	1.3
	1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	32.6	40.3	0.2	2.7	9.0	0.2	2.7
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	24.3	32.3	0.3	1.4	6.2	0.3	1.4
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	5.5	7.3	0.1	0.3	1.4	0.1	0.3
		ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	255.7	338.7	3.6	19.4	74.3	3.6	19.5

AVERAGES:

Runoff = SURO (impervious areas)

[mm]	1991-1996	JAN	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
		ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(IMPEV)

[mm]	1991-1996	JAN	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
		ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(TAET)

[mm]	1991-1996	JAN	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	0.6	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	0.8	2.2	2.2	2.3	2.2	2.2
	1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4
	1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.8	8.7	23.3	24.3	24.4	23.3	24.3
	1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.9	18.2	44.6	47.5	45.8	44.6	47.5
	1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	23.8	22.3	51.3	53.0	50.7	51.3	53.0
	1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	27.3	25.3	61.1	63.1	61.3	61.1	63.1
	1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	27.2	24.8	55.6	58.8	56.1	55.6	58.8
	1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	18.3	16.9	38.4	38.4	36.3	38.4	38.4
	1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	13.1	12.6	30.7	31.4	31.8	30.7	31.4
	1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.1	5.0	13.5	13.8	14.3	13.5	13.8
	1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	1.7	3.9	4.1	4.5	3.9	4.1
		ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	145.1	136.8	333.6	345.8	336.8	333.6	345.8

AVERAGES:

(AGWO)

[mm]	1991-1996	JAN	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	13.4	9.6	18.3	17.1	14.8	18.3	17.1
	1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	11.9	8.5	16.2	15.3	13.3	16.2	15.3
	1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	13.6	9.7	16.6	15.6	13.8	16.6	15.6
	1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	13.6	9.7	16.5	15.6	13.9	16.5	15.6
	1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	16.7	11.8	19.3	18.3	16.2	19.3	18.3
	1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	16.7	11.8	19.2	17.9	15.6	19.2	17.9
	1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	16.7	11.7	20.6	18.9	16.3	20.6	18.9
	1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	17.9	12.6	21.3	19.2	16.6	21.3	19.2
	1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	16.7	11.8	19.6	17.7	15.1	19.6	17.7
	1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	16.6	11.9	21.1	19.0	16.1	21.1	19.0
	1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	17.2	12.4	22.1	20.1	17.0	22.1	20.1
	1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	17.5	12.6	21.9	20.2	17.2	21.9	20.2
		ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	189.5	134.9	232.6	214.9	185.7	232.6	214.9

AVERAGES:

(AGWI)

[mm]	1991-1996	JAN	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	15.0	10.2	22.8	22.6	19.7	22.8	22.6
	1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	5.8	4.0	6.1	6.1	6.3	6.1	6.1
	1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	11.5	8.6	11.4	11.0	10.8	11.4	11.0
	1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	30.0	20.7	33.7	32.3	29.4	33.7	32.3
	1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	20.1	13.6	26.5	23.6	18.5	26.5	23.6
	1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	15.7	10.7	19.9	17.0	13.5	19.9	17.0
	1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	21.7	14.9	29.5	25.1	21.4	29.5	25.1
	1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	13.3	10.3	15.5	13.2	11.4	15.5	13.2
	1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	11.6	9.1	13.4	11.7	9.4	13.4	11.7
	1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	26.5	19.8	33.8	31.2	25.2	33.8	31.1
	1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	24.3	17.3	31.0	30.2	26.2	31.0	30.2
	1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	7.5	5.4	7.7	8.1	7.5	7.7	8.1
		ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	204.4	145.5	251.5	231.9	199.2	251.5	231.9

AVERAGES:

(IGWI)

[mm]	1991-1996	JAN	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	2.2	1.5	3.4	3.4	2.9	3.4	3.4
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.9	0.6	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.7	1.3	1.7	1.6	1.6	1.7	1.6
	1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	4.5	3.1	5.0	4.8	4.4	5.0	4.8
	1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	3.0	2.0	4.0	3.5	2.8	4.0	3.5
	1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	2.3	1.6	3.0	2.5	2.0	3.0	2.5
	1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	3.2	2.2	4.4	3.8	3.2	4.4	3.7
	1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	2.0	1.5	2.3	2.0	1.7	2.3	2.0
	1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.7	1.4	2.0	1.7	1.4	2.0	1.7
	1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	4.0	3.0	5.1	4.7	3.8	5.1	4.7
	1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	3.6	2.6	4.6	4.5	3.9	4.6	4.5
	1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	1.1	0.8	1.2	1.2	1.1	1.2	1.2
		ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	30.5	21.7	37.6	34.7	29.8	37.6	34.7

URF VOLUMES

INPUTS REQ'D

URF Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
Pervious Composition (%)	0.70	0.70	0.70	0.50	0.50	0.50	0.35	0.35	0.35	0.04	0.63	0.63	0.63	0.90	0.90	0.90	0.97	0.97	0.97	0.3	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0
Impervious Composition (%)	0.09	0.09	0.09	0.13	0.13	0.13	0.17	0.17	0.17	0.19	0.11	0.11	0.11	0.05	0.05	0.05	0.03	0.03	0.03	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
URF AREA : 100000 Pervious Composition (m^2)	70000	70000	70000	50000	50000	50000	35000	35000	35000	4000	63000	63000	63000	90000	90000	90000	97000	97000	97000	30000	30000	30000	100000	100000	100000	100000	100000	100000
10 ha m^2 Impervious Composition (m^2)	9000	9000	9000	13000	13000	13000	17000	17000	17000	19000	11000	11000	11000	5000	5000	5000	3000	3000	3000	70000	70000	70000	0	0	0	0	0	0
Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
Total Moisture Supply = SUPY (Pervious)																												
AVERAGES (m^3):																												
1991-1996 JAN	2759.9	2759.9	2759.9	1971.3	1971.3	1971.3	1379.9	1379.9	1379.9	157.7	2483.9	2483.9	2483.9	3543.3	3543.3	3543.3	3818.8	3818.8	3818.8	1181.4	1181.4	1181.4	3936.0	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996 FEB	770.5	770.5	770.5	550.4	550.4	550.4	385.2	385.2	385.2	44.0	693.4	693.4	693.4	991.2	991.2	991.2	1068.3	1068.3	1068.3	330.4	330.4	330.4	1101.4	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996 MAR	1942.6	1942.6	1942.6	1387.6	1387.6	1387.6	971.3	971.3	971.3	111.0	1748.3	1748.3	1748.3	2497.7	2497.7	2497.7	2692.0	2692.0	2692.0	832.6	832.6	832.6	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996 APR	5297.2	5297.2	5297.2	3783.7	3783.7	3783.7	2648.6	2648.6	2648.6	302.7	4767.4	4767.4	4767.4	6810.6	6810.6	6810.6	7340.4	7340.4	7340.4	2270.2	2270.2	2270.2	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996 MAY	5068.3	5068.3	5068.3	3620.2	3620.2	3620.2	2534.2	2534.2	2534.2	289.6	4561.5	4561.5	4561.5	6516.4	6516.4	6516.4	7023.3	7023.3	7023.3	2172.1	2172.1	2172.1	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996 JUN	4266.2	4266.2	4266.2	3047.3	3047.3	3047.3	2133.1	2133.1	2133.1	243.8	3839.6	3839.6	3839.6	5485.2	5485.2	5485.2	5911.8	5911.8	5911.8	1828.4	1828.4	1828.4	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996 JUL	6781.2	6781.2	6781.2	4843.7	4843.7	4843.7	3390.6	3390.6	3390.6	387.5	6103.0	6103.0	6103.0	8718.6	8718.6	8718.6	9396.7	9396.7	9396.7	2906.2	2906.2	2906.2	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996 AUG	4296.6	4296.6	4296.6	3069.0	3069.0	3069.0	2148.3	2148.3	2148.3	245.5	3866.9	3866.9	3866.9	5524.2	5524.2	5524.2	5953.9	5953.9	5953.9	1841.4	1841.4	1841.4	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996 SEP	2952.7	2952.7	2952.7	2109.1	2109.1	2109.1	1476.4	1476.4	1476.4	168.7	2657.5	2657.5	2657.5	3796.4	3796.4	3796.4	4091.7	4091.7	4091.7	1265.5	1265.5	1265.5	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996 OCT	5715.2	5715.2	5715.2	4082.3	4082.3	4082.3	2857.6	2857.6	2857.6	326.6	5143.7	5143.7	5143.7	7348.1	7348.1	7348.1	7919.6	7919.6	7919.6	2449.4	2449.4	2449.4	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996 NOV	3244.6	3244.6	3244.6	2317.6	2317.6	2317.6	1622.3	1622.3	1622.3	185.4	2920.2	2920.2	2920.2	5616.2	5616.2	5616.2	6053.0	6053.0	6053.0	1872.0	1872.0	1872.0	6240.4	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996 DEC	1001.3	1001.3	1001.3	715.2	715.2	715.2	500.6	500.6	500.6	57.2	901.1	901.1	901.1	1282.0	1282.0	1282.0	1381.7	1381.7	1381.7	427.3	427.3	427.3	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
ANNUAL	44096.3	44096.3	44096.3	31497.3	31497.3	31497.3	22048.1	22048.1	22048.1	2519.8	39686.6	39686.6	39686.6	58129.8	58129.8	58129.8	62651.0	62651.0	62651.0	19376.8	19376.8	19376.8	64588.0	64588.0	64588.0	64588.0	64588.0	64588.0
Total Moisture Supply = SUPY (Impervious)																												
1991-1996 JAN	339.4	339.4	339.4	490.3	490.3	490.3	641.1	641.1	641.1	716.2	414.7	414.7	414.7	188.5	188.5	188.5	113.1	113.1	113.1	2638.8	2638.8	2638.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	99.1	99.1	99.1	143.1	143.1	143.1	187.1	187.1	187.1	209.2	121.1	121.1	121.1	55.0	55.0	55.0	33.0	33.0	33.0	770.6	770.6	770.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	249.8	249.8	249.8	360.8	360.8	360.8	471.8	471.8	471.8	527.3	305.3	305.3	305.3	138.8	138.8	138.8	83.3	83.3	83.3	1942.7	1942.7	1942.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	681.1	681.1	681.1	983.8	983.8	983.8	1286.5	1286.5	1286.5	1437.8	832.4	832.4	832.4	378.4	378.4	378.4	227.0	227.0	227.0	5297.2	5297.2	5297.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	651.6	651.6	651.6	941.3	941.3	941.3	1230.9	1230.9	1230.9	1375.7	796.5	796.5	796.5	362.0	362.0	362.0	217.2	217.2	217.2	5068.3	5068.3	5068.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	548.5	548.5	548.5	792.3	792.3	792.3	1036.1	1036.1	1036.1	1158.0	670.4	670.4	670.4	304.7	304.7	304.7	182.8	182.8	182.8	4266.2	4266.2	4266.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	871.9	871.9	871.9	1259.4	1259.4	1259.4	1646.9	1646.9	1646.9	1840.6	1065.6	1065.6	1065.6	484.4	484.4	484.4	290.6	290.6	290.6	6781.2	6781.2	6781.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	552.4	552.4	552.4	797.9	797.9	797.9	1043.5	1043.5	1043.5	1166.2	675.2	675.2	675.2	306.9	306.9	306.9	184.1	184.1	184.1	4296.6	4296.6	4296.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	379.6	379.6	379.6	548.4	548.4	548.4	717.1	717.1	717.1	801.5	464.0	464.0	464.0	210.9	210.9	210.9	126.5	126.5	126.5	2952.7	2952.7	2952.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	734.8	734.8	734.8	1061.4	1061.4	1061.4	1388.0	1388.0	1388.0	1551.3	898.1	898.1	898.1	408.2	408.2	408.2	244.9	244.9	244.9	5715.2	5715.2	5715.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	561.6	561.6	561.6	811.2	811.2	811.2	1060.8	1060.8	1060.8	1185.7	686.4	686.4	686.4	312.0	312.0	312.0	187.2	187.2	187.2	4368.2	4368.2	4368.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	128.2	128.2	128.2	185.2	185.2	185.2	242.2	242.2	242.2	270.6	156.7	156.7	156.7	71.2	71.2	71.2	42.7	42.7	42.7	997.1	997.1	997.1	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	5798.0	5798.0	5798.0	8374.9	8374.9	8374.9	10951.8	10951.8	10951.8	12240.0	7086.3	7086.3	7086.3	3221.1	3221.1	3221.1	1932.6	1932.6	1932.6	45094.7	45094.7	45094.7	0.0	0.0	0.0	0.0	0.0	0.0
Runoff = SURO+IFWO (pervious areas)																												
1991-1996 JAN	18.1	103.5	400.2	18.8	86.3	317.0	21.5	78.1	262.2	6.4	14.1	84.7	361.5	16.7	100.2	476.1	6.0	60.7	393.0	365.8	551.4	734.0	34.7	157.2	655.7	34.7	157.3	656.7
1991-1996 FEB	4.5	16.8	74.3	4.3	14.1	62.1	4.2	13.5	55.1	0.9	3.6	14.5	75.7	3.3	15.2	106.4	0.6	7.1	61.7	98.4	158.0	209.8	7.5	27.8	168.4	7.5	27.8	167.9
1991-1996 MAR	3.2	15.8	99.4	2.7	14.8	83.1	2.6	16.0	74.5	0.9	2.7	12.9	95.2	3.8	17.8	130.7	2.9	10.2	105.5	116.2	210.7	356.5	5.7	32.3	184.6	5.7	32.3	185.2
1991-1996 APR	16.5	76.8	432.7	14.4	70.2	352.8	13.6	73.1	301.9	4.2	14.0	62.9	406.6	19.3	89.3	576.5	8.5	48.8	483.4	432.0	701.1	1066.5	33.3	159.8	740.0	33.3	159.8	741.1
1991-1996 MAY	33.7	144.8	641.4	29.8	127.7	509.0	30.0	126.4	417.6	8.6	27.8	117.4	577.5	39.0	165.9	803.3	12.7	97.2	749.3	650.8	911.7	1226.2	70.8	267.9	966.6	70.9	268.2	974.9
1991-1996 JUN	30.6	167.6	548.3	29.0	147.8	432.1	31.6	141.5	353.1	10.0	24.8	134.6	499.9	35.3	189.2	696.9	15.5	130.6	651.5	629.4	826.7	1038.4	56.9	262.9	827.4	57.0	263.6	836.4
1991-1996 JUL	18.4	164.0	614.9	18.0	145.4	503.1	20.8	140.1	438.0	9.8	14.9	131.1	593.3	21.3	183.8	816.1	10.1	92.5	564.4	842.0	1197.8	1593.9	36.3	280.1	1075.0	36.3	281.5	1087.7
1991-1996 AUG	12.8	113.6	433.1	13.3	104.5	353.3	18.3	106.6	303.9	7.0	10.0	87.2	425.4	14.3	121.1	582.2	5.6	56.5	411.0	656.1	842.3	993.8	26.5	187.0	776.3	26.5	187.8	790.6
1991-1996 SEP	13.6	72.9	190.3	14.1	61.7	152.7	16.4	56.0	131.5	3.9	10.8	63.2	186.3	15.4	91.2	270.5	5.9	52.0	197.2	274.1	398.5	531.1	28.2	132.7	381.2	28.2	132.4	376.7
1991-1996 OCT	8.0	92.7	417.6	8.4	94.8	347.1	11.2	106.4	304.1	5.2	6.4	70.4	400.9	9.1	99.2	560.2	2.3	12.0	135.6	693.1	976.9	1207.7	24.5	267.5	899.7	24.5	268.5	909.3
1991-1996 NOV	6.8	46.4	234.9	6.5	42.3	189.3	6.8	43.2	161.3	2.6	5.3	37.9	211.0	12.5	76.2	416.6	4.0	36.7	297.5	477.8	729.8	970.3	27.1	135.5	615.3	27.1	135.5	614.5
1991-1996 DEC	2.4	13.1	61.9	2.4	11.7	51.4	2.9	11.8	45.9	0.8	1.9	11.7	56.3	3.1	19.6	88.8	1.1	9.8	63.6	103.0	164.8	219.4	7.0	34.1	135.3	7.0	34.1	134.7
ANNUAL	168.5	1027.9	4148.9	161.8	921.1	3353.1	179.9	912.2	2849.8	60.2	136.3	828.4	3889.5	192.9	1168.7	5524.1	75.3	614.1	4113.6	5329.2	7671.5	10160.6	358.5	1944.7	7425.5	358.6	1948.7	7475.5
Runoff = SURO (impervious areas)																												
1991-1996 JAN	328.0	328.3	329.8	473.7	473.9	475.3	617.9	618.1	619.6	705.9	404.8	404.9	405.7	182.8	182.9	183.2	106.6	106.8	108.2	2484.4	2484.4	2484.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	93.7	93.7	93.8	135.3	135.3	135.4	176.2	176.2	176.3	204.3	116.4	116.4	116.5	52.4	52.4	52.4	30.0	30.0	30.2	699.1	699.1	699.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	216.8	216.9	218.1	312.9	312.9	314.1	405.1	405.2	406.7	495.2	275.6	275.7	276.3	122.1	122.2	122.7	65.7	66.0	68.5	1528.1	1528.1	1528.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	597.8	598.2	601.6	862.8	863.1	866.6	1118.0	1118.5	1122.8	1357.1	757.8	757.9	759.1	336.4	336.6	337.7	182.4	183.6	187.1	4242.7	4242.7	4242.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	552.9	554.0	566.3	797.8	798.9	810.5	1031.6	1033.1	1045.6	1277.2	706.4	706.7	712.8	311.7	311.9	318.3	165.6	166.4	183.8	3842.7	3842.7	3842.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	453.2	455.6	472.0	653.9	656.5	671.3	844.2	847.9	862.6	1061.6	582.9	583.4	593.8	256.0	256.5	268.2	133.5	135.0	158.5	3102.3	3102.3	3102.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	753.2	755.1	769.8	1087.2	1089.1	1103.0	1407.3	1410.1	1426.1	1724.0	958.3	958.8	966.9	424.1	424.5	433.4	227.5	228.4	247.6	5295.4	5295.4	5295.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	454.2	456.5	472.1	655.4	657.9	672.4	845.9	849.4	864.8	1065.7	584.2	584.8	596.1	256.3	256.8	269.5	133.3	134.4	157.7	3101.7	3101.7	3101.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	308.7	309.0	312.1	445.5	445.7	448.8	574.5	574.9	579.1	728.8	398.4	398.4	399.6	174.5	174.6	175.6	90.1	90.3	92.6	2095.3	2095.3	2095.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	641.8	642.8	654.1	926.4	927.6	938.2	1200.1	1202.3	1213.4	1460.9	814.6	814.8	822.7	361.2	361.5	371.6	194.9	195.5	198.0	4542.4	4542.4	4542.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	499.6	499.9	501.9	721.1	721.2	723.2	935.1	935.3	937.7	1126.3	631.2	631.4	632.0	280.9	281.1	281.8	153.5	154.6	156.7	3575.3	3575.3	3575.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	112.3	112.3	112.6	162.0	162.1	162.3	209.9	210.0	210.1	255.2	142.4	142.5	142.6	63.2	63.3	63.4	34.2	34.6	34.9	795.4	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	5018.0	5027.7	5108.5	7242.1	7252.0	7326.6	9375.9	9390.0	9471.5	11475.6	6382.1	6384.9	6430.6	2825.6	2828.5	2879.9	1517.5	1526.1	1632.6	35304.8	35304.8	35304.8	0.0	0.0	0.0	0.0	0.0	0.0
(IMPEV)																												
1991-1996 JAN	8.2	8.1	7.0	12.0	11.8	10.8	16.8	16.6	15.6	7.5	7.1	7.1	6.5	4.1	4.0	3.8	4.7	4.5	3.6	111.7	111.7	111.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	8.5	8.5	8.4	12.4	12.4	12.3	17.4	17.4	17.2	7.8	7.4	7.4	7.3	4.2	4.2	4.1	4.8	4.8	4.5	113.6	113.6	113.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	33.4	33.3	32.1	48.6	48.5	47.3	67.6	67.5	66.0	32.4	30.0	29.9	29.3	16.9	16.8	16.2	17.8	17.5	15.0	420.5	420.5	420.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	82.7	82.3	79.0	120.1	119.8	116.4	167.3	166.9	162.5	80.2	74.2	74.0	72.8	41.7	41.5	40.4	44.3	43.1	39.7	1047.2	1047.2	1047.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	101.4	100.2	87.6	147.3	146.1	134.3	204.6	203.0	190.1	101.1	92.5	92.2	85.9	51.7	51.4	44.9	52.9	52.2	34.3	1257.9	1257.9	1257.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	99.6	97.1	80.0	144.7	142.0	126.5	200.6	196.8	181.4	100.9	91.6	90.9	80.1	50.9	50.5	38.2	51.6	50.0	25.4	1217.0	1217.0	1217.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	117.2	115.3	100.8	170.1	168.1	154.4	236.6	233.9	218.0	115.1	106.0	105.5	97.5	59.6	59.1	50.4	62.4	61.5	42.5	1467.6	1467.6	1467.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	97.6	95.4	79.8	141.6	139.2	124.8	196.3	192.9	177.5	99.9	90.4	89.8	78.6	50.3	49.8	37.2	50.5	49.4	26.3	1187.4	1187.4	1187.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	72.5	72.2	69.1	105.2	105.0	101.8	145.8	145.5	141.1	74.3	67.1	67.1	65.9	37.3	37.2	36.1	37.3	37.1	34.7	876.9	876.9	876.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	87.8	86.8	76.2	127.5	126.3	116.3	177.4	175.3	164.8	85.3	78.9	78.6	71.2	44.4	44.2	34.6	47.2	46.7	44.3	1107.4	1107.4	1107.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	60.9	60.6	58.6	88.4	88.3	86.3	123.3	123.1	120.8	58.3	54.2	54.0	53.4	30.6	30.4	29.6	33.0	32.0	30.0	778.1	778.1	778.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	16.2	16.1	15.9	23.6	23.5	23.3	32.8	32.7	32.6	15.7	14.5	14.4	14.4	8.2	8.0	8.0	8.7	8.3	8.0	205.5	205.5	205.5	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	780.0	770.3	689.6	1132.9	1123.0	1048.3	1576.0	1561.9	1480.4	764.5	704.3	701.4	655.8	395.5	392.6	341.1	415.1	406.5	300.0	9790.6	9790.6	9790.6	0.0	0.0	0.0	0.0	0.0	0.0
p **(TAET)**																												
1991-1996 JAN	125.5	126.4	129.0	86.2	86.9	88.8	56.5	57.0	58.2	7.3	114.4	115.1	117.6	163.7	164.7	168.3	188.3	188.3	188.4	18.5	18.5	18.3	176.2	178.6	184.6	176.2	178.6	184.7
1991-1996 FEB	154.8	159.0	160.3	106.5	109.6	110.1	69.9	71.9	72.0	9.2	141.0	144.8	146.4	201.4	206.6	208.7	235.4	235.8	236.1	22.5	22.6	22.6	215.4	224.8	227.3	215.4	224.8	227.3
1991-1996 MAR	504.3	516.7	523.8	348.8	358.0	361.6	231.0	237.6	238.6	29.8	458.5	469.5	476.0	654.9	670.7	680.0	741.9	742.9	743.9	81.1	81.1	80.8	714.4	745.0	754.2	714.4	745.0	754.2
1991-1996 APR	1659.6	1705.8	1719.4	1148.2	1179.0	1186.1	760.3	779.1	781.9	98.5	1508.4	1550.9	1556.3	2154.1	2215.0	2223.3	2475.6	2482.9	2485.3	264.9	264.8	261.8	2331.4	2431.4	2436.1	2331.4	2431.4	2436.0
1991-1996 MAY	3257.6	3398.7	3386.9	2267.0	2360.0	2344.4	1516.2	1569.7	1554.0	195.8	2955.3	3085.2	3027.3	4220.7	4407.1	4325.2	5148.4	5186.3	5179.8	571.7	567.3	546.7	4460.4	4747.0	4581.1	4460.4	4747.0	4580.8
1991-1996 JUN	3921.8	4009.2	3953.9	2737.3	2790.0	2745.6	1841.6	1864.6	1829.9	230.8	3554.9	3637.4	3536.8	5077.6	5196.3	5053.4	6698.4	6723.6	6662.1	736.2	714.9	669.3	5130.5	5298.1	5069.8	5130.5	5298.1	5069.3
1991-1996 JUL	4623.7	4724.5	4703.7	3221.7	3286.4	3259.0	2157.6	2196.3	2163.9	272.1	4192.9	4287.7	4196.7	5989.6	6125.5	5996.5	7762.6	7796.2	7665.1	834.0	818.7	759.7	6112.5	6305.3	6134.5	6112.5	6305.2	6133.9
1991-1996 AUG	4262.3	4426.7	4362.3	2986.0	3090.6	3033.6	2021.5	2075.6	2026.7	254.6	3859.3	4012.3	3882.1	5513.1	5732.2	5547.5	7334.1	7379.1	7199.4	837.9	816.7	744.8	5562.2	5880.0	5611.3	5562.2	5879.9	5610.6
1991-1996 SEP	3033.7	3037.2	2939.6	2118.8	2114.1	2040.9	1425.1	1414.0	1359.6	174.9	2748.9	2755.6	2633.9	3927.0	3936.7	3763.8	5421.9	5399.6	5063.9	578.5	547.7	507.4	3842.1	3843.4	3628.3	3842.1	3843.3	3627.8
1991-1996 OCT	2289.8	2326.0	2339.8	1590.1	1612.2	1620.5	1059.5	1071.7	1075.7	134.1	2078.8	2113.3	2114.1	2969.7	3019.0	3020.9	3765.9	3765.9	3674.4	395.5	393.2	378.2	3068.5	3143.0	3178.8	3068.5	3142.9	3178.3
1991-1996 NOV	2710.1	2578.6	2286.7	1952.8	1860.7	1632.2	1385.3	1318.4	1133.9	146.4	2432.7	2314.6	2049.3	1246.4	1259.1	1287.3	1423.6	1424.5	1423.8	152.3	152.0	150.4	1349.8	1376.6	1427.6	1349.8	1376.6	1427.6
1991-1996 DEC	293.7	300.3	315.0	203.2	208.4	219.1	134.8	139.0	145.8	17.3	267.0	272.7	286.6	381.5	389.7	409.4	476.9	477.3	477.3	51.7	51.6	50.5	393.8	411.9	447.9	393.8	411.9	447.8
ANNUAL	26829.7	27301.3	26813.0	18745.0	19033.6	18620.3	12626.3	12761.3	12407.7	1570.9	24312.2	24758.9	24023.0	32499.5	33322.7	32684.4	41672.9	41802.4	40999.4	4445.6	4353.7	4103.2	33357.0	34584.9	33681.3	33357.1	34584.7	33678.1
p **(AGWO)**																												
1991-1996 JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6	1475.4
1991-1996 FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8	1327.7
1991-1996 MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7	1374.0
1991-1996 APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3	1384.1
1991-1996 MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1	1614.3
1991-1996 JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0	1553.0
1991-1996 JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0	1624.3
1991-1996 AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8	1652.7
1991-1996 SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5	1510.9
1991-1996 OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4	1603.4
1991-1996 NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6	1700.6
1991-1996 DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5	1716.9
ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3	18537.1
p **(IGWI)**																												
1991-1996 JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1	293.6
1991-1996 FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5	93.8
1991-1996 MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1	160.7
1991-1996 APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9	438.4
1991-1996 MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3	275.3
1991-1996 JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8	201.2
1991-1996 JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0	318.0
1991-1996 AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0	169.4
1991-1996 SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9	140.2
1991-1996 OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4	375.6
1991-1996 NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1	391.8
1991-1996 DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4	112.7
ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2	2970.9

ADDITIONAL URF OUTPUT DATA
REQ'D INPUTS: HSPF OUTPUT

URF's as per Watershed Land Uses

	Code	SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
Surface	DSN	1013	1014	1015	1114	1115
Sub-surfa	DSN	1513	1514	1515	1614	1615
	Year	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Impervious)

AVERAGES:		SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
1991-1996	JAN	37.7	37.7	37.7	37.7	37.7
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2
	ANNUAL	**644.2**	**644.2**	**644.2**	**644.2**	**644.2**

SURO (Impervious)

AVERAGES:		SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
1991-1996	JAN	35.5	35.9	35.5	35.2	35.3
1991-1996	FEB	10.0	10.1	10.0	10.0	10.0
1991-1996	MAR	21.9	23.4	21.9	21.0	21.4
1991-1996	APR	60.6	64.9	60.6	57.6	59.0
1991-1996	MAY	54.9	60.1	54.9	50.8	52.7
1991-1996	JUN	44.3	49.0	44.3	40.9	42.5
1991-1996	JUL	75.7	82.3	75.7	70.5	73.0
1991-1996	AUG	44.3	50.1	44.3	39.8	41.9
1991-1996	SEP	29.9	33.4	29.9	27.2	28.5
1991-1996	OCT	64.9	69.5	64.9	61.7	63.2
1991-1996	NOV	51.1	53.7	51.1	49.2	50.2
1991-1996	DEC	11.4	12.1	11.4	11.0	11.1
	ANNUAL	504.4	544.5	504.4	474.8	488.7

IMPEV

AVERAGES:		SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
1991-1996	JAN	1.6	1.6	1.6	1.6	1.6
1991-1996	FEB	1.6	1.2	1.6	2.0	1.8
1991-1996	MAR	6.0	4.4	6.0	6.8	6.4
1991-1996	APR	15.0	10.8	15.0	17.9	16.5
1991-1996	MAY	18.0	12.4	18.0	22.3	20.3
1991-1996	JUN	17.4	12.2	17.4	21.3	19.5
1991-1996	JUL	21.0	14.5	21.0	25.8	23.5
1991-1996	AUG	17.0	11.3	17.0	21.4	19.4
1991-1996	SEP	12.5	8.8	12.5	15.3	14.0
1991-1996	OCT	15.8	11.6	15.8	18.9	17.4
1991-1996	NOV	11.1	8.6	11.1	12.5	11.8
1991-1996	DEC	2.9	2.3	2.9	3.6	3.3
	ANNUAL	**139.9**	**99.7**	**139.9**	**169.4**	**155.5**

ADDITIONAL URF vOLUME DATA

			Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
REQ'D INPUTS:		Sidewalk Composition (%)		0.01	0.01	0.01	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sloped Roof Composition (%)		0.13	0.13	0.13	0.24	0.24	0.24	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Driveway Composition (%)		0.07	0.07	0.07	0.10	0.10	0.10	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Flat Roof Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Ind Park Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.15	0.15	0.15	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
URF AREA	100000	Sidewalk Composition (m^2)		1000	1000	1000	3000	3000	3000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ha	m^2	Sloped Roof Composition (m^2)		13000	13000	13000	24000	24000	24000	32000	32000	32000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Driveway Composition (m^2)		7000	7000	7000	10000	10000	10000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Flat Roof Composition (m^2)		0	0	0	0	0	0	0	0	0	17000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Ind Park Composition (m^2)		0	0	0	0	0	0	0	0	0	60000	15000	15000	15000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0
			Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
		Total Moisture Supply = SUPY (Impervious)																												
		AVERAGES:																												
		1991-1996	JAN	791.82	791.82	791.82	1395.09	1395.09	1395.09	1809.84	1809.84	1809.84	2902.64	980.11	980.11	980.11	188.48	188.48	188.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	FEB	231.18	231.18	231.18	407.31	407.31	407.31	528.40	528.40	528.40	847.64	286.22	286.22	286.22	55.04	55.04	55.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAR	582.81	582.81	582.81	1026.86	1026.86	1026.86	1332.14	1332.14	1332.14	2136.94	721.57	721.57	721.57	138.76	138.76	138.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	APR	1589.15	1589.15	1589.15	2799.93	2799.93	2799.93	3632.34	3632.34	3632.34	5826.89	1967.52	1967.52	1967.52	378.37	378.37	378.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAY	1520.50	1520.50	1520.50	2678.98	2678.98	2678.98	3475.43	3475.43	3475.43	5575.17	1882.53	1882.53	1882.53	362.02	362.02	362.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUN	1279.87	1279.87	1279.87	2255.01	2255.01	2255.01	2925.42	2925.42	2925.42	4692.87	1584.60	1584.60	1584.60	304.73	304.73	304.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUL	2034.35	2034.35	2034.35	3584.33	3584.33	3584.33	4649.94	4649.94	4649.94	7459.27	2518.72	2518.72	2518.72	484.37	484.37	484.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	AUG	1288.98	1288.98	1288.98	2271.06	2271.06	2271.06	2946.24	2946.24	2946.24	4726.26	1595.88	1595.88	1595.88	306.90	306.90	306.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	SEP	885.82	885.82	885.82	1560.73	1560.73	1560.73	2024.74	2024.74	2024.74	3248.01	1096.73	1096.73	1096.73	210.91	210.91	210.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	OCT	1714.55	1714.55	1714.55	3020.88	3020.88	3020.88	3918.98	3918.98	3918.98	6286.69	2122.78	2122.78	2122.78	408.23	408.23	408.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	NOV	1310.42	1310.42	1310.42	2308.83	2308.83	2308.83	2995.24	2995.24	2995.24	4805.01	1622.47	1622.47	1622.47	312.01	312.01	312.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	DEC	299.13	299.13	299.13	527.03	527.03	527.03	683.72	683.72	683.72	1096.80	370.35	370.35	370.35	71.22	71.22	71.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			ANNUAL	13528.57	13528.57	13528.57	23836.05	23836.05	23836.05	30922.43	30922.43	30922.43	49604.20	16749.47	16749.47	16749.47	3221.05	3221.05	3221.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Total SURO = SURO(Impervious)																												
		AVERAGES:																												
		1991-1996	JAN	750.232	750.232	750.232	1322.233	1322.233	1322.233	1715.643	1715.643	1715.643	2716.825	916.495	916.495	916.495	176.601	176.601	176.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	FEB	211.652	211.652	211.652	373.073	373.073	373.073	484.115	484.115	484.115	768.986	259.658	259.658	259.658	49.934	49.934	49.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	MAR	479.452	479.452	479.452	846.480	846.480	846.480	1099.503	1099.503	1099.503	1641.574	552.181	552.181	552.181	107.040	107.040	107.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	APR	1328.709	1328.709	1328.709	2345.791	2345.791	2345.791	3046.925	3046.925	3046.925	4519.835	1518.673	1518.673	1518.673	295.071	295.071	295.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	MAY	1220.443	1220.443	1220.443	2156.010	2156.010	2156.010	2801.492	2801.492	2801.492	4027.777	1350.077	1350.077	1350.077	263.633	263.633	263.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	JUN	991.050	991.050	991.050	1751.231	1751.231	1751.231	2275.891	2275.891	2275.891	3243.016	1086.530	1086.530	1086.530	212.373	212.373	212.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	JUL	1675.041	1675.041	1675.041	2958.539	2958.539	2958.539	3843.851	3843.851	3843.851	5580.032	1871.217	1871.217	1871.217	365.058	365.058	365.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	AUG	1005.931	1005.931	1005.931	1778.709	1778.709	1778.709	2312.531	2312.531	2312.531	3188.516	1065.623	1065.623	1065.623	209.359	209.359	209.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	SEP	673.820	673.820	673.820	1191.022	1191.022	1191.022	1548.123	1548.123	1548.123	2169.670	725.898	725.898	725.898	142.298	142.298	142.298	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	OCT	1423.208	1423.208	1423.208	2512.644	2512.644	2512.644	3263.664	3263.664	3263.664	4838.390	1625.759	1625.759	1625.759	315.857	315.857	315.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	NOV	1106.527	1106.527	1106.527	1952.470	1952.470	1952.470	2535.203	2535.203	2535.203	3846.431	1294.006	1294.006	1294.006	250.773	250.773	250.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	DEC	247.647	247.647	247.647	437.078	437.078	437.078	567.611	567.611	567.611	855.413	287.962	287.962	287.962	55.731	55.731	55.731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			ANNUAL	11113.712	11113.712	11113.712	19625.279	19625.279	19625.279	25494.549	25494.549	25494.549	37396.463	12554.077	12554.077	12554.077	2443.726	2443.726	2443.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Total IMPEV = IMPEV(Impervious)																												
		AVERAGES:																												
		1991-1996	JAN	32.94	32.94	32.94	57.99	57.99	57.99	75.20	75.20	75.20	122.82	41.47	41.47	41.47	7.98	7.98	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	FEB	28.30	28.30	28.30	49.37	49.37	49.37	63.65	63.65	63.65	140.66	48.37	48.37	48.37	8.95	8.95	8.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAR	105.43	105.43	105.43	184.01	184.01	184.01	237.33	237.33	237.33	501.09	170.89	170.89	170.89	32.18	32.18	32.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	APR	259.73	259.73	259.73	453.04	453.04	453.04	584.11	584.11	584.11	1295.11	444.81	444.81	444.81	82.53	82.53	82.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAY	305.44	305.44	305.44	532.09	532.09	532.09	685.49	685.49	685.49	1595.65	549.62	549.62	549.62	101.34	101.34	101.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUN	298.09	298.09	298.09	519.57	519.57	519.57	669.57	669.57	669.57	1531.47	526.95	526.95	526.95	97.38	97.38	97.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUL	356.03	356.03	356.03	620.19	620.19	620.19	798.96	798.96	798.96	1846.75	635.66	635.66	635.66	117.38	117.38	117.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	AUG	282.69	282.69	282.69	491.88	491.88	491.88	633.23	633.23	633.23	1524.93	525.54	525.54	525.54	96.79	96.79	96.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	SEP	214.94	214.94	214.94	374.65	374.65	374.65	482.83	482.83	482.83	1101.41	378.91	378.91	378.91	70.05	70.05	70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	OCT	277.14	277.14	277.14	483.66	483.66	483.66	623.79	623.79	623.79	1367.89	469.42	469.42	469.42	87.24	87.24	87.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	NOV	201.28	201.28	201.28	351.94	351.94	351.94	454.43	454.43	454.43	923.01	315.25	315.25	315.25	59.18	59.18	59.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	DEC	52.99	52.99	52.99	92.64	92.64	92.64	119.60	119.60	119.60	257.33	88.64	88.64	88.64	16.34	16.34	16.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			ANNUAL	2415.00	2415.00	2415.00	4211.01	4211.01	4211.01	5428.19	5428.19	5428.19	12208.11	4195.52	4195.52	4195.52	777.35	777.35	777.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

URF TOTAL INPUTS AND OUTPUTS

10Ha **Total Moisture Supply = SUPY (Pervious)+ SUPY (Impervious) (m^3)**

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	3891.1	3891.1	3891.1	3856.7	3856.7	3856.7	3830.9	3830.9	3830.9	3776.6	3878.6	3878.6	3878.6	3920.2	3920.2	3920.2	3931.9	3931.9	3931.9	3820.2	3820.2	3820.2	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996	FEB	1100.7	1100.7	1100.7	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.7	1100.7	1100.7	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.0	1101.0	1101.0	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996	MAR	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996	APR	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996	MAY	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996	JUN	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996	JUL	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996	AUG	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996	SEP	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996	OCT	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996	NOV	5116.7	5116.7	5116.7	5437.6	5437.6	5437.6	5678.4	5678.4	5678.4	6176.1	5229.1	5229.1	5229.1	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996	DEC	1428.6	1428.6	1428.6	1427.4	1427.4	1427.4	1426.5	1426.5	1426.5	1424.7	1428.2	1428.2	1428.2	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
	ANNUAL	63422.8	63422.8	63422.8	63708.3	63708.3	63708.3	63922.3	63922.3	63922.3	64364.0	63522.4	63522.4	63522.4	64571.9	64571.9	64571.9	64583.7	64583.7	64583.7	64471.5	64471.5	64471.5	64588.0	64588.0	64588.0	64588.0	64588.0
(m3) for a single Ha		**6342.3**	**6342.3**	**6342.3**	**6370.8**	**6370.8**	**6370.8**	**6392.2**	**6392.2**	**6392.2**	**6436.4**	**6352.2**	**6352.2**	**6352.2**	**6457.2**	**6457.2**	**6457.2**	**6458.4**	**6458.4**	**6458.4**	**6447.2**	**6447.2**	**6447.2**	**6458.8**	**6458.8**	**6458.8**	**6458.8**	**6458.8**

Total Runoff = SURO+IFWO (Pervious)+ SURO(Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1096.3	1182.0	1480.2	1814.8	1882.4	2114.5	2355.1	2411.8	2597.5	3429.1	1335.4	1406.2	1683.6	376.2	459.7	835.9	112.6	167.5	501.1	2850.2	3035.8	3218.4	34.7	157.2	655.7	34.7	157.3
1991-1996	FEB	309.8	322.1	379.8	512.7	522.5	570.5	664.5	673.8	715.6	974.1	379.7	390.6	451.9	105.6	117.5	208.8	30.6	37.1	91.9	797.5	857.1	908.9	7.5	27.8	168.4	7.5	27.8
1991-1996	MAR	699.5	712.1	796.9	1162.1	1174.2	1243.7	1507.3	1520.7	1580.6	2137.6	830.6	840.7	923.6	232.9	247.1	360.5	68.6	76.2	173.9	1644.2	1738.8	1884.6	5.7	32.3	184.6	5.7	32.3
1991-1996	APR	1943.1	2003.8	2363.0	3223.1	3279.1	3565.1	4178.5	4238.5	4471.7	5881.2	2290.4	2339.5	2684.4	650.7	721.0	1209.3	190.9	232.4	670.5	4674.7	4943.8	5309.2	33.3	159.8	740.0	33.3	159.8
1991-1996	MAY	1807.0	1919.2	2428.1	2983.6	3082.6	3475.4	3863.1	3961.0	4264.7	5313.6	2084.3	2174.1	2640.4	614.3	741.5	1385.3	178.4	263.5	933.1	4493.6	4754.4	5069.0	70.8	267.9	966.6	70.9	268.2
1991-1996	JUN	1474.9	1614.3	2011.3	2434.1	2555.5	2854.7	3151.7	3265.2	3491.6	4314.6	1694.2	1804.5	2180.2	503.6	658.1	1177.5	149.0	265.7	810.0	3731.7	3929.0	4140.8	56.9	262.9	827.4	57.0	263.6
1991-1996	JUL	2446.7	2594.2	3059.7	4063.7	4193.0	4564.6	5271.9	5394.0	5708.0	7313.9	2844.4	2961.1	3431.5	810.4	973.4	1614.5	237.6	320.8	812.0	6137.4	6493.2	6889.3	36.3	280.1	1075.0	36.3	281.5
1991-1996	AUG	1472.9	1576.0	1911.2	2447.5	2541.1	2804.4	3176.8	3268.5	3481.3	4261.2	1659.8	1737.6	2087.0	479.9	587.3	1061.0	138.9	190.8	568.7	3757.8	3944.0	4095.5	26.5	187.0	776.3	26.5	187.8
1991-1996	SEP	996.1	1055.8	1176.1	1650.6	1698.5	1792.6	2139.0	2179.0	2258.8	2902.4	1135.1	1187.5	1311.8	332.2	408.1	588.3	96.0	142.3	289.8	2369.4	2493.8	2626.5	28.2	132.7	381.2	28.2	132.4
1991-1996	OCT	2073.0	2158.7	2494.9	3447.4	3535.1	3798.0	4474.9	4572.3	4781.2	6304.5	2446.7	2511.0	2849.3	686.1	776.6	1247.6	197.2	207.5	333.6	5235.5	5519.3	5750.2	24.5	267.5	899.7	24.5	268.5
1991-1996	NOV	1612.9	1652.7	1843.3	2680.0	2716.0	2864.9	3477.1	3513.8	3634.2	4975.3	1930.6	1963.3	2137.1	544.1	608.0	949.1	157.6	191.2	454.2	4053.1	4305.1	4545.6	27.1	135.5	615.3	27.1	135.5
1991-1996	DEC	362.3	373.1	422.1	601.5	610.8	650.7	780.5	789.4	823.7	1111.4	432.3	442.2	486.8	122.0	138.6	207.9	35.3	44.4	98.5	898.5	960.2	1014.8	7.0	34.1	135.3	7.0	34.1
	ANNUAL	16300.3	17169.3	20371.1	27029.1	27798.4	30305.0	35050.3	35796.7	37815.8	48932.2	19072.5	19767.5	22874.2	5462.3	6440.9	10847.8	1592.8	2140.2	5746.2	40634.0	42976.3	45465.4	358.5	1944.7	7425.5	358.6	1948.7
(m3) for a single Ha		**1630.0**	**1716.9**	**2037.1**	**2702.9**	**2779.8**	**3030.5**	**3505.0**	**3579.7**	**3781.6**	**4893.2**	**1907.2**	**1976.7**	**2287.4**	**546.2**	**644.1**	**1084.8**	**159.3**	**214.0**	**574.6**	**4063.4**	**4297.6**	**4546.5**	**35.8**	**194.5**	**742.5**	**35.9**	**194.9**

Total Evapo = IMPEV(Impervious)+ TAET(Pervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	166.7	167.4	168.9	156.2	156.7	157.7	148.4	148.8	149.0	137.6	163.0	163.7	165.6	175.7	176.7	180.0	193.0	192.9	191.9	130.2	130.2	130.0	176.2	178.6	184.6	176.2	178.6
1991-1996	FEB	191.7	195.9	197.0	168.3	171.4	171.7	151.0	152.9	152.9	157.6	196.8	200.5	202.1	214.5	219.7	221.8	240.2	240.5	240.6	136.2	136.2	136.2	215.4	224.8	227.3	215.4	224.8
1991-1996	MAR	643.2	655.4	661.3	581.3	590.5	592.9	535.9	542.4	541.9	563.3	659.4	670.2	676.2	703.9	719.6	728.4	759.6	760.4	758.9	501.6	501.6	501.3	714.4	745.0	754.2	714.4	745.0
1991-1996	APR	2002.0	2047.8	2058.1	1721.4	1751.8	1755.6	1511.7	1530.0	1528.5	1473.7	2027.4	2069.7	2074.0	2278.4	2339.0	2346.3	2519.9	2526.0	2524.9	1312.1	1312.0	1309.0	2331.4	2431.4	2436.1	2331.4	2431.4
1991-1996	MAY	3664.4	3804.4	3779.9	2946.4	3038.1	3010.8	2406.3	2458.1	2429.7	1892.6	3597.4	3727.0	3662.8	4373.8	4559.9	4471.4	5201.4	5238.5	5214.2	1829.6	1825.2	1804.6	4460.4	4747.0	4581.1	4460.4	4747.0
1991-1996	JUN	4319.5	4404.4	4332.0	3401.6	3451.6	3391.6	2711.8	2731.0	2680.9	1863.2	4173.4	4255.2	4143.9	5225.9	5344.1	5189.0	6750.0	6773.6	6687.5	1953.2	1931.9	1886.3	5130.5	5298.1	5069.8	5130.5	5298.1
1991-1996	JUL	5096.9	5195.8	5160.5	4012.0	4074.7	4033.6	3193.1	3229.1	3180.8	2234.0	4934.6	5028.9	4929.9	6166.5	6302.0	6164.3	7825.0	7857.7	7707.5	2301.5	2286.3	2227.3	6112.5	6305.3	6134.5	6112.5	6305.2
1991-1996	AUG	4642.6	4804.8	4724.8	3619.5	3721.7	3650.2	2851.1	2901.7	2837.4	1879.4	4475.3	4627.7	4486.3	5660.2	5878.8	5681.4	7384.6	7428.6	7225.7	2025.3	2004.1	1932.3	5562.2	5880.0	5611.3	5562.2	5879.9
1991-1996	SEP	3321.1	3324.3	3223.7	2598.7	2593.7	2517.3	2053.8	2042.3	1983.5	1350.6	3195.0	3201.5	3078.7	4034.3	4043.9	3870.0	5459.2	5436.7	5098.6	1455.4	1424.5	1384.2	3842.1	3843.4	3628.3	3842.1	3843.3
1991-1996	OCT	2654.8	2689.9	2693.1	2201.2	2222.2	2220.5	1860.7	1870.8	1864.3	1587.3	2627.1	2661.3	2654.7	3101.4	3150.4	3142.8	3813.1	3812.6	3718.7	1502.9	1500.6	1485.6	3068.5	3143.0	3178.8	3068.5	3142.9
1991-1996	NOV	2972.3	2840.5	2546.6	2393.2	2300.9	2070.5	1963.0	1895.9	1709.1	1127.7	2802.2	2683.9	2417.9	1336.2	1348.7	1376.1	1456.7	1456.5	1453.8	930.4	930.1	928.5	1349.8	1376.6	1427.6	1349.8	1376.6
1991-1996	DEC	363.0	369.4	384.0	319.5	324.5	335.1	287.2	291.3	298.0	290.3	370.2	375.8	389.6	406.0	414.0	433.8	485.6	485.5	485.3	257.1	257.0	256.0	393.8	411.9	447.9	393.8	411.9
	ANNUAL	30024.7	30486.7	29917.6	24088.9	24367.6	23879.6	19630.4	19751.4	19316.3	14543.5	29212.0	29655.8	28874.3	33672.3	34492.6	33802.9	42088.0	42208.9	41299.4	14236.2	14144.2	13893.7	33357.0	34584.9	33681.3	33357.1	34584.7
(m3) for a single Ha		**3002.5**	**3048.7**	**2991.8**	**2408.9**	**2436.8**	**2388.0**	**1963.0**	**1975.1**	**1931.6**	**1454.3**	**2921.2**	**2965.6**	**2887.4**	**3367.2**	**3449.3**	**3380.3**	**4208.8**	**4220.9**	**4129.9**	**1423.6**	**1414.4**	**1389.4**	**3335.7**	**3458.5**	**3368.1**	**3335.7**	**3458.5**

(AGWO)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6
1991-1996	FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8
1991-1996	MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7
1991-1996	APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3
1991-1996	MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1
1991-1996	JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0
1991-1996	JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0
1991-1996	AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8
1991-1996	SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5
1991-1996	OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4
1991-1996	NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6
1991-1996	DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5
	ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3
(m3) for a single Ha		**1524.4**	**1426.5**	**1222.9**	**1116.2**	**1040.7**	**883.9**	**812.6**	**751.4**	**627.0**	**80.5**	**1361.2**	**1276.8**	**1099.0**	**1978.1**	**1856.1**	**1603.9**	**1745.8**	**1674.6**	**1471.2**	**729.6**	**568.4**	**404.6**	**2325.7**	**2149.1**	**1857.5**	**2325.7**	**2148.8**

(IGWI)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1
1991-1996	FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5
1991-1996	MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1
1991-1996	APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9
1991-1996	MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3
1991-1996	JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8
1991-1996	JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0
1991-1996	AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0
1991-1996	SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9
1991-1996	OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4
1991-1996	NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1
1991-1996	DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4
	ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2
(m3) for a single Ha		**241.3**	**224.7**	**190.1**	**176.8**	**164.0**	**137.5**	**128.8**	**118.4**	**97.7**	**12.7**	**215.4**	**201.1**	**170.8**	**319.0**	**298.9**	**256.3**	**279.5**	**268.0**	**233.8**	**117.3**	**91.6**	**65.2**	**375.9**	**346.6**	**297.7**	**375.9**	**346.5**

Annual Water Balance
Volume for single Ha (m3)

Paramter (m3)	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd
SUPY	6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2	6352.2	6457.2	6457.2	6457.2
RO	1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7	2287.4	546.2	644.1	1084.8
ET	3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6	2887.4	3367.2	3449.3	3380.3
AGWO	1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8	1099.0	1978.1	1856.1	1603.9
IGWI	241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1	170.8	319.0	298.9	256.3

Paramter (m3)	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
SUPY	6458.4	6458.4	6458.4	6447.2	6447.2	6447.2	6458.8	6458.8	6458.8	6458.8	6458.8	6458.8	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
RO	159.3	214.0	574.6	743.3	977.5	1226.4	35.8	194.5	742.5	35.9	194.9	747.6	614.0	641.8	756.2	82.1	123.8	293.5
ET	4208.8	4220.9	4129.9	2751.7	2742.5	2717.4	3335.7	3458.5	3368.1	3335.7	3458.5	3367.8	3367.0	3376.3	3341.3	3619.7	3633.7	3583.0
AGWO	1745.8	1674.6	1471.2	2721.6	2560.5	2396.7	2325.7	2149.1	1857.5	2325.7	2148.8	1853.7	2381.4	2354.5	2293.4	2620.7	2580.5	2488.8
IGWI	279.5	268.0	233.8	117.3	91.6	65.2	375.9	346.6	297.7	375.9	346.5	297.1	66.2	61.7	51.4	99.3	92.5	77.1

REARRANGED

Paramter (m3)	SUPY	RO	ET	AGWO	IGWI
RLD5ab	6342.3	1630.0	3002.5	1524.4	241.3
RLD5bc	6342.3	1716.9	3048.7	1426.5	224.7
RLD5cd	6342.3	2037.1	2991.8	1222.9	190.1
RMD5ab	6370.8	2702.9	2408.9	1116.2	176.8
RMD5bc	6370.8	2779.8	2436.8	1040.7	164.0
RMD5cd	6370.8	3030.5	2388.0	883.9	137.5
RHD5ab	6392.2	3505.0	1963.0	812.6	128.8
RHD5bc	6392.2	3579.7	1975.1	751.4	118.4
RHD5cd	6392.2	3781.6	1931.6	627.0	97.7
CSMbc	6436.4	4893.2	1454.3	80.5	12.7
EISab	6352.2	1907.2	2921.2	1361.2	215.4
EISbc	6352.2	1976.7	2965.6	1276.8	201.1
EIScd	6352.2	2287.4	2887.4	1099.0	170.8
OPLab	6457.2	546.2	3367.2	1978.1	319.0
OPLbc	6457.2	644.1	3449.3	1856.1	298.9
OPLcd	6457.2	1084.8	3380.3	1603.9	256.3
OVLab	6458.4	159.3	4208.8	1745.8	279.5
OVLbc	6458.4	214.0	4220.9	1674.6	268.0
OVLcd	6458.4	574.6	4129.9	1471.2	233.8
THCab	6447.2	743.3	2751.7	2721.6	117.3
THCbc	6447.2	977.5	2742.5	2560.5	91.6
THCcd	6447.2	1226.4	2717.4	2396.7	65.2
AGT0ab	6458.8	35.8	3335.7	2325.7	375.9
AGT0bc	6458.8	194.5	3458.5	2149.1	346.6
AGT0cd	6458.8	742.5	3368.1	1857.5	297.7
AGPab	6458.8	35.9	3335.7	2325.7	375.9
AGP0bc	6458.8	194.9	3458.5	2148.8	346.5
AGP0cd	6458.8	747.6	3367.8	1853.7	297.1
IPRab	6413.6	614.0	3367.0	2381.4	66.2
IPRbc	6413.6	641.8	3376.3	2354.5	61.7
IPRcd	6413.6	756.2	3341.3	2293.4	51.4
IPEab	6399.3	82.1	3619.7	2620.7	99.3
IPEbc	6399.3	123.8	3633.7	2580.5	92.5
IPEcd	6399.3	293.5	3583.0	2488.8	77.1

%ET

5	10	20	30	40	50

Required LID Volumes	Required LID Volumes
3270.4	3320.1

TO BE INFLITRATED

Required LID Volumes IPR	Required LID Volumes IPE/Roads
3270.4	3320.1

ACTUAL INFILTRATED VALUES

Required LID Volumes IPR	Required LID Volumes IPE/Roads
1962.3	1992.1

VOLUME EVAPORATED

Required LID Volumes IPR	Required LID Volumes IPE/Roads
1308.2	1328.1

RUNOFF DEFICIT

Required LID Volumes IPR	Required LID Volumes IPE/Roads
3270.4	3320.1

REQ INPUTS:HSPF MODEL

LAND USE IN HA

SUBCATCHMENTS

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	3.60	40.85	15.99	5.25	17.31	18.63	45.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	2.00	0.00	38.57	0.00	0.00	0.00	0.00	1.46	0.00	0.00	3.14	2.63	2.20	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	2.20	29.35	1.81	1.35	2.21	2.45	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	6.00	0.00	42.70	0.00	0.00	0.00	0.00	2.18	0.00	0.00	10.00	7.05	21.06	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	6.30	0.00	25.93	0.00	0.00	0.00	0.00	1.69	0.00	0.00	9.12	6.91	20.32	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	1.16					9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.84					5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	1.05					0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.75					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	1.97	1.13				29.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.55	0.00	0.00	0.00	0.00	0.29	0.00	0.00	1.36	0.08	0.18	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	18.88			1.72		2.19	6.00	19.50	0.00	21.80	4.90	0.00	4.00	3.40	2.50	0.00	0.00	0.00	4.02	0.00	0.00	0.00	0.00	0.76	7.20	17.90	0.51	0.00	0.00	1.70
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	13.57			0.22		1.16	3.90	16.10	0.00	49.60	9.70	0.00	18.30	16.40	11.00	0.00	0.00	0.00	4.45	0.00	0.00	0.00	0.00	1.13	14.80	70.60	1.63	0.00	0.00	9.30
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00			0.00		0.00	1.50	7.30	0.00	47.60	12.00	0.00	30.90	19.20	21.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.88	44.30	91.50	1.48	0.00	0.00	8.70
Utility/Transport/Parks	2	OPL0ab	4001	4501	8.50	9.60	0.60	9.40	20.61			3.17	3.13	22.44	17.70	18.10	7.80	6.30	1.10	3.40	1.10	1.90	0.50	0.00	0.20	5.40	17.24	1.60	0.80	3.50	5.10	0.59	2.20	0.10	0.04	0.14	1.39	0.00
Utility/Transport/Parks	2	OPL0bc	4002	4502	1.10	3.60	0.20	5.90	14.81			0.40	0.41	11.93	11.50	15.00	11.30	14.40	2.20	9.40	5.00	9.30	2.40	0.00	0.60	12.90	19.09	7.90	1.60	9.60	16.00	0.88	4.60	0.50	0.13	0.38	13.30	0.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.50	3.20	0.20	3.30	0.00			0.00	0.00	0.00	4.30	6.80	6.10	13.80	2.70	8.30	8.40	10.80	4.60	0.00	0.70	17.70	11.59	17.60	2.50	9.10	15.20	0.69	13.70	0.70	0.12	0.37	12.83	0.00
Valley Segment	2	OVL0ab	4101	4601	7.40	0.60	0.00	2.40	43.73	3.12	3.72				0.00	1.40	0.00	0.90	0.40	0.00	0.00	0.20	0.20	10.56	0.00	0.00	9.15	0.20	0.90	1.10	0.20	5.90	0.90	0.40	10.97	12.49	1.03	0.10
Valley Segment	2	OVL0bc	4102	4602	1.00	0.20	0.00	1.50	31.42	0.35	0.96				0.00	1.10	0.00	2.00	0.90	0.00	0.00	0.80	0.90	22.23	0.00	0.00	10.13	1.10	1.80	3.00	0.70	8.82	1.80	1.40	34.97	33.51	9.83	0.40
Valley Segment	2	OVL0cd	4103	4603	0.40	0.20	0.00	0.80	0.00	0.00	0.00				0.00	0.50	0.00	1.90	1.10	0.00	0.00	1.00	1.80	22.11	0.00	0.00	6.15	2.30	2.70	2.90	0.70	6.85	5.30	1.80	31.88	32.84	9.48	0.40
Roads	2	THC0ab	5001	5501	0.60	5.00	1.40	2.80	27.62	5.93	2.47	12.48	11.02	48.94	6.90	2.40	2.30	3.90	0.10	0.90	0.30	0.80	0.50		0.90	0.40		0.10		0.10	0.40		0.70	0.40				0.50
Roads	2	THC0bc			0.1	1.9	0.4	1.8							4.50	2.00	3.40	8.80	0.30	2.50	1.50	3.80	2.40		2.60	1.00		0.40		0.30	1.20		1.50	1.40				3.10
Roads and ROW	2	THC0cd	5003	5503	0.00	1.70	0.40	1.00							1.70	0.90	1.80	8.50	0.30	2.20	2.60	4.40	4.50	2.22	2.70	1.30	44.33	1.00	0.00	0.30	1.10	3.95	4.40	1.90	10.88	10.19	13.04	2.90
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	5.30	103.73	44.65	1.93				11.80	19.50	7.00	10.50	4.00	1.80	2.00	3.10	1.50	29.89	3.90	0.00	36.16	0.00	0.00	0.00	0.00	6.31	0.00	4.00	41.88	42.24	9.95	0.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	3.30	74.53	5.06	0.50				7.70	16.10	10.10	23.80	7.80	5.10	9.30	15.10	6.60	62.92	11.60	0.00	40.04	0.00	0.00	0.00	0.00	9.43	0.00	15.80	133.55	113.28	95.04	0.00
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	1.90	0.00	0.00	0.00				2.90	7.30	5.50	22.90	9.70	4.50	15.70	17.60	12.50	62.58	12.30	0.00	24.31	0.00	0.00	0.00	0.00	7.33	0.00	20.50	121.78	111.03	91.73	0.00
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00			3.53				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00			0.91				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	24.60							2.90	14.60	5.70	7.50	0.00	7.40	0.00	0.00	0.00		0.00	5.60		1.40	5.10	6.60	3.50		12.80	1.30				0.20
Industrial/Prestige		IPRbc			0.00	0.00	0.00	15.50							1.90	12.10	8.20	17.00	0.00	20.40	0.00	0.00	0.00		0.00	13.40		7.20	10.40	18.00	11.00		26.50	4.90				1.00
Industrial/Prestige		IPRcd			0.00	0.00	0.00	8.70							0.70	5.50	4.40	16.30	0.00	17.90	0.00	0.00	0.00		0.00	18.30		16.10	15.80	17.10	10.40		79.20	6.40				0.90
Prestige Business Park		IPEab			52.20	46.70	14.30	26.40							10.80	22.10	4.10	21.30	0.60	1.00	0.10	2.10	2.70		1.60	4.80		2.40	2.90	4.60	8.50		10.00	1.30				3.50
Prestige Business Park		IPEbc			7.00	17.70	4.50	16.60							7.00	18.20	6.00	48.30	1.20	2.70	0.60	10.20	11.80		4.60	11.50		12.40	5.90	12.50	26.80		20.60	5.20				19.80
Prestige Business Park		IPEcd			3.10	15.60	4.40	9.40							2.60	8.30	3.20	46.40	1.50	2.40	1.10	11.90	22.50		4.90	15.80		27.50	8.90	11.90	25.40		61.60	6.80				18.60
		Sum URF AREAS			**81.9**	**106.0**	**26.4**	**147.7**	**424.9**	**78.0**	**20.6**	**37.5**	**35.6**	**200.9**	**106.3**	**214.8**	**86.9**	**393.5**	**60.5**	**89.9**	**100.9**	**132.0**	**109.9**	**214.0**	**60.9**	**108.1**	**439.7**	**99.2**	**59.3**	**100.6**	**126.2**	**59.1**	**312.1**	**254.8**	**413.9**	**373.2**	**301.4**	**71.1**

LAND USE IN %

SUBCATCHMENTS

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	0.02	0.10	0.20	0.25	0.46	0.52	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.01	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	0.01	0.07	0.02	0.07	0.06	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.02	0.02	0.07	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.02	0.07	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05	0.00	0.01	0.06	0.09	0.00	0.06	0.08	0.00	0.04	0.03	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.00	0.00	0.00	0.02
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.01	0.04	0.07	0.00	0.13	0.16	0.00	0.18	0.12	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.05	0.28	0.00	0.00	0.00	0.13
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.12	0.20	0.00	0.31	0.15	0.19	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.14	0.36	0.00	0.00	0.00	0.12
Utility/Transport/Parks	2	OPL0ab	4001	4501	0.10	0.09	0.02	0.06	0.05	0.00	0.00	0.08	0.09	0.11	0.17	0.08	0.09	0.02	0.02	0.04	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.02	0.01	0.03	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Utility/Transport/Parks	2	OPL0bc	4002	4502	0.01	0.03	0.01	0.04	0.03	0.00	0.00	0.01	0.01	0.06	0.11	0.07	0.13	0.04	0.04	0.10	0.05	0.07	0.02	0.00	0.01	0.12	0.04	0.08	0.03	0.10	0.13	0.01	0.01	0.00	0.00	0.00	0.04	0.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.01	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.07	0.04	0.04	0.09	0.08	0.08	0.04	0.00	0.01	0.16	0.03	0.18	0.04	0.09	0.12	0.01	0.04	0.00	0.00	0.00	0.04	0.00
Valley Segment	2	OVL0ab	4101	4601	0.09	0.01	0.00	0.02	0.10	0.04	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.10	0.00	0.00	0.03	0.03	0.00	0.00
Valley Segment	2	OVL0bc	4102	4602	0.01	0.00	0.00	0.01	0.07	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.10	0.00	0.00	0.02	0.01	0.03	0.03	0.01	0.15	0.01	0.01	0.08	0.09	0.03	0.01
Valley Segment	2	OVL0cd	4103	4603	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.02	0.10	0.00	0.00	0.01	0.02	0.05	0.03	0.01	0.12	0.02	0.01	0.08	0.09	0.03	0.01
Roads	2	THC0ab	5001	5501	0.01	0.05	0.05	0.02	0.07	0.08	0.12	0.33	0.31	0.24	0.06	0.01	0.03	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Roads	2	THC0bc			0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.04	0.02	0.00	0.03	0.01	0.03	0.02	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.04
Roads and ROW	2	THC0cd	5003	5503	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.02	0.03	0.03	0.04	0.01	0.04	0.01	0.10	0.01	0.00	0.00	0.01	0.07	0.01	0.01	0.03	0.03	0.04	0.04
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	0.04	0.24	0.57	0.09	0.00	0.00	0.00	0.11	0.09	0.08	0.03	0.07	0.02	0.02	0.02	0.01	0.14	0.06	0.00	0.08	0.00	0.00	0.00	0.00	0.11	0.00	0.02	0.10	0.11	0.03	0.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	0.02	0.18	0.06	0.02	0.00	0.00	0.00	0.07	0.07	0.12	0.06	0.13	0.06	0.09	0.11	0.06	0.29	0.19	0.00	0.09	0.00	0.00	0.00	0.00	0.16	0.00	0.06	0.32	0.30	0.32	0.00
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.06	0.06	0.16	0.05	0.16	0.13	0.11	0.29	0.20	0.00	0.06	0.00	0.00	0.00	0.00	0.12	0.00	0.08	0.29	0.30	0.30	0.00
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.07	0.02	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.09	0.07	0.03	0.00	0.04	0.01	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRbc			0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.09	0.04	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.07	0.18	0.18	0.09	0.00	0.08	0.02	0.00	0.00	0.00	0.01
Industrial/Prestige		IPRcd			0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.04	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.16	0.27	0.17	0.08	0.00	0.25	0.03	0.00	0.00	0.00	0.01
Prestige Business Park		IPEab			0.64	0.44	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.05	0.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.04	0.00	0.02	0.05	0.05	0.07	0.00	0.03	0.01	0.00	0.00	0.00	0.05
Prestige Business Park		IPEbc			0.09	0.17	0.17	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.07	0.12	0.02	0.03	0.01	0.08	0.11	0.00	0.08	0.11	0.00	0.13	0.10	0.12	0.21	0.00	0.07	0.02	0.00	0.00	0.00	0.28
Prestige Business Park		IPEcd			0.04	0.15	0.17	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.12	0.02	0.03	0.01	0.09	0.20	0.00	0.08	0.15	0.00	0.28	0.15	0.12	0.20	0.00	0.20	0.03	0.00	0.00	0.00	0.26
		Sum URF AREAS			**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

SUBCATCHMENT

SUMMARY OF WATER BALANCES FOR EACH SUBCATCHMENT

SUBCATCHMENT 1			SUBCATCHMENT 2			SUBCATCHMENT 3		
S (m3)	S (m3)	S (mm)	W (m3)	w (m3)	W (mm)	T (m3)	T (m3)	T (mm)
81.9	**81.9**		106.3	**106.3**		108.1	**108.1**	
525241.4	**525241.4**	**641.3**	683687.0	**683687.0**	**643.2**	694510.5	**694510.5**	**642.5**
14120.4	**14120.4**	**17.2**	66054.8	**66054.8**	**62.1**	65659.8	**65659.8**	**60.7**
298540.5	**298540.5**	**364.5**	351295.4	**351295.4**	**330.5**	370904.1	**370904.1**	**343.1**
199309.3	**199309.3**	**243.4**	227626.6	**227626.6**	**214.1**	238213.5	**238213.5**	**220.4**
11750.0	**11750.0**	**14.3**	24084.0	**24084.0**	**22.7**	15234.8	**15234.8**	**14.1**
106.0	**106.0**		214.8	**214.8**		439.7	**439.7**	
679746.8	**679746.8**	**641.3**	1378304.5	**1378304.5**	**641.7**	2818679.9	**2818679.9**	**641.0**
29547.4	**29547.4**	**27.9**	154870.2	**154870.2**	**72.1**	691622.1	**691622.1**	**157.3**
372595.5	**372595.5**	**351.5**	718167.3	**718167.3**	**334.3**	1300389.4	**1300389.4**	**295.7**
261916.4	**261916.4**	**247.1**	443428.5	**443428.5**	**206.4**	697329.9	**697329.9**	**158.6**
13577.7	**13577.7**	**12.8**	43608.8	**43608.8**	**20.3**	97159.5	**97159.5**	**22.1**
26.4	**26.4**		86.9	**86.9**		99.2	**99.2**	
169105.0	**169105.0**	**640.5**	559523.1	**559523.1**	**643.9**	637017.0	**637017.0**	**642.2**
5617.6	**5617.6**	**21.3**	45803.7	**45803.7**	**52.7**	55793.3	**55793.3**	**56.2**
93301.2	**93301.2**	**353.4**	292899.5	**292899.5**	**337.1**	346300.3	**346300.3**	**349.1**
67711.3	**67711.3**	**256.5**	190832.0	**190832.0**	**219.6**	219265.8	**219265.8**	**221.0**
2705.7	**2705.7**	**10.2**	18214.9	**18214.9**	**21.0**	13254.3	**13254.3**	**13.4**
147.7	**147.7**		393.5	**393.5**		59.3	**59.3**	
947716.3	**947716.3**	**641.6**	2519807.3	**2519807.3**	**640.4**	380528.2	**380528.2**	**641.7**
71892.0	**71892.0**	**48.7**	370975.2	**370975.2**	**94.3**	31594.1	**31594.1**	**53.3**
508941.2	**508941.2**	**344.6**	1294229.4	**1294229.4**	**328.9**	208103.3	**208103.3**	**350.9**
340953.2	**340953.2**	**230.8**	777187.2	**777187.2**	**197.5**	134963.2	**134963.2**	**227.6**
20653.6	**20653.6**	**14.0**	67259.3	**67259.3**	**17.1**	6050.8	**6050.8**	**10.2**
424.9	**424.9**		60.5	**60.5**		100.6	**100.6**	
2731762.2	**2731762.2**	**643.0**	387707.8	**387707.8**	**640.8**	646097.4	**646097.4**	**642.2**
274514.6	**274514.6**	**64.6**	72040.6	**72040.6**	**119.1**	55139.0	**55139.0**	**54.8**
1435702.2	**1435702.2**	**337.9**	194983.5	**194983.5**	**322.3**	351684.4	**351684.4**	**349.6**
824711.7	**824711.7**	**194.1**	100901.1	**100901.1**	**166.8**	223551.2	**223551.2**	**222.2**
123544.6	**123544.6**	**29.1**	14805.6	**14805.6**	**24.5**	13123.7	**13123.7**	**13.0**
78.0	**78.0**		89.9	**89.9**		126.2	**126.2**	
501875.0	**501875.0**	**643.1**	578117.4	**578117.4**	**643.1**	810273.1	**810273.1**	**642.1**
42265.1	**42265.1**	**54.2**	59417.1	**59417.1**	**66.1**	61525.7	**61525.7**	**48.8**
252536.3	**252536.3**	**323.6**	301671.3	**301671.3**	**335.6**	440643.5	**440643.5**	**349.2**
163935.7	**163935.7**	**210.1**	197381.6	**197381.6**	**219.6**	286248.7	**286248.7**	**226.8**
24476.8	**24476.8**	**31.4**	13485.8	**13485.8**	**15.0**	17667.8	**17667.8**	**14.0**
20.6	**20.6**		100.9	**100.9**		59.1	**59.1**	
132380.7	**132380.7**	**642.0**	645842.5	**645842.5**	**640.1**	380945.7	**380945.7**	**644.2**
13979.7	**13979.7**	**67.8**	146239.6	**146239.6**	**144.9**	37448.7	**37448.7**	**63.3**
69473.5	**69473.5**	**336.9**	314724.5	**314724.5**	**311.9**	211375.0	**211375.0**	**357.5**
40481.3	**40481.3**	**196.3**	156935.0	**156935.0**	**155.5**	107922.0	**107922.0**	**182.5**
5697.9	**5697.9**	**27.6**	22958.5	**22958.5**	**22.8**	16027.7	**16027.7**	**27.1**
37.5	**37.5**		132.0	**132.0**		312.1	**312.1**	
239637.4	**239637.4**	**638.9**	846825.2	**846825.2**	**641.5**	1997769.6	**1997769.6**	**640.1**
46990.7	**46990.7**	**125.3**	133091.9	**133091.9**	**100.8**	280511.6	**280511.6**	**89.9**
110781.9	**110781.9**	**295.3**	431063.5	**431063.5**	**326.6**	1042661.3	**1042661.3**	**334.1**
73141.2	**73141.2**	**195.0**	244416.9	**244416.9**	**185.2**	648112.6	**648112.6**	**207.7**
7683.0	**7683.0**	**20.5**	28404.2	**28404.2**	**21.5**	34361.5	**34361.5**	**11.0**
35.6	**35.6**		109.9	**109.9**		254.8	**254.8**	
227601.4	**227601.4**	**638.6**	703870.4	**703870.4**	**640.4**	1625114.2	**1625114.2**	**637.8**
44738.5	**44738.5**	**125.5**	109771.0	**109771.0**	**99.9**	419493.6	**419493.6**	**164.6**
105682.3	**105682.3**	**296.5**	361540.4	**361540.4**	**329.0**	782722.1	**782722.1**	**307.2**
68839.4	**68839.4**	**193.2**	210561.8	**210561.8**	**191.6**	376628.1	**376628.1**	**147.8**
7459.6	**7459.6**	**20.9**	19350.4	**19350.4**	**17.6**	50183.7	**50183.7**	**19.7**
200.9	**200.9**		214.0	**214.0**		413.9	**413.9**	
1286534.0	**1286534.0**	**640.4**	1381706.8	**1381706.8**	**645.8**	2670029.9	**2670029.9**	**645.1**
363474.5	**363474.5**	**180.9**	84293.4	**84293.4**	**39.4**	215417.4	**215417.4**	**52.0**
551066.8	**551066.8**	**274.3**	768088.6	**768088.6**	**359.0**	1448604.5	**1448604.5**	**350.0**
327103.3	**327103.3**	**162.8**	416464.4	**416464.4**	**194.6**	796984.6	**796984.6**	**192.6**
36595.4	**36595.4**	**18.2**	66202.3	**66202.3**	**30.9**	124477.5	**124477.5**	**30.1**
#N/A	**#N/A**		60.9	**60.9**		373.2	**373.2**	
			390941.2	**390941.2**	**641.9**	2408063.2	**2408063.2**	**645.3**
			47840.6	**47840.6**	**78.6**	178130.6	**178130.6**	**47.7**
			199817.9	**199817.9**	**328.1**	1317239.1	**1317239.1**	**353.0**
			122627.0	**122627.0**	**201.4**	722701.7	**722701.7**	**193.7**
			14081.1	**14081.1**	**23.1**	112790.7	**112790.7**	**30.2**
						301.4	**301.4**	
						1941687.6	**1941687.6**	**644.1**
						216185.4	**216185.4**	**71.7**
						1017167.0	**1017167.0**	**337.4**
						567544.8	**567544.8**	**188.3**
						86815.6	**86815.6**	**28.8**
						71.1	**71.1**	
						454457.9	**454457.9**	**639.2**
						58458.4	**58458.4**	**82.2**
						237503.5	**237503.5**	**334.0**
						152883.8	**152883.8**	**215.0**
						8218.3	**8218.3**	**11.6**

Sulfur

	S-5	**S-6**	**S-7**	**S-8**	**S-9**	**S-10**	**S-11**	**S-12**	**S-13a**	**S-13b**
AREA (ha)	**81.9**	**106.0**	**26.4**	**147.7**	**424.9**	**78.0**	**20.6**	**37.5**	**35.6**	**200.9**
SUPPLY	641.3	641.3	640.5	641.6	643.0	643.1	642.0	638.9	638.6	640.4
RO	17.2	27.9	21.3	48.7	64.6	54.2	67.8	125.3	125.5	180.9
ET	364.5	351.5	353.4	344.6	337.9	323.6	336.9	295.3	296.5	274.3
AGWO	243.4	247.1	256.5	230.8	194.1	210.1	196.3	195.0	193.2	162.8
IGWI	14.3	12.8	10.2	14.0	29.1	31.4	27.6	20.5	20.9	18.2
Error (%)	0.3	0.3	-0.1	0.6	2.7	3.7	2.1	0.4	0.4	0.6

Welland

	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-23**	**W-24**
AREA (ha)	**106.3**	**214.8**	**86.9**	**393.5**	**60.5**	**89.9**	**100.9**	**132.0**	**109.9**	**214.0**	**60.9**
SUPPLY	643.2	641.7	643.9	640.4	640.8	643.1	640.1	641.5	640.4	645.8	641.9
RO	62.1	72.1	52.7	94.3	119.1	66.1	144.9	100.8	99.9	39.4	78.6
ET	330.5	334.3	337.1	328.9	322.3	335.6	311.9	326.6	329.0	359.0	328.1
AGWO	214.1	206.4	219.6	197.5	166.8	219.6	155.5	185.2	191.6	194.6	201.4
IGWI	22.7	20.3	21.0	17.1	24.5	15.0	22.8	21.5	17.6	30.9	23.1
Error (%)	2.1	1.3	2.1	0.4	1.3	1.1	0.8	1.2	0.4	3.4	1.7

Twenty-Mile

	T-25	**T-26**	**T-27**	**T-28**	**T-29**	**T-30**	**T-31**	**T-32**	**T-33**	**T-34**	**T-35**	**T-36**	**T-37**
AREA (ha)	**108.1**	**439.7**	**99.2**	**59.3**	**100.6**	**126.2**	**59.1**	**312.1**	**254.8**	**413.9**	**373.2**	**301.4**	**71.1**
SUPPLY	642.5	641.0	642.2	641.7	642.2	642.1	644.2	640.1	637.8	645.1	645.3	644.1	639.2
RO	60.7	157.3	56.2	53.3	54.8	48.8	63.3	89.9	164.6	52.0	47.7	71.7	82.2
ET	343.1	295.7	349.1	350.9	349.6	349.2	357.5	334.1	307.2	350.0	353.0	337.4	334.0
AGWO	220.4	158.6	221.0	227.6	222.2	226.8	182.5	207.7	147.8	192.6	193.7	188.3	215.0
IGWI	14.1	22.1	13.4	10.2	13.0	14.0	27.1	11.0	19.7	30.1	30.2	28.8	11.6
Error (%)	0.6	1.1	0.4	0.0	0.4	0.5	2.1	-0.4	-0.2	3.2	3.2	2.8	-0.6

Sulfur											
	S-5	**S-6**	**S-7**	**S-8**	**S-9**	**S-10**	**S-11**	**S-12**	**S-13a**	**S-13b**	**AVERAGE**
AREA (ha)	82	106	26	148	425	78	21	38	36	201	
SUPPLY (mm)	641	641	641	642	643	643	642	639	639	640	641
RO (mm)	17	28	21	49	65	54	68	125	126	181	73
ET (mm)	365	352	353	345	338	324	337	295	297	274	328
AGWO (mm)	243	247	256	231	194	210	196	195	193	163	
IGWI (mm)	14	13	10	14	29	31	28	20	21	18	
Infil (mm)	258	260	267	245	223	241	224	215	214	181	233
Error (%)	0.29	4.77	1.19	2.25	2.57	3.53	2.18	1.14	1.07	0.89	

Welland												
	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-23**	**W-24**	**AVERAGE**
AREA (ha)	106	215	87	394	61	90	101	132	110	214	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	646	642	642
RO (mm)	62	72	53	94	119	66	145	101	100	39	79	85
ET (mm)	330	334	337	329	322	336	312	327	329	359	328	331
AGWO (mm)	214	206	220	198	167	220	156	185	192	195	201	
IGWI (mm)	23	20	21	17	24	15	23	22	18	31	23	
Infil (mm)	237	227	241	215	191	235	178	207	209	226	224	215
Error (%)	2.14	3.77	3.54	2.36	2.58	3.28	2.69	3.01	2.94	3.36	2.31	

Twenty-Mile														
	T-25	**T-26**	**T-27**	**T-28**	**T-29**	**T-30**	**T-31**	**T-32**	**T-33**	**T-34**	**T-35**	**T-36**	**T-37**	**AVERAGE**
AREA (ha)	108	440	99	59	101	126	59	312	255	414	373	301	71	
SUPPLY (mm)	642	641	642	642	642	642	644	640	638	645	645	644	639	642
RO (mm)	61	157	56	53	55	49	63	90	165	52	48	72	82	71
ET (mm)	343	296	349	351	350	349	357	334	307	350	353	337	334	343
AGWO (mm)	220	159	221	228	222	227	183	208	148	193	194	188	215	
IGWI (mm)	14	22	13	10	13	14	27	11	20	30	30	29	12	
Infil (mm)	234	181	234	238	235	241	210	219	168	223	224	217	227	219
Error (%)	0.65	1.14	0.38	-0.05	0.40	0.52	2.15	-0.39	-0.24	3.17	3.21	2.78	-0.57	

Sulphur					
	S-5	S-6	S-7	S-8	AVERAGE
AREA (ha)	82	106	26	148	
SUPPLY (mm)	641	641	641	642	641
RO (mm)	17	28	21	49	29
ET (mm)	365	352	353	345	354
INFIL (mm)	258	260	267	245	257

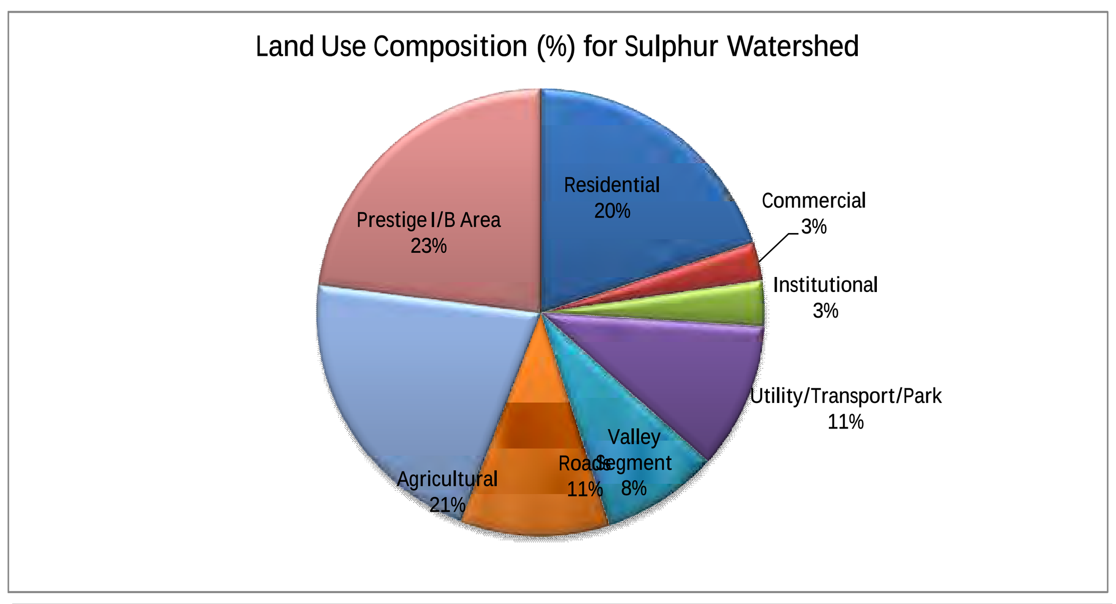
Welland											
	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-24	AVERAGE
AREA (ha)	106	215	87	394	61	90	101	132	110	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	642	642
RO (mm)	62	72	53	94	119	66	145	101	100	79	89
ET (mm)	330	334	337	329	322	336	312	327	329	328	328
INFIL (mm)	237	227	241	215	191	235	178	207	209	224	216

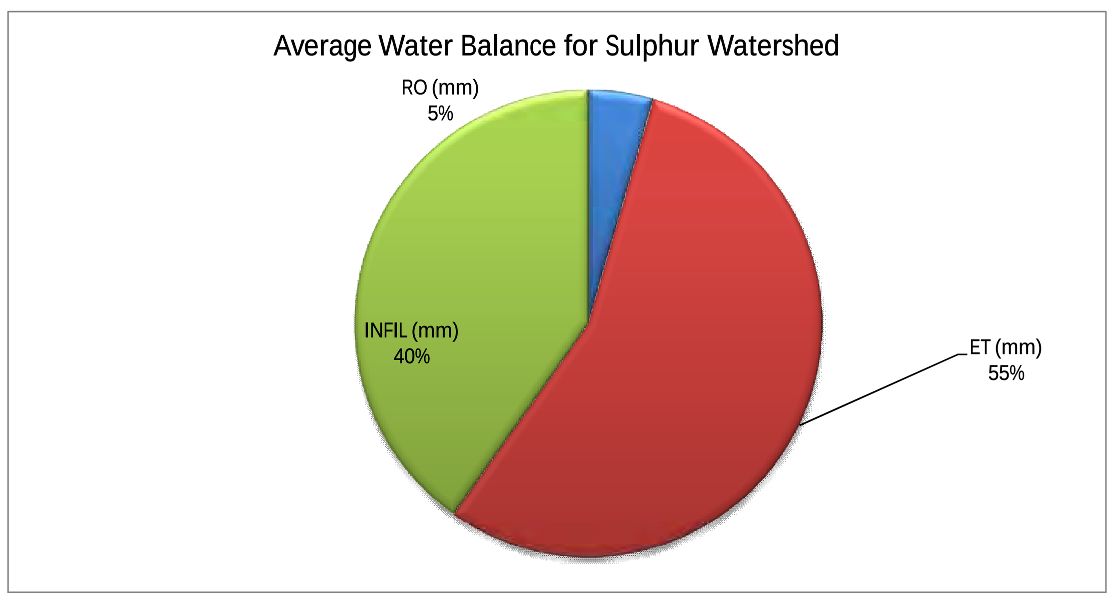
Twenty-Mile									
	T-25	T-27	T-28	T-29	T-30	T-32	T-33	T-37	AVERAGE
AREA (ha)	108	99	59	101	126	312	255	71	
SUPPLY (mm)	642	642	642	642	642	640	638	639	641
RO (mm)	61	56	53	55	49	90	165	82	76
ET (mm)	343	349	351	350	349	334	307	334	340
INFIL (mm)	234	234	238	235	241	219	168	227	224

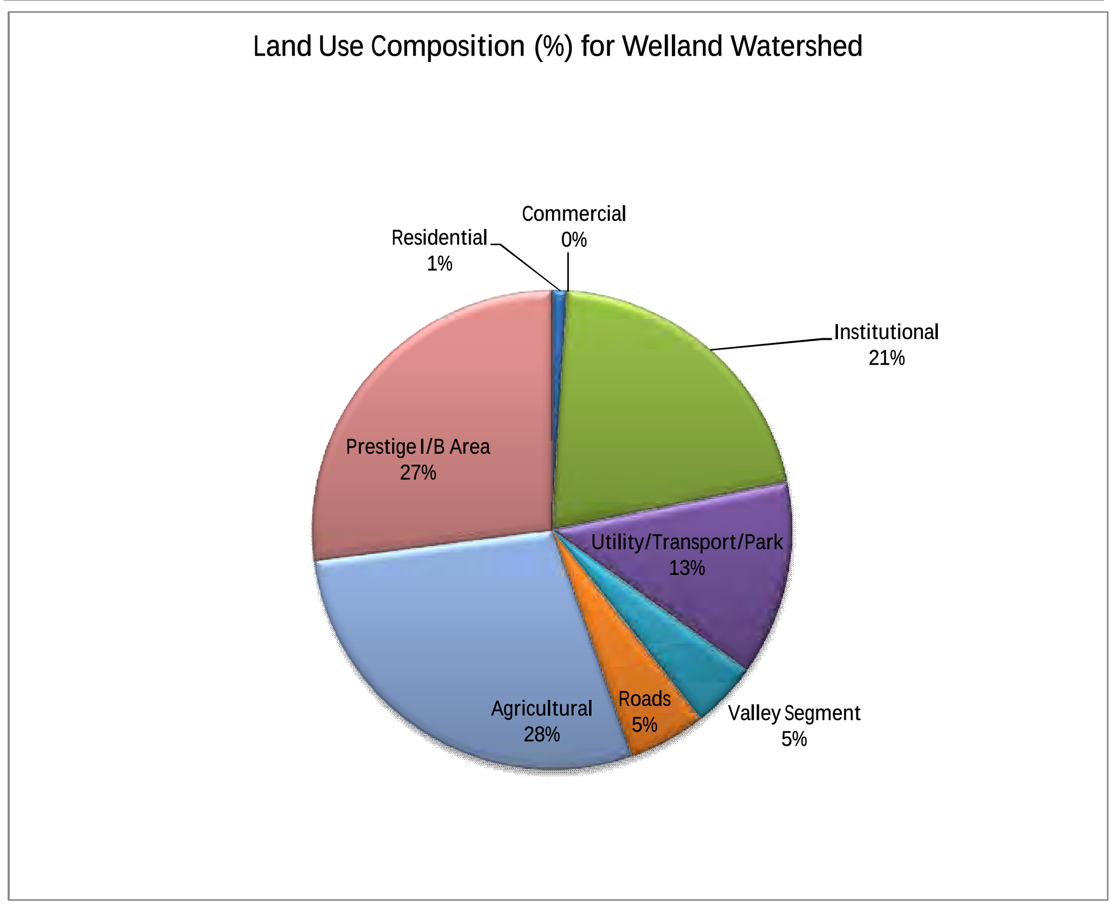
LAND USE COMPOSITION (ha)		SULFUR	WELLAND	TWENTY-MILE
Res Low Density	RLD5ab	147.13	2.28	48.00
Res Low Density	RLD5bc	63.57	6.59	82.99
Res Low Density	RLD5cd	1.30	6.88	63.98
Res Med Denisty	RMD5ab	10.93	0.00	12.34
Res Med Denisty	RMD5bc	6.03	0.00	13.79
Res Med Denisty	RMD5cd	0.00	0.00	8.44
Res High Density	RHD5ab	1.36	0.00	21.41
Res High Density	RHD5bc	0.92	0.00	23.74
Res High Density	RHD5cd	0.00	0.00	14.43
Commercial	CSM1bc	32.21	0.00	11.47
Institutional	EIS1ab	22.79	62.10	32.09
Institutional	EIS1bc	14.95	125.00	101.91
Institutional	EIS1cd	0.00	139.50	149.56
Utility/Transport/Parks	OPL0ab	77.45	58.10	38.11
Utility/Transport/Parks	OPL0bc	38.35	81.10	86.88
Utility/Transport/Parks	OPL0cd	7.20	66.50	102.10
Valley Segment	OVL0ab	60.97	13.66	43.33
Valley Segment	OVL0bc	35.43	27.93	107.44
Valley Segment	OVL0cd	1.40	28.41	103.31
Roads	THC0ab	118.26	19.00	2.60
Roads	THC0bc	4.20	31.80	8.90
Roads and ROW	THC0cd	3.10	31.82	95.29
Agricultural Tilled	AGT0ab	155.61	94.99	140.54
Agricultural Tilled	AGT0bc	83.39	176.12	407.14
Agricultural Tilled	AGT0cd	1.90	173.48	376.67
Agricultural Pasture/forest	AGPab	3.53	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.91	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00
Industrial/Prestige	IPRab	24.60	38.10	36.50
Industrial/Prestige	IPRbc	15.50	59.60	92.40
Industrial/Prestige	IPRcd	8.70	44.80	164.20
Prestige Business Park	IPEab	139.60	66.40	38.00
Prestige Business Park	IPEbc	45.80	110.60	114.70
Prestige Business Park	IPEcd	32.50	104.80	176.50

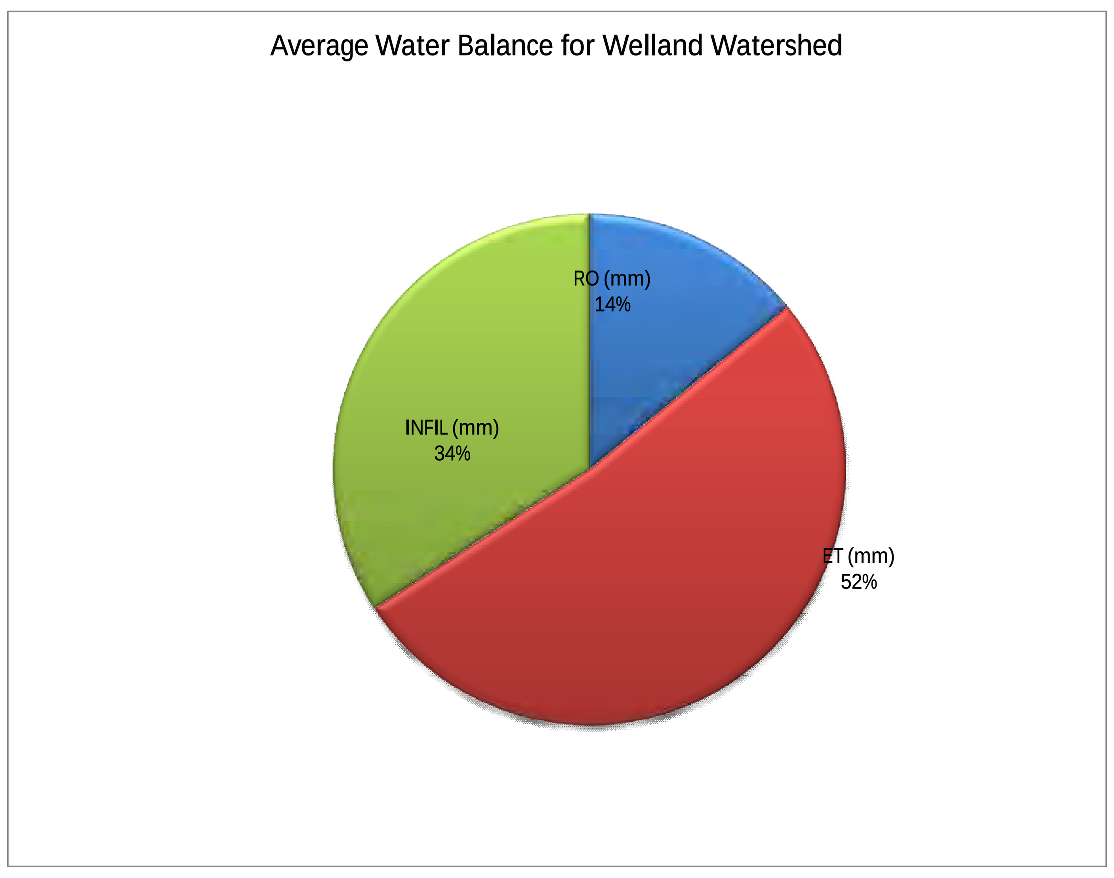
LAND USE COMP	Land Use Composition (ha) for Sulfur Watershed	Land Use Composition (ha) for Welland Watershed	Land Use Composition (ha) for Twenty-Mile Watershed
Res. Low Density	212.00	15.75	194.97
Res. Med Denisty	16.96	0.00	34.57
Res. High Density	2.28	0.00	59.58
Commercial	32.21	0.00	11.47
Institutional	37.74	326.60	283.56
Utility/Transport/Park	123.00	205.70	227.09
Valley Segment	97.80	70.00	254.09
Roads	125.56	82.62	106.79
Agricultural Tilled	240.90	444.59	924.35
Agricultural Pasture/forest	4.44	0.00	0.00
Industrial/Prestige	48.80	142.50	293.10
Prestige Business Park	217.90	281.80	329.20
TOTAL	1159.59	1569.56	2718.76

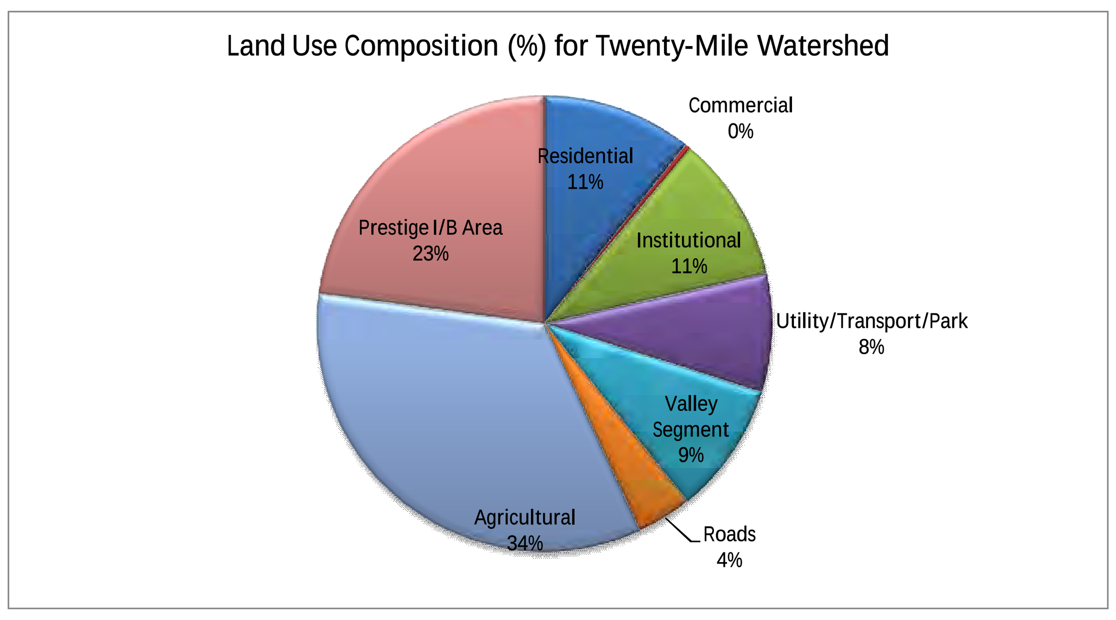
LAND USE COMP	Land Use Composition (ha) for Sulfur Watershed	Land Use Composition (ha) for Welland Watershed	Land Use Composition (ha) for Twenty-Mile Watershed
Residential	231.2	15.8	289.1
Commercial	32.2	0.0	11.5
Institutional	37.7	326.6	283.6
Utility/Transport/Park	123.0	205.7	227.1
Valley Segment	97.8	70.0	254.1
Roads	125.6	82.6	106.8
Agricultural	245.3	444.6	924.4
Prestige I/B Area	266.70	424.30	622.30
TOTAL	1159.59	1569.56	2718.76

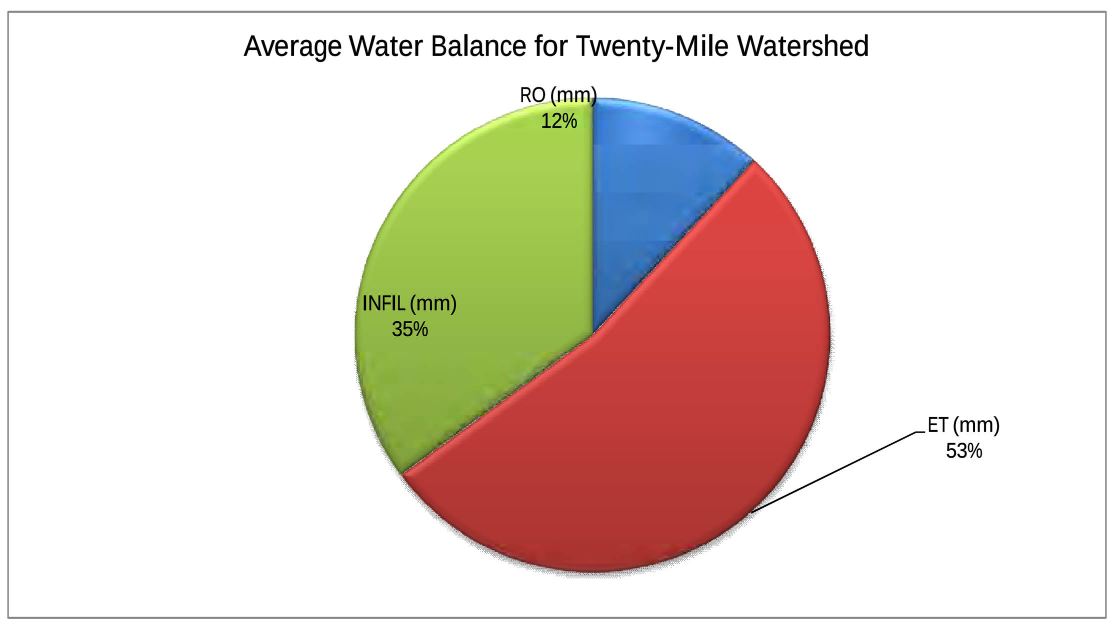












ORIGINAL DATA OUTPUT FROM HSPF
REQ"D INPUT FROM HSPF OUTPUT
CALCULATED **AVERAGES:**

URF's as per Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	Total Moisture Supply = SUPY (Pervious)																											
1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9
	Total Moisture Supply = SUPY (Impervious)																											
1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0
	SURLI = SURLI (Pervious)																											
1991-1996	JAN	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0
	SURLI = SURLI (Impervious)																											
AGWO																												
1991-1996	JAN	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SUPLY + SURLI = (Pervious)																											
1991-1996	JAN	39.9	39.9	39.9	41.6	41.6	41.6	44.5	44.5	44.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	122.2	122.2	122.2	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.1	11.1	11.1	11.6	11.6	11.6	12.4	12.4	12.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	34.3	34.3	34.3	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	28.1	28.1	28.1	29.1	29.1	29.1	30.9	30.9	30.9	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	78.7	78.7	78.7	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	76.5	76.5	76.5	79.3	79.3	79.3	84.3	84.3	84.3	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	217.1	217.1	217.1	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	73.2	73.2	73.2	75.7	75.7	75.7	80.3	80.3	80.3	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	200.5	200.5	200.5	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	61.6	61.6	61.6	63.6	63.6	63.6	67.3	67.3	67.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	164.3	164.3	164.3	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	97.9	97.9	97.9	101.4	101.4	101.4	107.7	107.7	107.7	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	273.4	273.4	273.4	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	62.0	62.0	62.0	64.0	64.0	64.0	67.7	67.7	67.7	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	164.8	164.8	164.8	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.6	42.6	42.6	44.0	44.0	44.0	46.5	46.5	46.5	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	112.0	112.0	112.0	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	82.6	82.6	82.6	85.5	85.5	85.5	90.9	90.9	90.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	233.0	233.0	233.0	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.9	46.9	46.9	48.5	48.5	48.5	51.5	51.5	51.5	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	181.6	181.6	181.6	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.5	14.5	14.5	15.0	15.0	15.0	15.9	15.9	15.9	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	40.8	40.8	40.8	14.2	14.2	14.2	14.2	14.2
	ANNUAL	636.8	636.8	636.8	659.3	659.3	659.3	699.9	699.9	699.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	1,822.6	1,822.6	1,822.6	645.9	645.9	645.9	645.9	645.9
	SUPLY + SURLI = (Impervious)																											
1991-1996	JAN	65.7	67.1	77.7	65.2	66.1	72.2	60.9	61.5	65.6	153.0	92.9	93.6	101.4	73.7	74.5	79.2	38.3	39.7	50.8	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	18.9	18.9	19.2	18.7	18.7	19.0	17.5	17.5	17.7	43.6	26.6	26.6	26.9	21.2	21.2	21.6	11.1	11.3	11.8	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	44.9	45.1	46.8	44.6	44.7	45.8	41.9	42.0	42.9	97.6	61.2	61.3	62.5	49.4	49.8	51.4	28.2	28.6	33.4	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	123.3	123.8	129.0	122.5	122.8	126.4	115.0	115.3	118.4	268.3	167.9	168.3	171.0	135.7	136.5	140.1	76.7	78.8	85.6	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	115.5	116.8	133.7	114.9	115.8	126.0	108.1	109.0	116.3	244.5	154.8	155.3	166.6	125.9	126.5	145.0	73.7	74.8	113.8	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	95.7	98.2	119.2	95.2	97.0	108.9	89.8	91.5	99.3	199.6	127.3	128.2	145.4	104.0	105.0	138.8	61.6	63.6	125.1	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	156.0	158.5	181.3	155.2	157.0	171.0	145.9	147.6	158.4	335.2	210.7	211.7	229.2	170.5	171.8	201.6	97.7	99.1	143.5	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	96.0	98.3	117.4	95.6	97.2	108.5	90.2	91.8	99.7	198.1	126.7	127.5	145.7	103.5	104.6	140.1	61.8	63.2	118.9	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	65.6	65.9	68.8	65.3	65.4	67.5	61.6	61.8	63.7	135.1	86.6	86.7	88.3	70.9	71.1	73.1	42.5	42.7	45.6	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	132.4	133.9	152.6	131.7	133.0	144.4	123.8	125.3	133.2	287.8	180.1	180.8	199.5	145.3	146.3	186.6	82.0	83.0	87.4	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	102.5	103.1	106.6	101.9	102.1	104.4	95.6	95.8	97.6	226.1	140.8	141.2	143.0	113.5	114.1	117.0	63.0	65.0	69.5	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	23.2	23.3	23.6	23.0	23.1	23.3	21.6	21.7	21.8	50.6	31.7	31.9	31.9	25.6	26.0	26.1	14.5	15.2	15.7	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
	ANNUAL	1,039.6	1,052.7	1,176.0	1,034.0	1,043.0	1,117.3	971.9	980.7	1,034.7	2,239.4	1,407.3	1,413.1	1,511.4	1,139.1	1,147.5	1,320.6	651.1	664.9	901.0	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0
	Runoff = SURO+IFWO (pervious areas)	**REQ MANUAL SUMMATION OF SURO + IFWO**																										
1991-1996	JAN	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	57.0	75.9	0.3	1.6	6.6	0.3	1.6
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	16.4	21.8	0.1	0.3	1.7	0.1	0.3
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	19.9	33.7	0.1	0.3	1.8	0.1	0.3
1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	67.0	102.0	0.3	1.6	7.4	0.3	1.6
1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	84.1	113.2	0.7	2.7	9.7	0.7	2.7
1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	74.3	93.3	0.6	2.6	8.3	0.6	2.6
1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	112.7	149.9	0.4	2.8	10.7	0.4	2.8
1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	75.4	88.9	0.3	1.9	7.8	0.3	1.9
1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	35.3	47.0	0.3	1.3	3.8	0.3	1.3
1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	92.9	114.9	0.2	2.7	9.0	0.2	2.7
1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	70.8	94.1	0.3	1.4	6.2	0.3	1.4
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	15.7	20.9	0.1	0.3	1.4	0.1	0.3
	ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	721.6	955.7	3.6	19.4	74.3	3.6	19.5
	Runoff = SURO (impervious areas)																											
1991-1996	JAN	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
	ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0
	(IMPEV)																											
1991-1996	JAN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
	ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0
	(TAET)																											
1991-1996	JAN	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8
1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2
1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4
1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.3	25.0	23.3	24.3	24.4	23.3	24.3
1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	52.4	50.5	44.6	47.5	45.8	44.6	47.5
1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	64.3	60.2	51.3	53.0	50.7	51.3	53.0
1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	77.0	71.5	61.1	63.1	61.3	61.1	63.1
1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	73.1	66.6	55.6	58.8	56.1	55.6	58.8
1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	48.5	44.9	38.4	38.4	36.3	38.4	38.4
1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	37.4	36.0	30.7	31.4	31.8	30.7	31.4
1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.7	14.6	13.5	13.8	14.3	13.5	13.8
1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1
	ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	409.5	385.9	333.6	345.8	336.8	333.6	345.8
	(AGWO)																											
1991-1996	JAN	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	41.7	29.9	18.3	17.1	14.8	18.3	17.1
1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	37.0	26.3	16.2	15.3	13.3	16.2	15.3
1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	38.4	27.5	16.6	15.6	13.8	16.6	15.6
1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	39.1	27.9	16.5	15.6	13.9	16.5	15.6
1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	46.2	32.6	19.3	18.3	16.2	19.3	18.3
1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	45.1	31.7	19.2	17.9	15.6	19.2	17.9
1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	47.1	33.0	20.6	18.9	16.3	20.6	18.9
1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	48.2	33.9	21.3	19.2	16.6	21.3	19.2
1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	44.4	31.4	19.6	17.7	15.1	19.6	17.7
1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	47.3	34.0	21.1	19.0	16.1	21.1	19.0
1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	50.0	36.1	22.1	20.1	17.0	22.1	20.1
1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	50.2	36.2	21.9	20.2	17.2	21.9	20.2
	ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	534.6	380.6	232.6	214.9	185.7	232.6	214.9
	(AGWI)																											
1991-1996	JAN	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	46.5	31.6	22.8	22.6	19.7	22.8	22.6
1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	18.0	12.4	6.1	6.1	6.3	6.1	6.1
1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	32.6	24.5	11.4	11.0	10.8	11.4	11.0
1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	86.1	59.5	33.7	32.3	29.4	33.7	32.3
1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	55.7	37.8	26.5	23.6	18.5	26.5	23.6
1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	42.3	28.8	19.9	17.0	13.5	19.9	17.0
1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	61.2	42.1	29.5	25.1	21.4	29.5	25.1
1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	35.7	27.5	15.5	13.2	11.4	15.5	13.2
1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	30.9	24.1	13.4	11.7	9.4	13.4	11.7
1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	75.8	56.6	33.8	31.2	25.2	33.8	31.1
1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	70.7	50.3	31.0	30.2	26.2	31.0	30.2
1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	21.4	15.5	7.7	8.1	7.5	7.7	8.1
	ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	576.8	410.7	251.5	231.9	199.2	251.5	231.9
	(IGWI)																											
1991-1996	JAN	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	6.9	4.7	3.4	3.4	2.9	3.4	3.4
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	2.7	1.8	0.9	0.9	0.9	0.9	0.9
1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	4.9	3.7	1.7	1.6	1.6	1.7	1.6
1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	12.9	8.9	5.0	4.8	4.4	5.0	4.8
1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	8.3	5.6	4.0	3.5	2.8	4.0	3.5
1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	6.3	4.3	3.0	2.5	2.0	3.0	2.5
1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	9.1	6.3	4.4	3.8	3.2	4.4	3.7
1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	5.3	4.1	2.3	2.0	1.7	2.3	2.0
1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	4.6	3.6	2.0	1.7	1.4	2.0	1.7
1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	11.3	8.5	5.1	4.7	3.8	5.1	4.7
1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	10.6	7.5	4.6	4.5	3.9	4.6	4.5
1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	3.2	2.3	1.2	1.2	1.1	1.2	1.2
	ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	86.2	61.4	37.6	34.7	29.8	37.6	34.7

Adjustments to Eliminate SURLI from Balance

URF's as per Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	

Adjustment Factor = SURLI/(SURLI+SUPY) (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.0124	0.0124	0.0124	0.0513	0.0513	0.0513	0.1141	0.1141	0.1141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6777	0.6777	0.6777	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.0125	0.0125	0.0125	0.0516	0.0516	0.0516	0.1148	0.1148	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6790	0.6790	0.6790	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.0109	0.0109	0.0109	0.0451	0.0451	0.0451	0.1012	0.1012	0.1012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6473	0.6473	0.6473	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.0111	0.0111	0.0111	0.0458	0.0458	0.0458	0.1027	0.1027	0.1027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6514	0.6514	0.6514	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.0105	0.0105	0.0105	0.0435	0.0435	0.0435	0.0978	0.0978	0.0978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6388	0.6388	0.6388	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.0101	0.0101	0.0101	0.0418	0.0418	0.0418	0.0942	0.0942	0.0942	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6291	0.6291	0.6291	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.0108	0.0108	0.0108	0.0448	0.0448	0.0448	0.1005	0.1005	0.1005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.0100	0.0100	0.0100	0.0415	0.0415	0.0415	0.0936	0.0936	0.0936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6274	0.6274	0.6274	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.0098	0.0098	0.0098	0.0408	0.0408	0.0408	0.0921	0.0921	0.0921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6234	0.6234	0.6234	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6496	0.6496	0.6496	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.0108	0.0108	0.0108	0.0447	0.0447	0.0447	0.1004	0.1004	0.1004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6563	0.6563	0.6563	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6505	0.6505	0.6505	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.0108	0.0108	0.0108	0.0445	0.0445	0.0445	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000

Adjustment Factor = SURLI/(SURLI+SUPY) (Impervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.4256	0.4380	0.5149	0.4219	0.4291	0.4773	0.3804	0.3864	0.4251	0.7536	0.5943	0.5974	0.6282	0.4884	0.4941	0.5241	0.0165	0.0507	0.2572	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.4164	0.4165	0.4266	0.4126	0.4124	0.4196	0.3705	0.3711	0.3783	0.7475	0.5865	0.5865	0.5901	0.4795	0.4802	0.4902	0.0063	0.0237	0.0709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.3817	0.3842	0.4065	0.3782	0.3793	0.3947	0.3385	0.3391	0.3537	0.7157	0.5464	0.5474	0.5559	0.4385	0.4422	0.4597	0.0145	0.0285	0.1681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.3861	0.3889	0.4134	0.3824	0.3840	0.4014	0.3422	0.3439	0.3610	0.7179	0.5494	0.5504	0.5574	0.4423	0.4458	0.4599	0.0132	0.0392	0.1160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.3733	0.3803	0.4585	0.3696	0.3746	0.4252	0.3303	0.3356	0.3776	0.7039	0.5322	0.5337	0.5655	0.4248	0.4278	0.5007	0.0181	0.0317	0.3637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.3633	0.3792	0.4887	0.3598	0.3718	0.4404	0.3211	0.3341	0.3862	0.6947	0.5212	0.5244	0.5810	0.4141	0.4196	0.5610	0.0106	0.0417	0.5128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.3791	0.3889	0.4656	0.3759	0.3831	0.4334	0.3362	0.3438	0.3883	0.7110	0.5403	0.5425	0.5774	0.4317	0.4362	0.5194	0.0086	0.0225	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.3608	0.3754	0.4774	0.3577	0.3687	0.4343	0.3192	0.3312	0.3844	0.6901	0.5154	0.5186	0.5786	0.4072	0.4133	0.5618	0.0076	0.0284	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.3568	0.3595	0.3869	0.3538	0.3554	0.3749	0.3152	0.3169	0.3374	0.6877	0.5127	0.5134	0.5220	0.4050	0.4067	0.4230	0.0080	0.0132	0.0753	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.3832	0.3900	0.4651	0.3801	0.3859	0.4346	0.3403	0.3482	0.3872	0.7163	0.5468	0.5483	0.5908	0.4381	0.4418	0.5626	0.0047	0.0165	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.3914	0.3945	0.4146	0.3879	0.3890	0.4026	0.3473	0.3485	0.3607	0.7240	0.5568	0.5581	0.5636	0.4501	0.4533	0.4667	0.0089	0.0398	0.1016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.3859	0.3888	0.3968	0.3819	0.3840	0.3882	0.3420	0.3438	0.3467	0.7186	0.5503	0.5530	0.5541	0.4436	0.4530	0.4547	0.0148	0.0619	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.3803	0.3880	0.4522	0.3769	0.3824	0.4234	0.3372	0.3431	0.3774	0.7123	0.5422	0.5441	0.5738	0.4345	0.4386	0.5122	0.0106	0.0311	0.2850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.5	0.5	0.5	2.0	2.0	2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.5	3.5	3.5	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.3	49.3	49.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.2	3.2	3.2	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	46.3	46.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3	38.3	38.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.0	1.0	1.0	4.3	4.3	4.3	9.7	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	62.5	62.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	38.5	38.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.7	1.7	1.7	3.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	26.3	26.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.7	3.7	3.7	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.1	2.1	2.1	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	41.0	41.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.8	6.8	6.8	28.1	28.1	28.1	63.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.0	417.0	417.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

SURLI = SURLI (Impervious)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	16.1	16.5	19.4	15.9	16.2	18.0	14.3	14.6	16.0	28.4	22.4	22.5	23.7	18.4	18.6	19.8	0.6	1.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	4.6	4.6	4.7	4.5	4.5	4.6	4.1	4.1	4.2	8.2	6.5	6.5	6.5	5.3	5.3	5.4	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	10.6	10.7	11.3	10.5	10.5	11.0	9.4	9.4	9.8	19.9	15.2	15.2	15.4	12.2	12.3	12.8	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	29.2	29.4	31.3	28.9	29.1	30.4	25.9	26.0	27.3	54.3	41.6	41.6	42.2	33.5	33.7	34.8	1.0	3.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	27.0	27.5	33.2	26.8	27.1	30.8	23.9	24.3	27.3	51.0	38.5	38.6	40.9	30.8	31.0	36.3	1.3	2.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	22.1	23.1	29.8	21.9	22.7	26.8	19.6	20.4	23.5	42.3	31.8	32.0	35.4	25.2	25.6	34.2	0.6	2.5	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	36.7	37.7	45.1	36.4	37.1	42.0	32.6	33.3	37.6	68.9	52.3	52.6	55.9	41.8	42.3	50.3	0.8	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	22.1	23.0	29.3	22.0	22.6	26.7	19.6	20.3	23.6	42.4	31.6	31.8	35.5	25.0	25.4	34.5	0.5	1.7	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	15.1	15.2	16.3	14.9	15.0	15.8	13.3	13.4	14.2	29.0	21.6	21.7	22.0	17.1	17.2	17.8	0.3	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	31.3	31.8	38.0	31.0	31.5	35.5	27.8	28.4	31.6	58.5	44.6	44.8	48.2	35.8	36.1	45.9	0.4	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	24.4	24.6	25.9	24.2	24.3	25.1	21.7	21.7	22.5	45.2	34.7	34.8	35.2	28.1	28.3	29.1	0.6	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	5.5	5.5	5.7	5.4	5.5	5.5	4.9	4.9	4.9	10.2	7.8	7.9	7.9	6.3	6.5	6.5	0.2	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	245.0	250.0	291.3	242.8	246.3	272.8	217.2	221.0	243.1	458.9	349.3	350.5	369.6	279.9	282.6	330.0	6.9	20.0	183.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

Runoff = SURO+IFWO (pervious areas)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	18.4	24.5	0.3	1.6	6.6	0.3	1.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	5.3	7.0	0.1	0.3	1.7	0.1	0.3
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	7.0	11.9	0.1	0.3	1.8	0.1	0.3
	1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	23.4	35.5	0.3	1.6	7.4	0.3	1.6
	1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	30.4	40.9	0.7	2.7	9.7	0.7	2.7
	1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	27.6	34.6	0.6	2.6	8.3	0.6	2.6
	1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	39.9	53.1	0.4	2.8	10.7	0.4	2.8
	1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	28.1	33.1	0.3	1.9	7.8	0.3	1.9
	1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	13.3	17.7	0.3	1.3	3.8	0.3	1.3
	1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	32.6	40.3	0.2	2.7	9.0	0.2	2.7
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	24.3	32.3	0.3	1.4	6.2	0.3	1.4
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	5.5	7.3	0.1	0.3	1.4	0.1	0.3
		ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	255.7	338.7	3.6	19.4	74.3	3.6	19.5

AVERAGES:

Runoff = SURO (impervious areas)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
		ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(IMPEV)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
		ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(TAET)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	0.6	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	0.8	2.2	2.2	2.3	2.2	2.2
	1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4
	1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.8	8.7	23.3	24.3	24.4	23.3	24.3
	1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.9	18.2	44.6	47.5	45.8	44.6	47.5
	1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	23.8	22.3	51.3	53.0	50.7	51.3	53.0
	1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	27.3	25.3	61.1	63.1	61.3	61.1	63.1
	1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	27.2	24.8	55.6	58.8	56.1	55.6	58.8
	1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	18.3	16.9	38.4	38.4	36.3	38.4	38.4
	1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	13.1	12.6	30.7	31.4	31.8	30.7	31.4
	1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.1	5.0	13.5	13.8	14.3	13.5	13.8
	1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	1.7	3.9	4.1	4.5	3.9	4.1
		ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	145.1	136.8	333.6	345.8	336.8	333.6	345.8

AVERAGES:

(AGWO)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	13.4	9.6	18.3	17.1	14.8	18.3	17.1
	1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	11.9	8.5	16.2	15.3	13.3	16.2	15.3
	1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	13.6	9.7	16.6	15.6	13.8	16.6	15.6
	1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	13.6	9.7	16.5	15.6	13.9	16.5	15.6
	1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	16.7	11.8	19.3	18.3	16.2	19.3	18.3
	1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	16.7	11.8	19.2	17.9	15.6	19.2	17.9
	1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	16.7	11.7	20.6	18.9	16.3	20.6	18.9
	1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	17.9	12.6	21.3	19.2	16.6	21.3	19.2
	1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	16.7	11.8	19.6	17.7	15.1	19.6	17.7
	1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	16.6	11.9	21.1	19.0	16.1	21.1	19.0
	1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	17.2	12.4	22.1	20.1	17.0	22.1	20.1
	1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	17.5	12.6	21.9	20.2	17.2	21.9	20.2
		ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	189.5	134.9	232.6	214.9	185.7	232.6	214.9

AVERAGES:

(AGWI)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	15.0	10.2	22.8	22.6	19.7	22.8	22.6
	1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	5.8	4.0	6.1	6.1	6.3	6.1	6.1
	1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	11.5	8.6	11.4	11.0	10.8	11.4	11.0
	1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	30.0	20.7	33.7	32.3	29.4	33.7	32.3
	1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	20.1	13.6	26.5	23.6	18.5	26.5	23.6
	1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	15.7	10.7	19.9	17.0	13.5	19.9	17.0
	1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	21.7	14.9	29.5	25.1	21.4	29.5	25.1
	1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	13.3	10.3	15.5	13.2	11.4	15.5	13.2
	1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	11.6	9.1	13.4	11.7	9.4	13.4	11.7
	1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	26.5	19.8	33.8	31.2	25.2	33.8	31.1
	1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	24.3	17.3	31.0	30.2	26.2	31.0	30.2
	1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	7.5	5.4	7.7	8.1	7.5	7.7	8.1
		ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	204.4	145.5	251.5	231.9	199.2	251.5	231.9

AVERAGES:

(IGWI)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	2.2	1.5	3.4	3.4	2.9	3.4	3.4
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.9	0.6	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.7	1.3	1.7	1.6	1.6	1.7	1.6
	1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	4.5	3.1	5.0	4.8	4.4	5.0	4.8
	1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	3.0	2.0	4.0	3.5	2.8	4.0	3.5
	1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	2.3	1.6	3.0	2.5	2.0	3.0	2.5
	1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	3.2	2.2	4.4	3.8	3.2	4.4	3.7
	1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	2.0	1.5	2.3	2.0	1.7	2.3	2.0
	1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.7	1.4	2.0	1.7	1.4	2.0	1.7
	1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	4.0	3.0	5.1	4.7	3.8	5.1	4.7
	1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	3.6	2.6	4.6	4.5	3.9	4.6	4.5
	1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	1.1	0.8	1.2	1.2	1.1	1.2	1.2
		ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	30.5	21.7	37.6	34.7	29.8	37.6	34.7

URF VOLUMES
INPUTS REQ'D

	URF Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
	Pervious Composition (%)	0.70	0.70	0.70	0.50	0.50	0.50	0.35	0.35	0.35	0.04	0.63	0.63	0.63	0.90	0.90	0.90	0.97	0.97	0.97	0.3	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0
	Impervious Composition (%)	0.09	0.09	0.09	0.13	0.13	0.13	0.17	0.17	0.17	0.19	0.11	0.11	0.11	0.05	0.05	0.05	0.03	0.03	0.03	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
URF AREA : 100000	Pervious Composition (m^2)	70000	70000	70000	50000	50000	50000	35000	35000	35000	4000	63000	63000	63000	90000	90000	90000	97000	97000	97000	30000	30000	30000	100000	100000	100000	100000	100000	100000
10 ha m^2	Impervious Composition (m^2)	9000	9000	9000	13000	13000	13000	17000	17000	17000	19000	11000	11000	11000	5000	5000	5000	3000	3000	3000	70000	70000	70000	0	0	0	0	0	0
	Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
	Total Moisture Supply = SUPY (Pervious)																												
AVERAGES (m^3):																													
1991-1996	JAN	2759.9	2759.9	2759.9	1971.3	1971.3	1971.3	1379.9	1379.9	1379.9	157.7	2483.9	2483.9	2483.9	3543.3	3543.3	3543.3	3818.8	3818.8	3818.8	1181.4	1181.4	1181.4	3936.0	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996	FEB	770.5	770.5	770.5	550.4	550.4	550.4	385.2	385.2	385.2	44.0	693.4	693.4	693.4	991.2	991.2	991.2	1068.3	1068.3	1068.3	330.4	330.4	330.4	1101.4	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996	MAR	1942.6	1942.6	1942.6	1387.6	1387.6	1387.6	971.3	971.3	971.3	111.0	1748.3	1748.3	1748.3	2497.7	2497.7	2497.7	2692.0	2692.0	2692.0	832.6	832.6	832.6	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996	APR	5297.2	5297.2	5297.2	3783.7	3783.7	3783.7	2648.6	2648.6	2648.6	302.7	4767.4	4767.4	4767.4	6810.6	6810.6	6810.6	7340.4	7340.4	7340.4	2270.2	2270.2	2270.2	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996	MAY	5068.3	5068.3	5068.3	3620.2	3620.2	3620.2	2534.2	2534.2	2534.2	289.6	4561.5	4561.5	4561.5	6516.4	6516.4	6516.4	7023.3	7023.3	7023.3	2172.1	2172.1	2172.1	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996	JUN	4266.2	4266.2	4266.2	3047.3	3047.3	3047.3	2133.1	2133.1	2133.1	243.8	3839.6	3839.6	3839.6	5485.2	5485.2	5485.2	5911.8	5911.8	5911.8	1828.4	1828.4	1828.4	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996	JUL	6781.2	6781.2	6781.2	4843.7	4843.7	4843.7	3390.6	3390.6	3390.6	387.5	6103.0	6103.0	6103.0	8718.6	8718.6	8718.6	9396.7	9396.7	9396.7	2906.2	2906.2	2906.2	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996	AUG	4296.6	4296.6	4296.6	3069.0	3069.0	3069.0	2148.3	2148.3	2148.3	245.5	3866.9	3866.9	3866.9	5524.2	5524.2	5524.2	5953.9	5953.9	5953.9	1841.4	1841.4	1841.4	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996	SEP	2952.7	2952.7	2952.7	2109.1	2109.1	2109.1	1476.4	1476.4	1476.4	168.7	2657.5	2657.5	2657.5	3796.4	3796.4	3796.4	4091.7	4091.7	4091.7	1265.5	1265.5	1265.5	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996	OCT	5715.2	5715.2	5715.2	4082.3	4082.3	4082.3	2857.6	2857.6	2857.6	326.6	5143.7	5143.7	5143.7	7348.1	7348.1	7348.1	7919.6	7919.6	7919.6	2449.4	2449.4	2449.4	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996	NOV	3244.6	3244.6	3244.6	2317.6	2317.6	2317.6	1622.3	1622.3	1622.3	185.4	2920.2	2920.2	2920.2	5616.2	5616.2	5616.2	6053.0	6053.0	6053.0	1872.0	1872.0	1872.0	6240.4	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996	DEC	1001.3	1001.3	1001.3	715.2	715.2	715.2	500.6	500.6	500.6	57.2	901.1	901.1	901.1	1282.0	1282.0	1282.0	1381.7	1381.7	1381.7	427.3	427.3	427.3	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
	ANNUAL	44096.3	44096.3	44096.3	31497.3	31497.3	31497.3	22048.1	22048.1	22048.1	2519.8	39686.6	39686.6	39686.6	58129.8	58129.8	58129.8	62651.0	62651.0	62651.0	19376.8	19376.8	19376.8	64588.0	64588.0	64588.0	64588.0	64588.0	64588.0
	Total Moisture Supply = SUPY (Impervious)																												
1991-1996	JAN	339.4	339.4	339.4	490.3	490.3	490.3	641.1	641.1	641.1	716.2	414.7	414.7	414.7	188.5	188.5	188.5	113.1	113.1	113.1	2638.8	2638.8	2638.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	99.1	99.1	99.1	143.1	143.1	143.1	187.1	187.1	187.1	209.2	121.1	121.1	121.1	55.0	55.0	55.0	33.0	33.0	33.0	770.6	770.6	770.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	249.8	249.8	249.8	360.8	360.8	360.8	471.8	471.8	471.8	527.3	305.3	305.3	305.3	138.8	138.8	138.8	83.3	83.3	83.3	1942.7	1942.7	1942.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	681.1	681.1	681.1	983.8	983.8	983.8	1286.5	1286.5	1286.5	1437.8	832.4	832.4	832.4	378.4	378.4	378.4	227.0	227.0	227.0	5297.2	5297.2	5297.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	651.6	651.6	651.6	941.3	941.3	941.3	1230.9	1230.9	1230.9	1375.7	796.5	796.5	796.5	362.0	362.0	362.0	217.2	217.2	217.2	5068.3	5068.3	5068.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	548.5	548.5	548.5	792.3	792.3	792.3	1036.1	1036.1	1036.1	1158.0	670.4	670.4	670.4	304.7	304.7	304.7	182.8	182.8	182.8	4266.2	4266.2	4266.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	871.9	871.9	871.9	1259.4	1259.4	1259.4	1646.9	1646.9	1646.9	1840.6	1065.6	1065.6	1065.6	484.4	484.4	484.4	290.6	290.6	290.6	6781.2	6781.2	6781.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	552.4	552.4	552.4	797.9	797.9	797.9	1043.5	1043.5	1043.5	1166.2	675.2	675.2	675.2	306.9	306.9	306.9	184.1	184.1	184.1	4296.6	4296.6	4296.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	379.6	379.6	379.6	548.4	548.4	548.4	717.1	717.1	717.1	801.5	464.0	464.0	464.0	210.9	210.9	210.9	126.5	126.5	126.5	2952.7	2952.7	2952.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	734.8	734.8	734.8	1061.4	1061.4	1061.4	1388.0	1388.0	1388.0	1551.3	898.1	898.1	898.1	408.2	408.2	408.2	244.9	244.9	244.9	5715.2	5715.2	5715.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	561.6	561.6	561.6	811.2	811.2	811.2	1060.8	1060.8	1060.8	1185.7	686.4	686.4	686.4	312.0	312.0	312.0	187.2	187.2	187.2	4368.2	4368.2	4368.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	128.2	128.2	128.2	185.2	185.2	185.2	242.2	242.2	242.2	270.6	156.7	156.7	156.7	71.2	71.2	71.2	42.7	42.7	42.7	997.1	997.1	997.1	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	5798.0	5798.0	5798.0	8374.9	8374.9	8374.9	10951.8	10951.8	10951.8	12240.0	7086.3	7086.3	7086.3	3221.1	3221.1	3221.1	1932.6	1932.6	1932.6	45094.7	45094.7	45094.7	0.0	0.0	0.0	0.0	0.0	0.0
	Runoff = SURO+IFWO (pervious areas)																												
1991-1996	JAN	18.1	103.5	400.2	18.8	86.3	317.0	21.5	78.1	262.2	6.4	14.1	84.7	361.5	16.7	100.2	476.1	6.0	60.7	393.0	365.8	551.4	734.0	34.7	157.2	655.7	34.7	157.3	656.7
1991-1996	FEB	4.5	16.8	74.3	4.3	14.1	62.1	4.2	13.5	55.1	0.9	3.6	14.5	75.7	3.3	15.2	106.4	0.6	7.1	61.7	98.4	158.0	209.8	7.5	27.8	168.4	7.5	27.8	167.9
1991-1996	MAR	3.2	15.8	99.4	2.7	14.8	83.1	2.6	16.0	74.5	0.9	2.7	12.9	95.2	3.8	17.8	130.7	2.9	10.2	105.5	116.2	210.7	356.5	5.7	32.3	184.6	5.7	32.3	185.2
1991-1996	APR	16.5	76.8	432.7	14.4	70.2	352.8	13.6	73.1	301.9	4.2	14.0	62.9	406.6	19.3	89.3	576.5	8.5	48.8	483.4	432.0	701.1	1066.5	33.3	159.8	740.0	33.3	159.8	741.1
1991-1996	MAY	33.7	144.8	641.4	29.8	127.7	509.0	30.0	126.4	417.6	8.6	27.8	117.4	577.5	39.0	165.9	803.3	12.7	97.2	749.3	650.8	911.7	1226.2	70.8	267.9	966.6	70.9	268.2	974.9
1991-1996	JUN	30.6	167.6	548.3	29.0	147.8	432.1	31.6	141.5	353.1	10.0	24.8	134.6	499.9	35.3	189.2	696.9	15.5	130.6	651.5	629.4	826.7	1038.4	56.9	262.9	827.4	57.0	263.6	836.4
1991-1996	JUL	18.4	164.0	614.9	18.0	145.4	503.1	20.8	140.1	438.0	9.8	14.9	131.1	593.3	21.3	183.8	816.1	10.1	92.5	564.4	842.0	1197.8	1593.9	36.3	280.1	1075.0	36.3	281.5	1087.7
1991-1996	AUG	12.8	113.6	433.1	13.3	104.5	353.3	18.3	106.6	303.9	7.0	10.0	87.2	425.4	14.3	121.1	582.2	5.6	56.5	411.0	656.1	842.3	993.8	26.5	187.0	776.3	26.5	187.8	790.6
1991-1996	SEP	13.6	72.9	190.3	14.1	61.7	152.7	16.4	56.0	131.5	3.9	10.8	63.2	186.3	15.4	91.2	270.5	5.9	52.0	197.2	274.1	398.5	531.1	28.2	132.7	381.2	28.2	132.4	376.7
1991-1996	OCT	8.0	92.7	417.6	8.4	94.8	347.1	11.2	106.4	304.1	5.2	6.4	70.4	400.9	9.1	99.2	560.2	2.3	12.0	135.6	693.1	976.9	1207.7	24.5	267.5	899.7	24.5	268.5	909.3
1991-1996	NOV	6.8	46.4	234.9	6.5	42.3	189.3	6.8	43.2	161.3	2.6	5.3	37.9	211.0	12.5	76.2	416.6	4.0	36.7	297.5	477.8	729.8	970.3	27.1	135.5	615.3	27.1	135.5	614.5
1991-1996	DEC	2.4	13.1	61.9	2.4	11.7	51.4	2.9	11.8	45.9	0.8	1.9	11.7	56.3	3.1	19.6	88.8	1.1	9.8	63.6	103.0	164.8	219.4	7.0	34.1	135.3	7.0	34.1	134.7
	ANNUAL	168.5	1027.9	4148.9	161.8	921.1	3353.1	179.9	912.2	2849.8	60.2	136.3	828.4	3889.5	192.9	1168.7	5524.1	75.3	614.1	4113.6	5329.2	7671.5	10160.6	358.5	1944.7	7425.5	358.6	1948.7	7475.5
	Runoff = SURO (impervious areas)																												
1991-1996	JAN	328.0	328.3	329.8	473.7	473.9	475.3	617.9	618.1	619.6	705.9	404.8	404.9	405.7	182.8	182.9	183.2	106.6	106.8	108.2	2484.4	2484.4	2484.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	93.7	93.7	93.8	135.3	135.3	135.4	176.2	176.2	176.3	204.3	116.4	116.4	116.5	52.4	52.4	52.4	30.0	30.0	30.2	699.1	699.1	699.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	216.8	216.9	218.1	312.9	312.9	314.1	405.1	405.2	406.7	495.2	275.6	275.7	276.3	122.1	122.2	122.7	65.7	66.0	68.5	1528.1	1528.1	1528.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	597.8	598.2	601.6	862.8	863.1	866.6	1118.0	1118.5	1122.8	1357.1	757.8	757.9	759.1	336.4	336.6	337.7	182.4	183.6	187.1	4242.7	4242.7	4242.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	552.9	554.0	566.3	797.8	798.9	810.5	1031.6	1033.1	1045.6	1277.2	706.4	706.7	712.8	311.7	311.9	318.3	165.6	166.4	183.8	3842.7	3842.7	3842.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	453.2	455.6	472.0	653.9	656.5	671.3	844.2	847.9	862.6	1061.6	582.9	583.4	593.8	256.0	256.5	268.2	133.5	135.0	158.5	3102.3	3102.3	3102.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	753.2	755.1	769.8	1087.2	1089.1	1103.0	1407.3	1410.1	1426.1	1724.0	958.3	958.8	966.9	424.1	424.5	433.4	227.5	228.4	247.6	5295.4	5295.4	5295.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	454.2	456.5	472.1	655.4	657.9	672.4	845.9	849.4	864.8	1065.7	584.2	584.8	596.1	256.3	256.8	269.5	133.3	134.4	157.7	3101.7	3101.7	3101.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	308.7	309.0	312.1	445.5	445.7	448.8	574.5	574.9	579.1	728.8	398.4	398.4	399.6	174.5	174.6	175.6	90.1	90.3	92.6	2095.3	2095.3	2095.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	641.8	642.8	654.1	926.4	927.6	938.2	1200.1	1202.3	1213.4	1460.9	814.6	814.8	822.7	361.2	361.5	371.6	194.9	195.5	198.0	4542.4	4542.4	4542.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	499.6	499.9	501.9	721.1	721.2	723.2	935.1	935.3	937.7	1126.3	631.2	631.4	632.0	280.9	281.1	281.8	153.5	154.6	156.7	3575.3	3575.3	3575.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	112.3	112.3	112.6	162.0	162.1	162.3	209.9	210.0	210.1	255.2	142.4	142.5	142.6	63.2	63.3	63.4	34.2	34.6	34.9	795.4	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	5018.0	5027.7	5108.5	7242.1	7252.0	7326.6	9375.9	9390.0	9471.5	11475.6	6382.1	6384.9	6430.6	2825.6	2828.5	2879.9	1517.5	1526.1	1632.6	35304.8	35304.8	35304.8	0.0	0.0	0.0	0.0	0.0	0.0
	(IMPEV)																												
1991-1996	JAN	8.2	8.1	7.0	12.0	11.8	10.8	16.8	16.6	15.6	7.5	7.1	7.1	6.5	4.1	4.0	3.8	4.7	4.5	3.6	111.7	111.7	111.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	8.5	8.5	8.4	12.4	12.4	12.3	17.4	17.4	17.2	7.8	7.4	7.4	7.3	4.2	4.2	4.1	4.8	4.8	4.5	113.6	113.6	113.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	33.4	33.3	32.1	48.6	48.5	47.3	67.6	67.5	66.0	32.4	30.0	29.9	29.3	16.9	16.8	16.2	17.8	17.5	15.0	420.5	420.5	420.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	82.7	82.3	79.0	120.1	119.8	116.4	167.3	166.9	162.5	80.2	74.2	74.0	72.8	41.7	41.5	40.4	44.3	43.1	39.7	1047.2	1047.2	1047.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	101.4	100.2	87.6	147.3	146.1	134.3	204.6	203.0	190.1	101.1	92.5	92.2	85.9	51.7	51.4	44.9	52.9	52.2	34.3	1257.9	1257.9	1257.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	99.6	97.1	80.0	144.7	142.0	126.5	200.6	196.8	181.4	100.9	91.6	90.9	80.1	50.9	50.5	38.2	51.6	50.0	25.4	1217.0	1217.0	1217.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	117.2	115.3	100.8	170.1	168.1	154.4	236.6	233.9	218.0	115.1	106.0	105.5	97.5	59.6	59.1	50.4	62.4	61.5	42.5	1467.6	1467.6	1467.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	97.6	95.4	79.8	141.6	139.2	124.8	196.3	192.9	177.5	99.9	90.4	89.8	78.6	50.3	49.8	37.2	50.5	49.4	26.3	1187.4	1187.4	1187.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	72.5	72.2	69.1	105.2	105.0	101.8	145.8	145.5	141.1	74.3	67.1	67.1	65.9	37.3	37.2	36.1	37.3	37.1	34.7	876.9	876.9	876.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	87.8	86.8	76.2	127.5	126.3	116.3	177.4	175.3	164.8	85.3	78.9	78.6	71.2	44.4	44.2	34.6	47.2	46.7	44.3	1107.4	1107.4	1107.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	60.9	60.6	58.6	88.4	88.3	86.3	123.3	123.1	120.8	58.3	54.2	54.0	53.4	30.6	30.4	29.6	33.0	32.0	30.0	778.1	778.1	778.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	16.2	16.1	15.9	23.6	23.5	23.3	32.8	32.7	32.6	15.7	14.5	14.4	14.4	8.2	8.0	8.0	8.7	8.3	8.0	205.5	205.5	205.5	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	780.0	770.3	689.6	1132.9	1123.0	1048.3	1576.0	1561.9	1480.4	764.5	704.3	701.4	655.8	395.5	392.6	341.1	415.1	406.5	300.0	9790.6	9790.6	9790.6	0.0	0.0	0.0	0.0	0.0	0.0
	(TAET)																												
1991-1996	JAN	125.5	126.4	129.0	86.2	86.9	88.8	56.5	57.0	58.2	7.3	114.4	115.1	117.6	163.7	164.7	168.3	188.3	188.3	188.4	18.5	18.5	18.3	176.2	178.6	184.6	176.2	178.6	184.7
1991-1996	FEB	154.8	159.0	160.3	106.5	109.6	110.1	69.9	71.9	72.0	9.2	141.0	144.8	146.4	201.4	206.6	208.7	235.4	235.8	236.1	22.5	22.6	22.6	215.4	224.8	227.3	215.4	224.8	227.3
1991-1996	MAR	504.3	516.7	523.8	348.8	358.0	361.6	231.0	237.6	238.6	29.8	458.5	469.5	476.0	654.9	670.7	680.0	741.9	742.9	743.9	81.1	81.1	80.8	714.4	745.0	754.2	714.4	745.0	754.2
1991-1996	APR	1659.6	1705.8	1719.4	1148.2	1179.0	1186.1	760.3	779.1	781.9	98.5	1508.4	1550.9	1556.3	2154.1	2215.0	2223.3	2475.6	2482.9	2485.3	264.9	264.8	261.8	2331.4	2431.4	2436.1	2331.4	2431.4	2436.0
1991-1996	MAY	3257.6	3398.7	3386.9	2267.0	2360.0	2344.4	1516.2	1569.7	1554.0	195.8	2955.3	3085.2	3027.3	4220.7	4407.1	4325.2	5148.4	5186.3	5179.8	571.7	567.3	546.7	4460.4	4747.0	4581.1	4460.4	4747.0	4580.8
1991-1996	JUN	3921.8	4009.2	3953.9	2737.3	2790.0	2745.6	1841.6	1864.6	1829.9	230.8	3554.9	3637.4	3536.8	5077.6	5196.3	5053.4	6698.4	6723.6	6662.1	736.2	714.9	669.3	5130.5	5298.1	5069.8	5130.5	5298.1	5069.3
1991-1996	JUL	4623.7	4724.5	4703.7	3221.7	3286.4	3259.0	2157.6	2196.3	2163.9	272.1	4192.9	4287.7	4196.7	5989.6	6125.5	5996.5	7762.6	7796.2	7665.1	834.0	818.7	759.7	6112.5	6305.3	6134.5	6112.5	6305.2	6133.9
1991-1996	AUG	4262.3	4426.7	4362.3	2986.0	3090.6	3033.6	2021.5	2075.6	2026.7	254.6	3859.3	4012.3	3882.1	5513.1	5732.2	5547.5	7334.1	7379.1	7199.4	837.9	816.7	744.8	5562.2	5880.0	5611.3	5562.2	5879.9	5610.6
1991-1996	SEP	3033.7	3037.2	2939.6	2118.8	2114.1	2040.9	1425.1	1414.0	1359.6	174.9	2748.9	2755.6	2633.9	3927.0	3936.7	3763.8	5421.9	5399.6	5063.9	578.5	547.7	507.4	3842.1	3843.4	3628.3	3842.1	3843.3	3627.8
1991-1996	OCT	2289.8	2326.0	2339.8	1590.1	1612.2	1620.5	1059.5	1071.7	1075.7	134.1	2078.8	2113.3	2114.1	2969.7	3019.0	3020.9	3765.9	3765.9	3674.4	395.5	393.2	378.2	3068.5	3143.0	3178.8	3068.5	3142.9	3178.3
1991-1996	NOV	2710.1	2578.6	2286.7	1952.8	1860.7	1632.2	1385.3	1318.4	1133.9	146.4	2432.7	2314.6	2049.3	1246.4	1259.1	1287.3	1423.6	1424.5	1423.8	152.3	152.0	150.4	1349.8	1376.6	1427.6	1349.8	1376.6	1427.6
1991-1996	DEC	293.7	300.3	315.0	203.2	208.4	219.1	134.8	139.0	145.8	17.3	267.0	272.7	286.6	381.5	389.7	409.4	476.9	477.3	477.3	51.7	51.6	50.5	393.8	411.9	447.9	393.8	411.9	447.8
	ANNUAL	26829.7	27301.3	26813.0	18745.0	19033.6	18620.3	12626.3	12761.3	12407.7	1570.9	24312.2	24758.9	24023.0	32499.5	33322.7	32684.4	41672.9	41802.4	40999.4	4445.6	4353.7	4103.2	33357.0	34584.9	33681.3	33357.1	34584.7	33678.1
	(AGWO)																												
1991-1996	JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6	1475.4
1991-1996	FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8	1327.7
1991-1996	MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7	1374.0
1991-1996	APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3	1384.1
1991-1996	MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1	1614.3
1991-1996	JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0	1553.0
1991-1996	JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0	1624.3
1991-1996	AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8	1652.7
1991-1996	SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5	1510.9
1991-1996	OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4	1603.4
1991-1996	NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6	1700.6
1991-1996	DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5	1716.9
	ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3	18537.1
	(IGWI)																												
1991-1996	JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1	293.6
1991-1996	FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5	93.8
1991-1996	MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1	160.7
1991-1996	APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9	438.4
1991-1996	MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3	275.3
1991-1996	JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8	201.2
1991-1996	JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0	318.0
1991-1996	AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0	169.4
1991-1996	SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9	140.2
1991-1996	OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4	375.6
1991-1996	NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1	391.8
1991-1996	DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4	112.7
	ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2	2970.9

ADDITIONAL URF OUTPUT DATA
REQ'D INPUTS: HSPF OUTPUT

URF's as per Watershed Land Uses

		Code	SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
	Surface	DSN	1013	1014	1015	1114	1115
	Sub-surfa	DSN	1513	1514	1515	1614	1615
		Year	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Impervious)

AVERAGES:							
	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2
		ANNUAL	**644.2**	**644.2**	**644.2**	**644.2**	**644.2**

SURO (Impervious)

AVERAGES:							
	1991-1996	JAN	35.5	35.9	35.5	35.2	35.3
	1991-1996	FEB	10.0	10.1	10.0	10.0	10.0
	1991-1996	MAR	21.9	23.4	21.9	21.0	21.4
	1991-1996	APR	60.6	64.9	60.6	57.6	59.0
	1991-1996	MAY	54.9	60.1	54.9	50.8	52.7
	1991-1996	JUN	44.3	49.0	44.3	40.9	42.5
	1991-1996	JUL	75.7	82.3	75.7	70.5	73.0
	1991-1996	AUG	44.3	50.1	44.3	39.8	41.9
	1991-1996	SEP	29.9	33.4	29.9	27.2	28.5
	1991-1996	OCT	64.9	69.5	64.9	61.7	63.2
	1991-1996	NOV	51.1	53.7	51.1	49.2	50.2
	1991-1996	DEC	11.4	12.1	11.4	11.0	11.1
		ANNUAL	504.4	544.5	504.4	474.8	488.7

IMPEV

AVERAGES:							
	1991-1996	JAN	1.6	1.6	1.6	1.6	1.6
	1991-1996	FEB	1.6	1.2	1.6	2.0	1.8
	1991-1996	MAR	6.0	4.4	6.0	6.8	6.4
	1991-1996	APR	15.0	10.8	15.0	17.9	16.5
	1991-1996	MAY	18.0	12.4	18.0	22.3	20.3
	1991-1996	JUN	17.4	12.2	17.4	21.3	19.5
	1991-1996	JUL	21.0	14.5	21.0	25.8	23.5
	1991-1996	AUG	17.0	11.3	17.0	21.4	19.4
	1991-1996	SEP	12.5	8.8	12.5	15.3	14.0
	1991-1996	OCT	15.8	11.6	15.8	18.9	17.4
	1991-1996	NOV	11.1	8.6	11.1	12.5	11.8
	1991-1996	DEC	2.9	2.3	2.9	3.6	3.3
		ANNUAL	**139.9**	**99.7**	**139.9**	**169.4**	**155.5**

ADDITIONAL URF vOLUME DATA

		Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
REQ'D INPUTS:		**Sidewalk Composition (%)**	0.01	0.01	0.01	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sloped Roof Composition (%)	0.13	0.13	0.13	0.24	0.24	0.24	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Driveway Composition (%)	0.07	0.07	0.07	0.10	0.10	0.10	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Flat Roof Composition (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Ind Park Composition (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.15	0.15	0.15	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
URF ARE/	**100000**	**Sidewalk Composition (m^2)**	1000	1000	1000	3000	3000	3000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ha	**m^2**	**Sloped Roof Composition (m^2)**	13000	13000	13000	24000	24000	24000	32000	32000	32000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Driveway Composition (m^2)	7000	7000	7000	10000	10000	10000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Flat Roof Composition (m^2)	0	0	0	0	0	0	0	0	0	17000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Ind Park Composition (m^2)	0	0	0	0	0	0	0	0	0	60000	15000	15000	15000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0
		Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
Total Moisture Supply = SUPY (Impervious)																													
AVERAGES:																													
	1991-1996	**JAN**	791.82	791.82	791.82	1395.09	1395.09	1395.09	1809.84	1809.84	1809.84	2902.64	980.11	980.11	980.11	188.48	188.48	188.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	FEB	231.18	231.18	231.18	407.31	407.31	407.31	528.40	528.40	528.40	847.64	286.22	286.22	286.22	55.04	55.04	55.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	MAR	582.81	582.81	582.81	1026.86	1026.86	1026.86	1332.14	1332.14	1332.14	2136.94	721.57	721.57	721.57	138.76	138.76	138.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	APR	1589.15	1589.15	1589.15	2799.93	2799.93	2799.93	3632.34	3632.34	3632.34	5826.89	1967.52	1967.52	1967.52	378.37	378.37	378.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	MAY	1520.50	1520.50	1520.50	2678.98	2678.98	2678.98	3475.43	3475.43	3475.43	5575.17	1882.53	1882.53	1882.53	362.02	362.02	362.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	JUN	1279.87	1279.87	1279.87	2255.01	2255.01	2255.01	2925.42	2925.42	2925.42	4692.87	1584.60	1584.60	1584.60	304.73	304.73	304.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	JUL	2034.35	2034.35	2034.35	3584.33	3584.33	3584.33	4649.94	4649.94	4649.94	7459.27	2518.72	2518.72	2518.72	484.37	484.37	484.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	AUG	1288.98	1288.98	1288.98	2271.06	2271.06	2271.06	2946.24	2946.24	2946.24	4726.26	1595.88	1595.88	1595.88	306.90	306.90	306.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	SEP	885.82	885.82	885.82	1560.73	1560.73	1560.73	2024.74	2024.74	2024.74	3248.01	1096.73	1096.73	1096.73	210.91	210.91	210.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	OCT	1714.55	1714.55	1714.55	3020.88	3020.88	3020.88	3918.98	3918.98	3918.98	6286.69	2122.78	2122.78	2122.78	408.23	408.23	408.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	NOV	1310.42	1310.42	1310.42	2308.83	2308.83	2308.83	2995.24	2995.24	2995.24	4805.01	1622.47	1622.47	1622.47	312.01	312.01	312.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	DEC	299.13	299.13	299.13	527.03	527.03	527.03	683.72	683.72	683.72	1096.80	370.35	370.35	370.35	71.22	71.22	71.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ANNUAL	13528.57	13528.57	13528.57	23836.05	23836.05	23836.05	30922.43	30922.43	30922.43	49604.20	16749.47	16749.47	16749.47	3221.05	3221.05	3221.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total SURO = SURO(Impervious)																													
AVERAGES:																													
	1991-1996	**JAN**	750.232	750.232	750.232	1322.233	1322.233	1322.233	1715.643	1715.643	1715.643	2716.825	916.495	916.495	916.495	176.601	176.601	176.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	FEB	211.652	211.652	211.652	373.073	373.073	373.073	484.115	484.115	484.115	768.986	259.658	259.658	259.658	49.934	49.934	49.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	MAR	479.452	479.452	479.452	846.480	846.480	846.480	1099.503	1099.503	1099.503	1641.574	552.181	552.181	552.181	107.040	107.040	107.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	APR	1328.709	1328.709	1328.709	2345.791	2345.791	2345.791	3046.925	3046.925	3046.925	4519.835	1518.673	1518.673	1518.673	295.071	295.071	295.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	MAY	1220.443	1220.443	1220.443	2156.010	2156.010	2156.010	2801.492	2801.492	2801.492	4027.777	1350.077	1350.077	1350.077	263.633	263.633	263.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	JUN	991.050	991.050	991.050	1751.231	1751.231	1751.231	2275.891	2275.891	2275.891	3243.016	1086.530	1086.530	1086.530	212.373	212.373	212.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	JUL	1675.041	1675.041	1675.041	2958.539	2958.539	2958.539	3843.851	3843.851	3843.851	5580.032	1871.217	1871.217	1871.217	365.058	365.058	365.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	AUG	1005.931	1005.931	1005.931	1778.709	1778.709	1778.709	2312.531	2312.531	2312.531	3188.516	1065.623	1065.623	1065.623	209.359	209.359	209.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	SEP	673.820	673.820	673.820	1191.022	1191.022	1191.022	1548.123	1548.123	1548.123	2169.670	725.898	725.898	725.898	142.298	142.298	142.298	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	OCT	1423.208	1423.208	1423.208	2512.644	2512.644	2512.644	3263.664	3263.664	3263.664	4838.390	1625.759	1625.759	1625.759	315.857	315.857	315.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	NOV	1106.527	1106.527	1106.527	1952.470	1952.470	1952.470	2535.203	2535.203	2535.203	3846.431	1294.006	1294.006	1294.006	250.773	250.773	250.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1991-1996	DEC	247.647	247.647	247.647	437.078	437.078	437.078	567.611	567.611	567.611	855.413	287.962	287.962	287.962	55.731	55.731	55.731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		ANNUAL	11113.712	11113.712	11113.712	19625.279	19625.279	19625.279	25494.549	25494.549	25494.549	37396.463	12554.077	12554.077	12554.077	2443.726	2443.726	2443.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total IMPEV = IMPEV(Impervious)																													
AVERAGES:																													
	1991-1996	**JAN**	32.94	32.94	32.94	57.99	57.99	57.99	75.20	75.20	75.20	122.82	41.47	41.47	41.47	7.98	7.98	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	FEB	28.30	28.30	28.30	49.37	49.37	49.37	63.65	63.65	63.65	140.66	48.37	48.37	48.37	8.95	8.95	8.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	MAR	105.43	105.43	105.43	184.01	184.01	184.01	237.33	237.33	237.33	501.09	170.89	170.89	170.89	32.18	32.18	32.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	APR	259.73	259.73	259.73	453.04	453.04	453.04	584.11	584.11	584.11	1295.11	444.81	444.81	444.81	82.53	82.53	82.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	MAY	305.44	305.44	305.44	532.09	532.09	532.09	685.49	685.49	685.49	1595.65	549.62	549.62	549.62	101.34	101.34	101.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	JUN	298.09	298.09	298.09	519.57	519.57	519.57	669.57	669.57	669.57	1531.47	526.95	526.95	526.95	97.38	97.38	97.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	JUL	356.03	356.03	356.03	620.19	620.19	620.19	798.96	798.96	798.96	1846.75	635.66	635.66	635.66	117.38	117.38	117.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	AUG	282.69	282.69	282.69	491.88	491.88	491.88	633.23	633.23	633.23	1524.93	525.54	525.54	525.54	96.79	96.79	96.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	SEP	214.94	214.94	214.94	374.65	374.65	374.65	482.83	482.83	482.83	1101.41	378.91	378.91	378.91	70.05	70.05	70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	OCT	277.14	277.14	277.14	483.66	483.66	483.66	623.79	623.79	623.79	1367.89	469.42	469.42	469.42	87.24	87.24	87.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	NOV	201.28	201.28	201.28	351.94	351.94	351.94	454.43	454.43	454.43	923.01	315.25	315.25	315.25	59.18	59.18	59.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1991-1996	DEC	52.99	52.99	52.99	92.64	92.64	92.64	119.60	119.60	119.60	257.33	88.64	88.64	88.64	16.34	16.34	16.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		ANNUAL	2415.00	2415.00	2415.00	4211.01	4211.01	4211.01	5428.19	5428.19	5428.19	12208.11	4195.52	4195.52	4195.52	777.35	777.35	777.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

URF TOTAL INPUTS AND OUTPUTS

10Ha **Total Moisture Supply = SUPY (Pervious)+ SUPY (Impervious) (m^3)**

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	3891.1	3891.1	3891.1	3856.7	3856.7	3856.7	3830.9	3830.9	3830.9	3776.6	3878.6	3878.6	3878.6	3920.2	3920.2	3920.2	3931.9	3931.9	3931.9	3820.2	3820.2	3820.2	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996	FEB	1100.7	1100.7	1100.7	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.7	1100.7	1100.7	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.0	1101.0	1101.0	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996	MAR	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996	APR	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996	MAY	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996	JUN	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996	JUL	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996	AUG	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996	SEP	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996	OCT	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996	NOV	5116.7	5116.7	5116.7	5437.6	5437.6	5437.6	5678.4	5678.4	5678.4	6176.1	5229.1	5229.1	5229.1	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996	DEC	1428.6	1428.6	1428.6	1427.4	1427.4	1427.4	1426.5	1426.5	1426.5	1424.7	1428.2	1428.2	1428.2	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
	ANNUAL	63422.8	63422.8	63422.8	63708.3	63708.3	63708.3	63922.3	63922.3	63922.3	64364.0	63522.4	63522.4	63522.4	64571.9	64571.9	64571.9	64583.7	64583.7	64583.7	64471.5	64471.5	64471.5	64588.0	64588.0	64588.0	64588.0	64588.0
(m3) for a single Ha		6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2	6352.2	6457.2	6457.2	6457.2	6458.4	6458.4	6458.4	6447.2	6447.2	6447.2	6458.8	6458.8	6458.8	6458.8	6458.8

Total Runoff = SURO+IFWO (Pervious)+ SURO(Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1096.3	1182.0	1480.2	1814.8	1882.4	2114.5	2355.1	2411.8	2597.5	3429.1	1335.4	1406.2	1683.6	376.2	459.7	835.9	112.6	167.5	501.1	2850.2	3035.8	3218.4	34.7	157.2	655.7	34.7	157.3
1991-1996	FEB	309.8	322.1	379.8	512.7	522.5	570.5	664.5	673.8	715.6	974.1	379.7	390.6	451.9	105.6	117.5	208.8	30.6	37.1	91.9	797.5	857.1	908.9	7.5	27.8	168.4	7.5	27.8
1991-1996	MAR	699.5	712.1	796.9	1162.1	1174.2	1243.7	1507.3	1520.7	1580.6	2137.6	830.6	840.7	923.6	232.9	247.1	360.5	68.6	76.2	173.9	1644.2	1738.8	1884.6	5.7	32.3	184.6	5.7	32.3
1991-1996	APR	1943.1	2003.8	2363.0	3223.1	3279.1	3565.1	4178.5	4238.5	4471.7	5881.2	2290.4	2339.5	2684.4	650.7	721.0	1209.3	190.9	232.4	670.5	4674.7	4943.8	5309.2	33.3	159.8	740.0	33.3	159.8
1991-1996	MAY	1807.0	1919.2	2428.1	2983.6	3082.6	3475.4	3863.1	3961.0	4264.7	5313.6	2084.3	2174.1	2640.4	614.3	741.5	1385.3	178.4	263.5	933.1	4493.6	4754.4	5069.0	70.8	267.9	966.6	70.9	268.2
1991-1996	JUN	1474.9	1614.3	2011.3	2434.1	2555.5	2854.7	3151.7	3265.2	3491.6	4314.6	1694.2	1804.5	2180.2	503.6	658.1	1177.5	149.0	265.7	810.0	3731.7	3929.0	4140.8	56.9	262.9	827.4	57.0	263.6
1991-1996	JUL	2446.7	2594.2	3059.7	4063.7	4193.0	4564.6	5271.9	5394.0	5708.0	7313.9	2844.4	2961.1	3431.5	810.4	973.4	1614.5	237.6	320.8	812.0	6137.4	6493.2	6889.3	36.3	280.1	1075.0	36.3	281.5
1991-1996	AUG	1472.9	1576.0	1911.2	2447.5	2541.1	2804.4	3176.8	3268.5	3481.3	4261.2	1659.8	1737.6	2087.0	479.9	587.3	1061.0	138.9	190.8	568.7	3757.8	3944.0	4095.5	26.5	187.0	776.3	26.5	187.8
1991-1996	SEP	996.1	1055.8	1176.1	1650.6	1698.5	1792.6	2139.0	2179.0	2258.8	2902.4	1135.1	1187.5	1311.8	332.2	408.1	588.3	96.0	142.3	289.8	2369.4	2493.8	2626.5	28.2	132.7	381.2	28.2	132.4
1991-1996	OCT	2073.0	2158.7	2494.9	3447.4	3535.1	3798.0	4474.9	4572.3	4781.2	6304.5	2446.7	2511.0	2849.3	686.1	776.6	1247.6	197.2	207.5	333.6	5235.5	5519.3	5750.2	24.5	267.5	899.7	24.5	268.5
1991-1996	NOV	1612.9	1652.7	1843.3	2680.0	2716.0	2864.9	3477.1	3513.8	3634.2	4975.3	1930.6	1963.3	2137.1	544.1	608.0	949.1	157.6	191.2	454.2	4053.1	4305.1	4545.6	27.1	135.5	615.3	27.1	135.5
1991-1996	DEC	362.3	373.1	422.1	601.5	610.8	650.7	780.5	789.4	823.7	1111.4	432.3	442.2	486.8	122.0	138.6	207.9	35.3	44.4	98.5	898.5	960.2	1014.8	7.0	34.1	135.3	7.0	34.1
	ANNUAL	16300.3	17169.3	20371.1	27029.1	27798.4	30305.0	35050.3	35796.7	37815.8	48932.2	19072.5	19767.5	22874.2	5462.3	6440.9	10847.8	1592.8	2140.2	5746.2	40634.0	42976.3	45465.4	358.5	1944.7	7425.5	358.6	1948.7
(m3) for a single Ha		1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7	2287.4	546.2	644.1	1084.8	159.3	214.0	574.6	4063.4	4297.6	4546.5	35.8	194.5	742.5	35.9	194.9

Total Evapo = IMPEV(Impervious)+ TAET(Pervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	166.7	167.4	168.9	156.2	156.7	157.7	148.4	148.8	149.0	137.6	163.0	163.7	165.6	175.7	176.7	180.0	193.0	192.9	191.9	130.2	130.2	130.0	176.2	178.6	184.6	176.2	178.6
1991-1996	FEB	191.7	195.9	197.0	168.3	171.4	171.7	151.0	152.9	152.9	157.6	196.8	200.5	202.1	214.5	219.7	221.8	240.2	240.5	240.6	136.2	136.2	136.2	215.4	224.8	227.3	215.4	224.8
1991-1996	MAR	643.2	655.4	661.3	581.3	590.5	592.9	535.9	542.4	541.9	563.3	659.4	670.2	676.2	703.9	719.6	728.4	759.6	760.4	758.9	501.6	501.6	501.3	714.4	745.0	754.2	714.4	745.0
1991-1996	APR	2002.0	2047.8	2058.1	1721.4	1751.8	1755.6	1511.7	1530.0	1528.5	1473.7	2027.4	2069.7	2074.0	2278.4	2339.0	2346.3	2519.9	2526.0	2524.9	1312.1	1312.0	1309.0	2331.4	2431.4	2436.1	2331.4	2431.4
1991-1996	MAY	3664.4	3804.4	3779.9	2946.4	3038.1	3010.8	2406.3	2458.1	2429.7	1892.6	3597.4	3727.0	3662.8	4373.8	4559.9	4471.4	5201.4	5238.5	5214.2	1829.6	1825.2	1804.6	4460.4	4747.0	4581.1	4460.4	4747.0
1991-1996	JUN	4319.5	4404.4	4332.0	3401.6	3451.6	3391.6	2711.8	2731.0	2680.9	1863.2	4173.4	4255.2	4143.9	5225.9	5344.1	5189.0	6750.0	6773.6	6687.5	1953.2	1931.9	1886.3	5130.5	5298.1	5069.8	5130.5	5298.1
1991-1996	JUL	5096.9	5195.8	5160.5	4012.0	4074.7	4033.6	3193.1	3229.1	3180.8	2234.0	4934.6	5028.9	4929.9	6166.5	6302.0	6164.3	7825.0	7857.7	7707.5	2301.5	2286.3	2227.3	6112.5	6305.3	6134.5	6112.5	6305.2
1991-1996	AUG	4642.6	4804.8	4724.8	3619.5	3721.7	3650.2	2851.1	2901.7	2837.4	1879.4	4475.3	4627.7	4486.3	5660.2	5878.8	5681.4	7384.6	7428.6	7225.7	2025.3	2004.1	1932.3	5562.2	5880.0	5611.3	5562.2	5879.9
1991-1996	SEP	3321.1	3324.3	3223.7	2598.7	2593.7	2517.3	2053.8	2042.3	1983.5	1350.6	3195.0	3201.5	3078.7	4034.3	4043.9	3870.0	5459.2	5436.7	5098.6	1455.4	1424.5	1384.2	3842.1	3843.4	3628.3	3842.1	3843.3
1991-1996	OCT	2654.8	2689.9	2693.1	2201.2	2222.2	2220.5	1860.7	1870.8	1864.3	1587.3	2627.1	2661.3	2654.7	3101.4	3150.4	3142.8	3813.1	3812.6	3718.7	1502.9	1500.6	1485.6	3068.5	3143.0	3178.8	3068.5	3142.9
1991-1996	NOV	2972.3	2840.5	2546.6	2393.2	2300.9	2070.5	1963.0	1895.9	1709.1	1127.7	2802.2	2683.9	2417.9	1336.2	1348.7	1376.1	1456.7	1456.5	1453.8	930.4	930.1	928.5	1349.8	1376.6	1427.6	1349.8	1376.6
1991-1996	DEC	363.0	369.4	384.0	319.5	324.5	335.1	287.2	291.3	298.0	290.3	370.2	375.8	389.6	406.0	414.0	433.8	485.6	485.5	485.3	257.1	257.0	256.0	393.8	411.9	447.9	393.8	411.9
	ANNUAL	30024.7	30486.7	29917.6	24088.9	24367.6	23879.6	19630.4	19751.4	19316.3	14543.5	29212.0	29655.8	28874.3	33672.3	34492.6	33802.9	42088.0	42208.9	41299.4	14236.2	14144.2	13893.7	33357.0	34584.9	33681.3	33357.1	34584.7
(m3) for a single Ha		3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6	2887.4	3367.2	3449.3	3380.3	4208.8	4220.9	4129.9	1423.6	1414.4	1389.4	3335.7	3458.5	3368.1	3335.7	3458.5

(AGWO)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6
1991-1996	FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8
1991-1996	MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7
1991-1996	APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3
1991-1996	MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1
1991-1996	JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0
1991-1996	JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0
1991-1996	AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8
1991-1996	SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5
1991-1996	OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4
1991-1996	NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6
1991-1996	DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5
	ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3
(m3) for a single Ha		1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8	1099.0	1978.1	1856.1	1603.9	1745.8	1674.6	1471.2	729.6	568.4	404.6	2325.7	2149.1	1857.5	2325.7	2148.8

(IGWI)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1
1991-1996	FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5
1991-1996	MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1
1991-1996	APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9
1991-1996	MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3
1991-1996	JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8
1991-1996	JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0
1991-1996	AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0
1991-1996	SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9
1991-1996	OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4
1991-1996	NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1
1991-1996	DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4
	ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2
(m3) for a single Ha		241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1	170.8	319.0	298.9	256.3	279.5	268.0	233.8	117.3	91.6	65.2	375.9	346.6	297.7	375.9	346.5

REQ INPUTS:HSPF MODEL

LAND USE IN HA

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	3.60	40.85	15.99	5.25	17.31	18.63	45.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	2.00	0.00	38.57	0.00	0.00	0.00	0.00	1.46	0.00	0.00	3.14	2.63	2.20	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	2.20	29.35	1.81	1.35	2.21	2.45	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	6.00	0.00	42.70	0.00	0.00	0.00	0.00	2.18	0.00	0.00	10.00	7.05	21.06	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	6.30	0.00	25.93	0.00	0.00	0.00	0.00	1.69	0.00	0.00	9.12	6.91	20.32	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	1.16					9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.84					5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	1.05					0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.75					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	1.97	1.13				29.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.55	0.00	0.00	0.00	0.00	0.29	0.00	0.00	1.36	0.08	0.18	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	18.88			1.72		2.19	6.00	19.50	0.00	21.80	4.90	0.00	4.00	3.40	2.50	0.00	0.00	0.00	4.02	0.00	0.00	0.00	0.00	0.76	7.20	17.90	0.51	0.00	0.00	1.70
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	13.57			0.22		1.16	3.90	16.10	0.00	49.60	9.70	0.00	18.30	16.40	11.00	0.00	0.00	0.00	4.45	0.00	0.00	0.00	0.00	1.13	14.80	70.60	1.63	0.00	0.00	9.30
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00			0.00		0.00	1.50	7.30	0.00	47.60	12.00	0.00	30.90	19.20	21.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.88	44.30	91.50	1.48	0.00	0.00	8.70
Utility/Transport/Parks	2	OPL0ab	4001	4501	8.50	9.60	0.60	9.40	20.61			3.17	3.13	22.44	17.70	18.10	7.80	6.30	1.10	3.40	1.10	1.90	0.50	0.00	0.20	5.40	17.24	1.60	0.80	3.50	5.10	0.59	2.20	0.10	0.04	0.14	1.39	0.00
Utility/Transport/Parks	2	OPL0bc	4002	4502	1.10	3.60	0.20	5.90	14.81			0.40	0.41	11.93	11.50	15.00	11.30	14.40	2.20	9.40	5.00	9.30	2.40	0.00	0.60	12.90	19.09	7.90	1.60	9.60	16.00	0.88	4.60	0.50	0.13	0.38	13.30	0.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.50	3.20	0.20	3.30	0.00			0.00	0.00	0.00	4.30	6.80	6.10	13.80	2.70	8.30	8.40	10.80	4.60	0.00	0.70	17.70	11.59	17.60	2.50	9.10	15.20	0.69	13.70	0.70	0.12	0.37	12.83	0.00
Valley Segment	2	OVL0ab	4101	4601	7.40	0.60	0.00	2.40	43.73	3.12	3.72				0.00	1.40	0.00	0.90	0.40	0.00	0.00	0.20	0.20	10.56	0.00	0.00	9.15	0.20	0.90	1.10	0.20	5.90	0.90	0.40	10.97	12.49	1.03	0.10
Valley Segment	2	OVL0bc	4102	4602	1.00	0.20	0.00	1.50	31.42	0.35	0.96				0.00	1.10	0.00	2.00	0.90	0.00	0.00	0.80	0.90	22.23	0.00	0.00	10.13	1.10	1.80	3.00	0.70	8.82	1.80	1.40	34.97	33.51	9.83	0.40
Valley Segment	2	OVL0cd	4103	4603	0.40	0.20	0.00	0.80	0.00	0.00	0.00				0.00	0.50	0.00	1.90	1.10	0.00	0.00	1.00	1.80	22.11	0.00	0.00	6.15	2.30	2.70	2.90	0.70	6.85	5.30	1.80	31.88	32.84	9.48	0.40
Roads	2	THC0ab	5001	5501	0.60	5.00	1.40	2.80	27.62	5.93	2.47	12.48	11.02	48.94	6.90	2.40	2.30	3.90	0.10	0.90	0.30	0.80	0.50		0.90	0.40		0.10		0.10	0.40		0.70	0.40				0.50
Roads	2	THC0bc			0.1	1.9	0.4	1.8							4.50	2.00	3.40	8.80	0.30	2.50	1.50	3.80	2.40		2.60	1.00		0.40		0.30	1.20		1.50	1.40				3.10
Roads and ROW	2	THC0cd	5003	5503	0.00	1.70	0.40	1.00							1.70	0.90	1.80	8.50	0.30	2.20	2.60	4.40	4.50	2.22	2.70	1.30	44.33	1.00	0.00	0.30	1.10	3.95	4.40	1.90	10.88	10.19	13.04	2.90
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	5.30	103.73	44.65	1.93				11.80	19.50	7.00	10.50	4.00	1.80	2.00	3.10	1.50	29.89	3.90	0.00	36.16	0.00	0.00	0.00	0.00	6.31	0.00	4.00	41.88	42.24	9.95	0.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	3.30	74.53	5.06	0.50				7.70	16.10	10.10	23.80	7.80	5.10	9.30	15.10	6.60	62.92	11.60	0.00	40.04	0.00	0.00	0.00	0.00	9.43	0.00	15.80	133.55	113.28	95.04	0.00
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	1.90	0.00	0.00	0.00				2.90	7.30	5.50	22.90	9.70	4.50	15.70	17.60	12.50	62.58	12.30	0.00	24.31	0.00	0.00	0.00	0.00	7.33	0.00	20.50	121.78	111.03	91.73	0.00
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00			3.53				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00			0.91				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	24.60							2.90	14.60	5.70	7.50	0.00	7.40	0.00	0.00	0.00		0.00	5.60		1.40	5.10	6.60	3.50		12.80	1.30				0.20
Industrial/Prestige		IPRbc			0.00	0.00	0.00	15.50							1.90	12.10	8.20	17.00	0.00	20.40	0.00	0.00	0.00		0.00	13.40		7.20	10.40	18.00	11.00		26.50	4.90				1.00
Industrial/Prestige		IPRcd			0.00	0.00	0.00	8.70							0.70	5.50	4.40	16.30	0.00	17.90	0.00	0.00	0.00		0.00	18.30		16.10	15.80	17.10	10.40		79.20	6.40				0.90
Prestige Business Park		IPEab			52.20	46.70	14.30	26.40							10.80	22.10	4.10	21.30	0.60	1.00	0.10	2.10	2.70		1.60	4.80		2.40	2.90	4.60	8.50		10.00	1.30				3.50
Prestige Business Park		IPEbc			7.00	17.70	4.50	16.60							7.00	18.20	6.00	48.30	1.20	2.70	0.60	10.20	11.80		4.60	11.50		12.40	5.90	12.50	26.80		20.60	5.20				19.80
Prestige Business Park		IPEcd			3.10	15.60	4.40	9.40							2.60	8.30	3.20	46.40	1.50	2.40	1.10	11.90	22.50		4.90	15.80		27.50	8.90	11.90	25.40		61.60	6.80				18.60
		Sum URF AREAS			81.9	106.0	26.4	147.7	424.9	78.0	20.6	37.5	35.6	200.9	106.3	214.8	86.9	393.5	60.5	89.9	100.9	132.0	109.9	214.0	60.9	108.1	439.7	99.2	59.3	100.6	126.2	59.1	312.1	254.8	413.9	373.2	301.4	71.1

LAND USE IN %

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	0.02	0.10	0.20	0.25	0.46	0.52	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.01	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	0.01	0.07	0.02	0.07	0.06	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.02	0.02	0.07	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.02	0.07	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05	0.00	0.01	0.06	0.09	0.00	0.06	0.08	0.00	0.04	0.03	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.00	0.00	0.00	0.02
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.01	0.04	0.07	0.00	0.13	0.16	0.00	0.18	0.12	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.05	0.28	0.00	0.00	0.00	0.13
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.12	0.20	0.00	0.31	0.15	0.19	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.14	0.36	0.00	0.00	0.00	0.12
Utility/Transport/Parks	2	OPL0ab	4001	4501	0.10	0.09	0.02	0.06	0.05	0.00	0.00	0.08	0.09	0.11	0.17	0.08	0.09	0.02	0.02	0.04	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.02	0.01	0.03	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Utility/Transport/Parks	2	OPL0bc	4002	4502	0.01	0.03	0.01	0.04	0.03	0.00	0.00	0.01	0.01	0.06	0.11	0.07	0.13	0.04	0.04	0.10	0.05	0.07	0.02	0.00	0.01	0.12	0.04	0.08	0.03	0.10	0.13	0.01	0.01	0.00	0.00	0.00	0.04	0.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.01	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.07	0.04	0.04	0.09	0.08	0.08	0.04	0.00	0.01	0.16	0.03	0.18	0.04	0.09	0.12	0.01	0.04	0.00	0.00	0.00	0.04	0.00
Valley Segment	2	OVL0ab	4101	4601	0.09	0.01	0.00	0.02	0.10	0.04	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.10	0.00	0.00	0.03	0.03	0.00	0.00
Valley Segment	2	OVL0bc	4102	4602	0.01	0.00	0.00	0.01	0.07	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.10	0.00	0.00	0.02	0.01	0.03	0.03	0.01	0.15	0.01	0.01	0.08	0.09	0.03	0.01
Valley Segment	2	OVL0cd	4103	4603	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.02	0.10	0.00	0.00	0.01	0.02	0.05	0.03	0.01	0.12	0.02	0.01	0.08	0.09	0.03	0.01
Roads	2	THC0ab	5001	5501	0.01	0.05	0.05	0.02	0.07	0.08	0.12	0.33	0.31	0.24	0.06	0.01	0.03	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Roads	2	THC0bc			0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.04	0.02	0.00	0.03	0.01	0.03	0.02	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.04
Roads and ROW	2	THC0cd	5003	5503	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.02	0.03	0.03	0.04	0.01	0.04	0.01	0.10	0.01	0.00	0.00	0.01	0.07	0.01	0.01	0.03	0.03	0.04	0.04
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	0.04	0.24	0.57	0.09	0.00	0.00	0.00	0.11	0.09	0.08	0.03	0.07	0.02	0.02	0.02	0.01	0.14	0.06	0.00	0.08	0.00	0.00	0.00	0.00	0.11	0.00	0.02	0.10	0.11	0.03	0.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	0.02	0.18	0.06	0.02	0.00	0.00	0.00	0.07	0.07	0.12	0.06	0.13	0.06	0.09	0.11	0.06	0.29	0.19	0.00	0.09	0.00	0.00	0.00	0.00	0.16	0.00	0.06	0.32	0.30	0.32	0.00
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.06	0.06	0.16	0.05	0.16	0.13	0.11	0.29	0.20	0.00	0.06	0.00	0.00	0.00	0.00	0.12	0.00	0.08	0.29	0.30	0.30	0.00
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.07	0.02	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.09	0.07	0.03	0.00	0.04	0.01	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRbc			0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.09	0.04	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.07	0.18	0.18	0.09	0.00	0.08	0.02	0.00	0.00	0.00	0.01
Industrial/Prestige		IPRcd			0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.04	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.16	0.27	0.17	0.08	0.00	0.25	0.03	0.00	0.00	0.00	0.01
Prestige Business Park		IPEab			0.64	0.44	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.05	0.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.04	0.00	0.02	0.05	0.05	0.07	0.00	0.03	0.01	0.00	0.00	0.00	0.05
Prestige Business Park		IPEbc			0.09	0.17	0.17	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.07	0.12	0.02	0.03	0.01	0.08	0.11	0.00	0.08	0.11	0.00	0.13	0.10	0.12	0.21	0.00	0.07	0.02	0.00	0.00	0.00	0.28
Prestige Business Park		IPEcd			0.04	0.15	0.17	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.12	0.02	0.03	0.01	0.09	0.20	0.00	0.08	0.15	0.00	0.28	0.15	0.12	0.20	0.00	0.20	0.03	0.00	0.00	0.00	0.26
		Sum URF AREAS			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

SUBCATCHMENT

S-5 | S-6 | S-7 | S-8 | S-9 | S-10 | S-11 | S-12 | S-13a | S-13b

Area (ha) SUPY RO ET AGWO IGWI

[illegible]

SUBCATCHMENT

[illegible]

SUBCATCHMENT

[illegible]

SUBCATCHMENT

[illegible]

SUMMARY OF WATER BALANCES FOR EACH SUBCATCHMENT

SUBCATCHMENT 1			SUBCATCHMENT 2			SUBCATCHMENT 3		
S (m3)	S (m3)	S (mm)	W (m3)	w (m3)	W (mm)	T (m3)	T (m3)	T (mm)
81.9	81.9		106.3	106.3		108.1	108.1	
525241.4	525241.4	641.3	683687.0	683687.0	643.2	694510.5	694510.5	642.5
69195.6	69195.6	84.5	100151.4	100151.4	94.2	128706.1	128706.1	119.1
276510.4	276510.4	337.6	337656.8	337656.8	317.6	345685.5	345685.5	319.8
166264.2	166264.2	203.0	207168.7	207168.7	194.9	200385.7	200385.7	185.4
11750.0	11750.0	14.3	24084.0	24084.0	22.7	15234.8	15234.8	14.1
106.0	106.0		214.8	214.8		439.7	439.7	
679746.8	679746.8	641.3	1378304.5	1378304.5	641.7	2818679.9	2818679.9	641.0
107002.4	107002.4	100.9	230153.3	230153.3	107.1	730378.4	730378.4	166.1
341613.5	341613.5	322.3	688054.0	688054.0	320.3	1284886.9	1284886.9	292.2
215443.4	215443.4	203.2	398258.7	398258.7	185.4	674076.2	674076.2	153.3
13577.7	13577.7	12.8	43608.8	43608.8	20.3	97159.5	97159.5	22.1
26.4	26.4		86.9	86.9		99.2	99.2	
169105.0	169105.0	640.5	559523.1	559523.1	643.9	637017.0	637017.0	642.2
27822.5	27822.5	105.4	79993.1	79993.1	92.1	115687.2	115687.2	116.6
84419.2	84419.2	319.8	279223.7	279223.7	321.3	322342.8	322342.8	324.9
54388.4	54388.4	206.0	170318.4	170318.4	196.0	183329.4	183329.4	184.8
2705.7	2705.7	10.2	18214.9	18214.9	21.0	13254.3	13254.3	13.4
147.7	147.7		393.5	393.5		59.3	59.3	
947716.3	947716.3	641.6	2519807.3	2519807.3	640.4	380528.2	380528.2	641.7
165278.3	165278.3	111.9	526601.9	526601.9	133.8	74443.7	74443.7	125.5
471586.7	471586.7	319.3	1231978.7	1231978.7	313.1	190963.5	190963.5	322.0
284921.4	284921.4	192.9	683811.2	683811.2	173.8	109253.4	109253.4	184.2
20653.6	20653.6	14.0	67259.3	67259.3	17.1	6050.8	6050.8	10.2
424.9	424.9		60.5	60.5		100.6	100.6	
2731762.2	2731762.2	643.0	387707.8	387707.8	640.8	646097.4	646097.4	642.2
298660.2	298660.2	70.3	75537.4	75537.4	124.9	117575.3	117575.3	116.9
1426043.9	1426043.9	335.6	193584.8	193584.8	320.0	326709.8	326709.8	324.8
810224.3	810224.3	190.7	98803.0	98803.0	163.3	186089.5	186089.5	185.0
123544.6	123544.6	29.1	14805.6	14805.6	24.5	13123.7	13123.7	13.0
78.0	78.0		89.9	89.9		126.2	126.2	
501875.0	501875.0	643.1	578117.4	578117.4	643.1	810273.1	810273.1	642.1
47449.2	47449.2	60.8	109616.2	109616.2	121.9	138729.0	138729.0	109.9
250462.7	250462.7	320.9	281591.7	281591.7	313.2	409762.2	409762.2	324.7
160825.2	160825.2	206.1	167262.2	167262.2	186.1	239926.7	239926.7	190.1
24476.8	24476.8	31.4	13485.8	13485.8	15.0	17667.8	17667.8	14.0
20.6	20.6		100.9	100.9		59.1	59.1	
132380.7	132380.7	642.0	645842.5	645842.5	640.1	380945.7	380945.7	644.2
16139.0	16139.0	78.3	151659.7	151659.7	150.3	40898.1	40898.1	69.2
68609.8	68609.8	332.7	312556.5	312556.5	309.8	209995.2	209995.2	355.1
39185.8	39185.8	190.0	153683.0	153683.0	152.3	105852.3	105852.3	179.0
5697.9	5697.9	27.6	22958.5	22958.5	22.8	16027.7	16027.7	27.1
37.5	37.5		132.0	132.0		312.1	312.1	
239637.4	239637.4	638.9	846825.2	846825.2	641.5	1997769.6	1997769.6	640.1
57900.9	57900.9	154.4	162115.7	162115.7	122.8	470527.8	470527.8	150.8
106417.9	106417.9	283.7	419454.0	419454.0	317.8	966654.8	966654.8	309.7
66595.2	66595.2	177.5	227002.6	227002.6	172.0	534102.8	534102.8	171.1
7683.0	7683.0	20.5	28404.2	28404.2	21.5	34361.5	34361.5	11.0
35.6	35.6		109.9	109.9		254.8	254.8	
227601.4	227601.4	638.6	703870.4	703870.4	640.4	1625114.2	1625114.2	637.8
54372.3	54372.3	152.6	148585.9	148585.9	135.2	445375.6	445375.6	174.8
101828.8	101828.8	285.7	346014.4	346014.4	314.8	772369.4	772369.4	303.1
63059.1	63059.1	176.9	187272.9	187272.9	170.4	361098.9	361098.9	141.7
7459.6	7459.6	20.9	19350.4	19350.4	17.6	50183.7	50183.7	19.7
200.9	200.9		214.0	214.0		413.9	413.9	
1286534.0	1286534.0	640.4	1381706.8	1381706.8	645.8	2670029.9	2670029.9	645.1
406258.3	406258.3	202.2	86236.2	86236.2	40.3	224929.2	224929.2	54.3
533953.3	533953.3	265.8	767311.5	767311.5	358.6	1444799.8	1444799.8	349.1
301433.0	301433.0	150.0	415298.8	415298.8	194.1	791277.5	791277.5	191.2
36595.4	36595.4	18.2	66202.3	66202.3	30.9	124477.5	124477.5	30.1
#N/A	#N/A		60.9	60.9		373.2	373.2	
			390941.2	390941.2	641.9	2408063.2	2408063.2	645.3
			62964.4	62964.4	103.4	187041.9	187041.9	50.1
			193768.4	193768.4	318.2	1313674.5	1313674.5	352.0
			113552.7	113552.7	186.5	717354.9	717354.9	192.2
			14081.1	14081.1	23.1	112790.7	112790.7	30.2
						301.4	301.4	
						1941687.6	1941687.6	644.1
						227581.5	227581.5	75.5
						1012608.6	1012608.6	335.9
						560707.2	560707.2	186.0
						86815.6	86815.6	28.8
						71.1	71.1	
						454457.9	454457.9	639.2
						102606.9	102606.9	144.3
						219844.1	219844.1	309.2
						126394.8	126394.8	177.8
						8218.3	8218.3	11.6

Sulfur

	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b
AREA (ha)	81.9	106.0	26.4	147.7	424.9	78.0	20.6	37.5	35.6	200.9
SUPPLY	641.3	641.3	640.5	641.6	643.0	643.1	642.0	638.9	638.6	640.4
RO	84.5	100.9	105.4	111.9	70.3	60.8	78.3	154.4	152.6	202.2
ET	337.6	322.3	319.8	319.3	335.6	320.9	332.7	283.7	285.7	265.8
AGWO	203.0	203.2	206.0	192.9	190.7	206.1	190.0	177.5	176.9	150.0
IGWI	14.3	12.8	10.2	14.0	29.1	31.4	27.6	20.5	20.9	18.2
Error (%)	0.3	0.3	-0.1	0.6	2.7	3.7	2.1	0.4	0.4	0.6

Welland

	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24
AREA (ha)	106.3	214.8	86.9	393.5	60.5	89.9	100.9	132.0	109.9	214.0	60.9
SUPPLY	643.2	641.7	643.9	640.4	640.8	643.1	640.1	641.5	640.4	645.8	641.9
RO	94.2	107.1	92.1	133.8	124.9	121.9	150.3	122.8	135.2	40.3	103.4
ET	317.6	320.3	321.3	313.1	320.0	313.2	309.8	317.8	314.8	358.6	318.2
AGWO	194.9	185.4	196.0	173.8	163.3	186.1	152.3	172.0	170.4	194.1	186.5
IGWI	22.7	20.3	21.0	17.1	24.5	15.0	22.8	21.5	17.6	30.9	23.1
Error (%)	2.1	1.3	2.1	0.4	1.3	1.1	0.8	1.2	0.4	3.4	1.7

Twenty-Mile

	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
AREA (ha)	108.1	439.7	99.2	59.3	100.6	126.2	59.1	312.1	254.8	413.9	373.2	301.4	71.1
SUPPLY	642.5	641.0	642.2	641.7	642.2	642.1	644.2	640.1	637.8	645.1	645.3	644.1	639.2
RO	119.1	166.1	116.6	125.5	116.9	109.9	69.2	150.8	174.8	54.3	50.1	75.5	144.3
ET	319.8	292.2	324.9	322.0	324.8	324.7	355.1	309.7	303.1	349.1	352.0	335.9	309.2
AGWO	185.4	153.3	184.8	184.2	185.0	190.1	179.0	171.1	141.7	191.2	192.2	186.0	177.8
IGWI	14.1	22.1	13.4	10.2	13.0	14.0	27.1	11.0	19.7	30.1	30.2	28.8	11.6
Error (%)	0.6	1.1	0.4	0.0	0.4	0.5	2.1	-0.4	-0.2	3.2	3.2	2.8	-0.6

Sulfur											
	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	AVERAGE
AREA (ha)	82	106	26	148	425	78	21	38	36	201	
SUPPLY (mm)	641	641	641	642	643	643	642	639	639	640	641
RO (mm)	84	101	105	112	70	61	78	154	153	202	112
ET (mm)	338	322	320	319	336	321	333	284	286	266	312
AGWO (mm)	203	203	206	193	191	206	190	178	177	150	
IGWI (mm)	14	13	10	14	29	31	28	20	21	18	
Infil (mm)	217	216	216	207	220	237	218	198	198	168	210
Error (%)	0.29	4.77	1.19	2.25	2.57	3.53	2.18	1.14	1.07	0.89	

Welland												
	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	AVERAGE
AREA (ha)	106	215	87	394	61	90	101	132	110	214	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	646	642	642
RO (mm)	94	107	92	134	125	122	150	123	135	40	103	111
ET (mm)	318	320	321	313	320	313	310	318	315	359	318	320
AGWO (mm)	195	185	196	174	163	186	152	172	170	194	186	
IGWI (mm)	23	20	21	17	24	15	23	22	18	31	23	
Infil (mm)	218	206	217	191	188	201	175	193	188	225	210	199
Error (%)	2.14	3.77	3.54	2.36	2.58	3.28	2.69	3.01	2.94	3.36	2.31	

Twenty-Mile														
	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37	AVERAGE
AREA (ha)	108	440	99	59	101	126	59	312	255	414	373	301	71	
SUPPLY (mm)	642	641	642	642	642	642	644	640	638	645	645	644	639	642
RO (mm)	119	166	117	126	117	110	69	151	175	54	50	75	144	108
ET (mm)	320	292	325	322	325	325	355	310	303	349	352	336	309	328
AGWO (mm)	185	153	185	184	185	190	179	171	142	191	192	186	178	
IGWI (mm)	14	22	13	10	13	14	27	11	20	30	30	29	12	
Infil (mm)	199	175	198	194	198	204	206	182	161	221	222	215	189	197
Error (%)	0.65	1.14	0.38	-0.05	0.40	0.52	2.15	-0.39	-0.24	3.17	3.21	2.78	-0.57	

Sulphur					
	S-5	**S-6**	**S-7**	**S-8**	**AVERAGE**
AREA (ha)	**82**	**106**	**26**	**148**	
SUPPLY (mm)	641	641	641	642	641
RO (mm)	84	101	105	112	101
ET (mm)	338	322	320	319	325
INFIL (mm)	217	216	216	207	214

Welland											
	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-24**	**AVERAGE**
AREA (ha)	106	215	87	394	61	90	101	132	110	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	642	642
RO (mm)	94	107	92	134	125	122	150	123	135	103	119
ET (mm)	318	320	321	313	320	313	310	318	315	318	317
INFIL (mm)	218	206	217	191	188	201	175	193	188	210	199

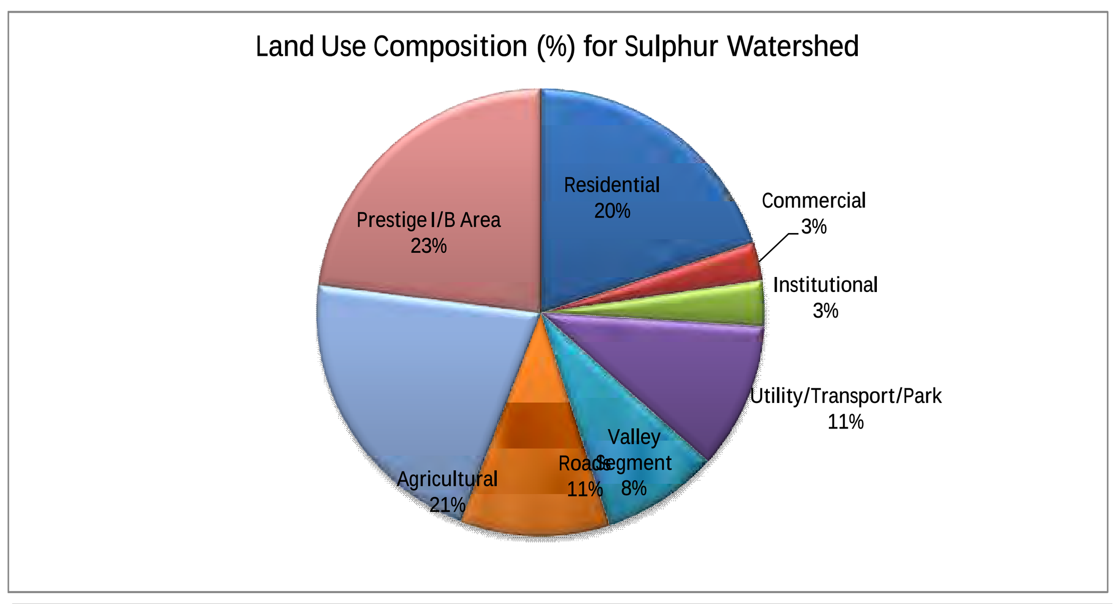
Twenty-Mile									
	T-25	**T-27**	**T-28**	**T-29**	**T-30**	**T-32**	**T-33**	**T-37**	**AVERAGE**
AREA (ha)	108	99	59	101	126	312	255	71	
SUPPLY (mm)	642	642	642	642	642	640	638	639	641
RO (mm)	119	117	126	117	110	151	175	144	132
ET (mm)	320	325	322	325	325	310	303	309	317
INFIL (mm)	199	198	194	198	204	182	161	189	191

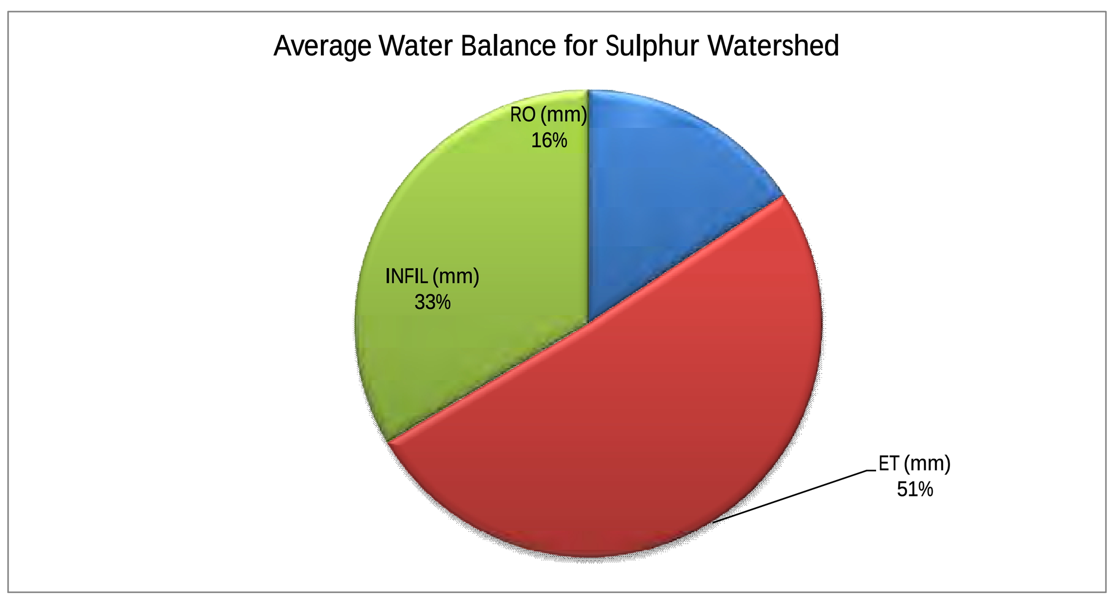
LAND USE COMPOSITION (ha)

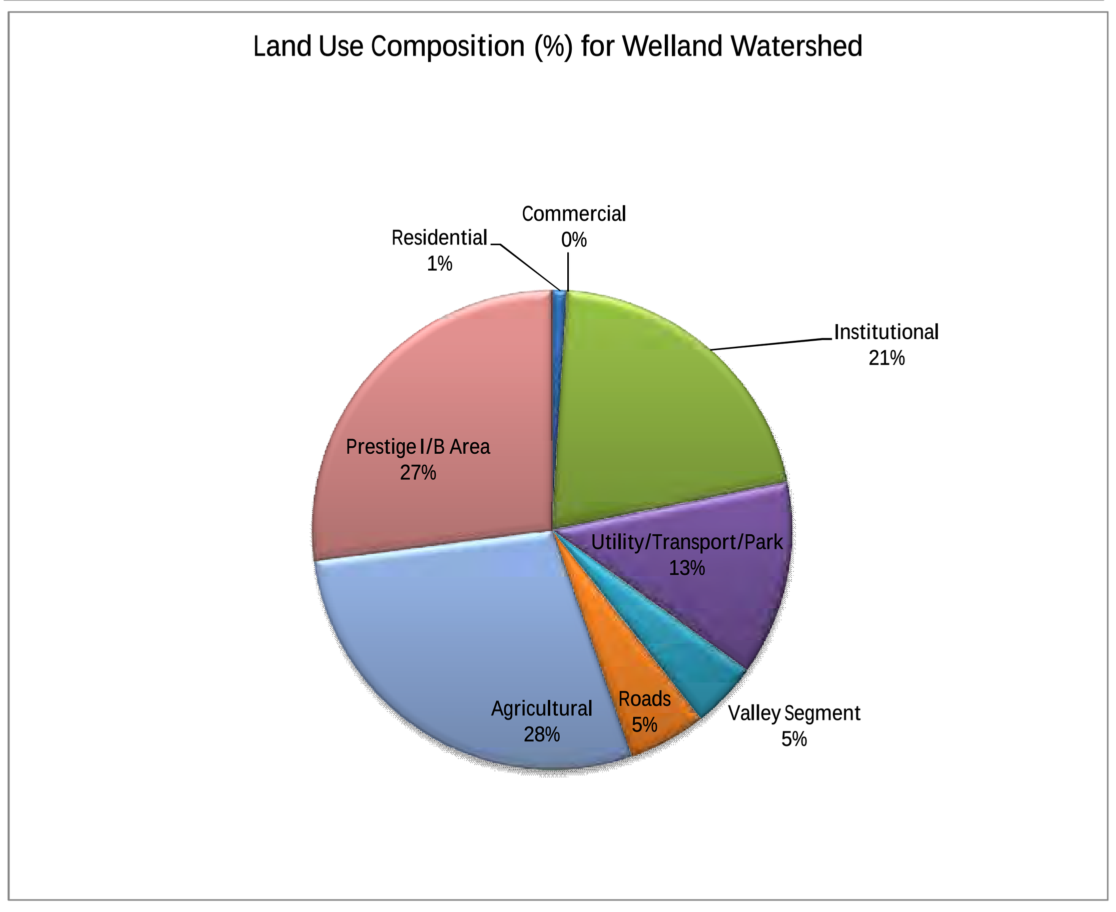
		SULFUR	WELLAND	TWENTY-MILE
Res Low Density	RLD5ab	147.13	2.28	48.00
Res Low Density	RLD5bc	63.57	6.59	82.99
Res Low Density	RLD5cd	1.30	6.88	63.98
Res Med Denisty	RMD5ab	10.93	0.00	12.34
Res Med Denisty	RMD5bc	6.03	0.00	13.79
Res Med Denisty	RMD5cd	0.00	0.00	8.44
Res High Density	RHD5ab	1.36	0.00	21.41
Res High Density	RHD5bc	0.92	0.00	23.74
Res High Density	RHD5cd	0.00	0.00	14.43
Commercial	CSM1bc	32.21	0.00	11.47
Institutional	EIS1ab	22.79	62.10	32.09
Institutional	EIS1bc	14.95	125.00	101.91
Institutional	EIS1cd	0.00	139.50	149.56
Utility/Transport/Parks	OPL0ab	77.45	58.10	38.11
Utility/Transport/Parks	OPL0bc	38.35	81.10	86.88
Utility/Transport/Parks	OPL0cd	7.20	66.50	102.10
Valley Segment	OVL0ab	60.97	13.66	43.33
Valley Segment	OVL0bc	35.43	27.93	107.44
Valley Segment	OVL0cd	1.40	28.41	103.31
Roads	THC0ab	118.26	19.00	2.60
Roads	THC0bc	4.20	31.80	8.90
Roads and ROW	THC0cd	3.10	31.82	95.29
Agricultural Tilled	AGT0ab	155.61	94.99	140.54
Agricultural Tilled	AGT0bc	83.39	176.12	407.14
Agricultural Tilled	AGT0cd	1.90	173.48	376.67
Agricultural Pasture/forest	AGPab	3.53	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.91	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00
Industrial/Prestige	IPRab	24.60	38.10	36.50
Industrial/Prestige	IPRbc	15.50	59.60	92.40
Industrial/Prestige	IPRcd	8.70	44.80	164.20
Prestige Business Park	IPEab	139.60	66.40	38.00
Prestige Business Park	IPEbc	45.80	110.60	114.70
Prestige Business Park	IPEcd	32.50	104.80	176.50

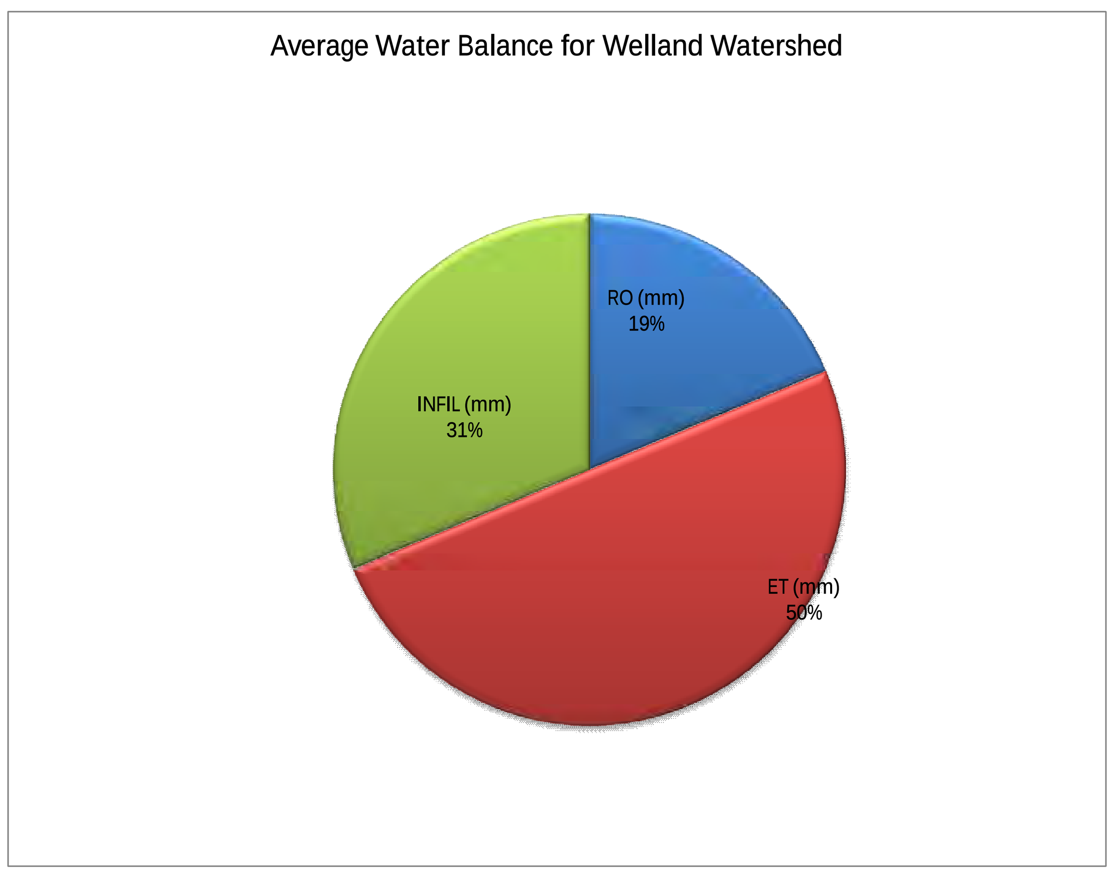
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Res. Low Density	212.00	15.75	194.97
Res. Med Denisty	16.96	0.00	34.57
Res. High Density	2.28	0.00	59.58
Commercial	32.21	0.00	11.47
Institutional	37.74	326.60	283.56
Utility/Transport/Park	123.00	205.70	227.09
Valley Segment	97.80	70.00	254.09
Roads	125.56	82.62	106.79
Agricultural Tilled	240.90	444.59	924.35
Agricultural Pasture/forest	4.44	0.00	0.00
Industrial/Prestige	48.80	142.50	293.10
Prestige Business Park	217.90	281.80	329.20
TOTAL	1159.59	1569.56	2718.76

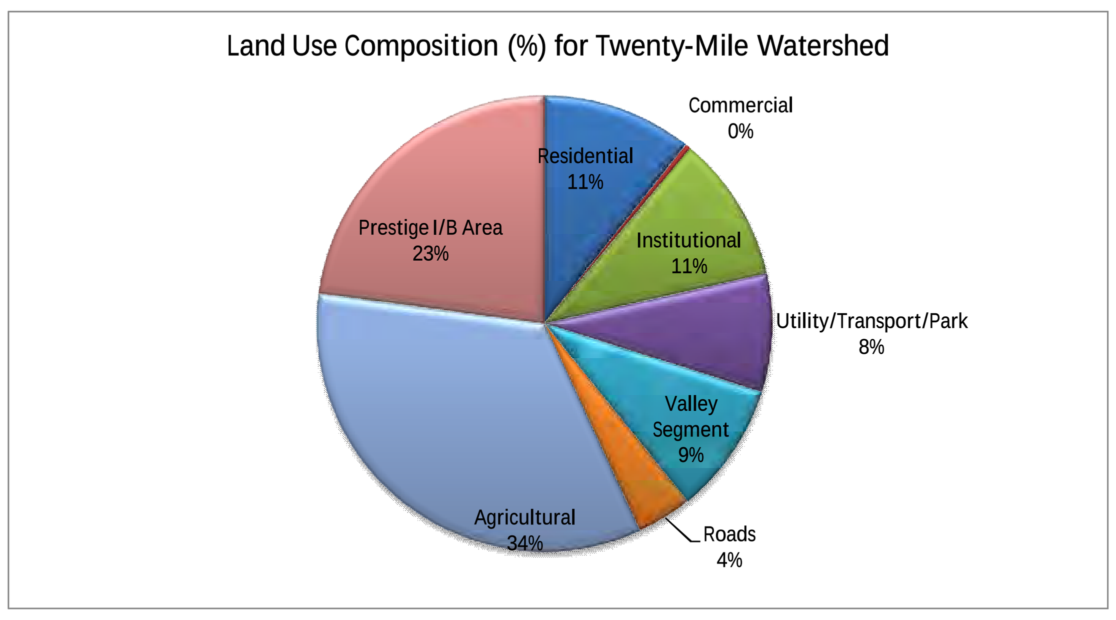
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Residential	231.2	15.8	289.1
Commercial	32.2	0.0	11.5
Institutional	37.7	326.6	283.6
Utility/Transport/Park	123.0	205.7	227.1
Valley Segment	97.8	70.0	254.1
Roads	125.6	82.6	106.8
Agricultural	245.3	444.6	924.4
Prestige I/B Area	266.70	424.30	622.30
TOTAL	1159.59	1569.56	2718.76

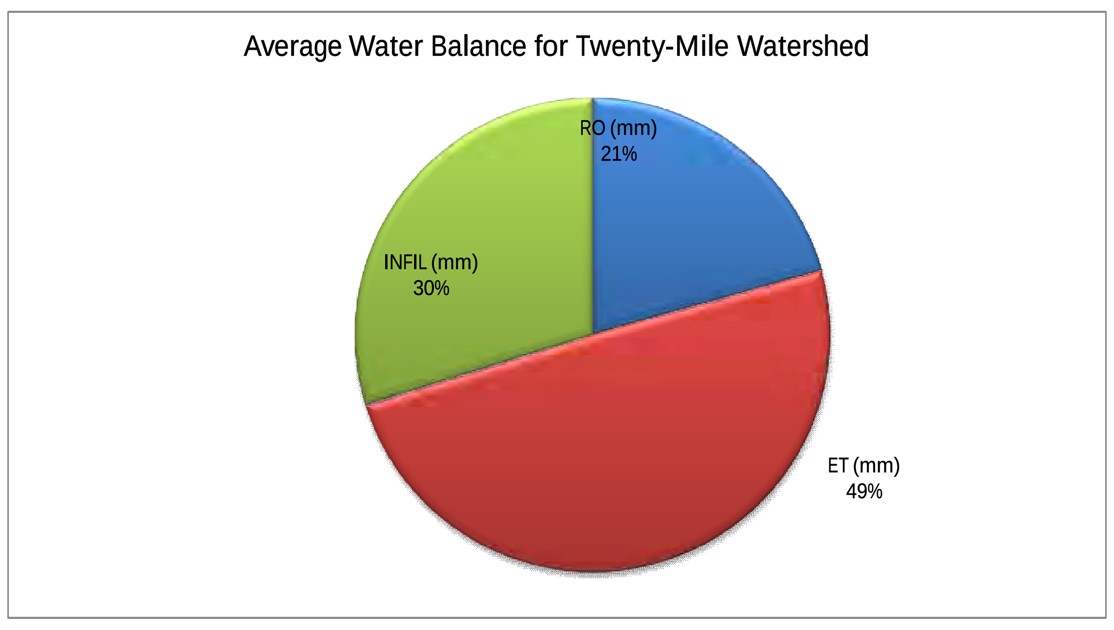












ORIGINAL DATA OUTPUT FROM HSPF
REQ"D INPUT FROM HSPF OUTPUT
CALCULATED **AVERAGES:**

URF's as per Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Impervious)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	AGWO																												
	1991-1996	JAN	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SUPLY + SURLI = (Pervious)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	39.9	39.9	39.9	41.6	41.6	41.6	44.5	44.5	44.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	122.2	122.2	122.2	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.1	11.1	11.1	11.6	11.6	11.6	12.4	12.4	12.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	34.3	34.3	34.3	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	28.1	28.1	28.1	29.1	29.1	29.1	30.9	30.9	30.9	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	78.7	78.7	78.7	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	76.5	76.5	76.5	79.3	79.3	79.3	84.3	84.3	84.3	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	217.1	217.1	217.1	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	73.2	73.2	73.2	75.7	75.7	75.7	80.3	80.3	80.3	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	200.5	200.5	200.5	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	61.6	61.6	61.6	63.6	63.6	63.6	67.3	67.3	67.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	164.3	164.3	164.3	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	97.9	97.9	97.9	101.4	101.4	101.4	107.7	107.7	107.7	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	273.4	273.4	273.4	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	62.0	62.0	62.0	64.0	64.0	64.0	67.7	67.7	67.7	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	164.8	164.8	164.8	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.6	42.6	42.6	44.0	44.0	44.0	46.5	46.5	46.5	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	112.0	112.0	112.0	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	82.6	82.6	82.6	85.5	85.5	85.5	90.9	90.9	90.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	233.0	233.0	233.0	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.9	46.9	46.9	48.5	48.5	48.5	51.5	51.5	51.5	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	181.6	181.6	181.6	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.5	14.5	14.5	15.0	15.0	15.0	15.9	15.9	15.9	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	40.8	40.8	40.8	14.2	14.2	14.2	14.2	14.2
		ANNUAL	636.8	636.8	636.8	659.3	659.3	659.3	699.9	699.9	699.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	1,822.6	1,822.6	1,822.6	645.9	645.9	645.9	645.9	645.9

SUPLY + SURLI = (Impervious)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	65.7	67.1	77.7	65.2	66.1	72.2	60.9	61.5	65.6	153.0	92.9	93.6	101.4	73.7	74.5	79.2	38.3	39.7	50.8	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	18.9	18.9	19.2	18.7	18.7	19.0	17.5	17.5	17.7	43.6	26.6	26.6	26.9	21.2	21.2	21.6	11.1	11.3	11.8	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	44.9	45.1	46.8	44.6	44.7	45.8	41.9	42.0	42.9	97.6	61.2	61.3	62.5	49.4	49.8	51.4	28.2	28.6	33.4	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	123.3	123.8	129.0	122.5	122.8	126.4	115.0	115.3	118.4	268.3	167.9	168.3	171.0	135.7	136.5	140.1	76.7	78.8	85.6	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	115.5	116.8	133.7	114.9	115.8	126.0	108.1	109.0	116.3	244.5	154.8	155.3	166.6	125.9	126.5	145.0	73.7	74.8	113.8	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	95.7	98.2	119.2	95.2	97.0	108.9	89.8	91.5	99.3	199.6	127.3	128.2	145.4	104.0	105.0	138.8	61.6	63.6	125.1	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	156.0	158.5	181.3	155.2	157.0	171.0	145.9	147.6	158.4	335.2	210.7	211.7	229.2	170.5	171.8	201.6	97.7	99.1	143.5	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	96.0	98.3	117.4	95.6	97.2	108.5	90.2	91.8	99.7	198.1	126.7	127.5	145.7	103.5	104.6	140.1	61.8	63.2	118.9	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	65.6	65.9	68.8	65.3	65.4	67.5	61.6	61.8	63.7	135.1	86.6	86.7	88.3	70.9	71.1	73.1	42.5	42.7	45.6	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	132.4	133.9	152.6	131.7	133.0	144.4	123.8	125.3	133.2	287.8	180.1	180.8	199.5	145.3	146.3	186.6	82.0	83.0	87.4	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	102.5	103.1	106.6	101.9	102.1	104.4	95.6	95.8	97.6	226.1	140.8	141.2	143.0	113.5	114.1	117.0	63.0	65.0	69.5	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	23.2	23.3	23.6	23.0	23.1	23.3	21.6	21.7	21.8	50.6	31.7	31.9	31.9	25.6	26.0	26.1	14.5	15.2	15.7	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
		ANNUAL	1,039.6	1,052.7	1,176.0	1,034.0	1,043.0	1,117.3	971.9	980.7	1,034.7	2,239.4	1,407.3	1,413.1	1,511.4	1,139.1	1,147.5	1,320.6	651.1	664.9	901.0	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

Runoff = SURO+IFWO (pervious areas) **REQ MANUAL SUMMATION OF SURO + IFWO**

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	57.0	75.9	0.3	1.6	6.6	0.3	1.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	16.4	21.8	0.1	0.3	1.7	0.1	0.3
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	19.9	33.7	0.1	0.3	1.8	0.1	0.3
	1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	67.0	102.0	0.3	1.6	7.4	0.3	1.6
	1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	84.1	113.2	0.7	2.7	9.7	0.7	2.7
	1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	74.3	93.3	0.6	2.6	8.3	0.6	2.6
	1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	112.7	149.9	0.4	2.8	10.7	0.4	2.8
	1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	75.4	88.9	0.3	1.9	7.8	0.3	1.9
	1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	35.3	47.0	0.3	1.3	3.8	0.3	1.3
	1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	92.9	114.9	0.2	2.7	9.0	0.2	2.7
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	70.8	94.1	0.3	1.4	6.2	0.3	1.4
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	15.7	20.9	0.1	0.3	1.4	0.1	0.3
		ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	721.6	955.7	3.6	19.4	74.3	3.6	19.5

Runoff = SURO (impervious areas)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
		ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0

(IMPEV)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
		ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0

(TAET)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2
	1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4
	1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.3	25.0	23.3	24.3	24.4	23.3	24.3
	1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	52.4	50.5	44.6	47.5	45.8	44.6	47.5
	1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	64.3	60.2	51.3	53.0	50.7	51.3	53.0
	1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	77.0	71.5	61.1	63.1	61.3	61.1	63.1
	1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	73.1	66.6	55.6	58.8	56.1	55.6	58.8
	1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	48.5	44.9	38.4	38.4	36.3	38.4	38.4
	1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	37.4	36.0	30.7	31.4	31.8	30.7	31.4
	1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.7	14.6	13.5	13.8	14.3	13.5	13.8
	1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1
		ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	409.5	385.9	333.6	345.8	336.8	333.6	345.8

(AGWO)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	41.7	29.9	18.3	17.1	14.8	18.3	17.1
	1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	37.0	26.3	16.2	15.3	13.3	16.2	15.3
	1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	38.4	27.5	16.6	15.6	13.8	16.6	15.6
	1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	39.1	27.9	16.5	15.6	13.9	16.5	15.6
	1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	46.2	32.6	19.3	18.3	16.2	19.3	18.3
	1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	45.1	31.7	19.2	17.9	15.6	19.2	17.9
	1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	47.1	33.0	20.6	18.9	16.3	20.6	18.9
	1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	48.2	33.9	21.3	19.2	16.6	21.3	19.2
	1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	44.4	31.4	19.6	17.7	15.1	19.6	17.7
	1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	47.3	34.0	21.1	19.0	16.1	21.1	19.0
	1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	50.0	36.1	22.1	20.1	17.0	22.1	20.1
	1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	50.2	36.2	21.9	20.2	17.2	21.9	20.2
		ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	534.6	380.6	232.6	214.9	185.7	232.6	214.9

(AGWI)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	46.5	31.6	22.8	22.6	19.7	22.8	22.6
	1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	18.0	12.4	6.1	6.1	6.3	6.1	6.1
	1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	32.6	24.5	11.4	11.0	10.8	11.4	11.0
	1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	86.1	59.5	33.7	32.3	29.4	33.7	32.3
	1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	55.7	37.8	26.5	23.6	18.5	26.5	23.6
	1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	42.3	28.8	19.9	17.0	13.5	19.9	17.0
	1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	61.2	42.1	29.5	25.1	21.4	29.5	25.1
	1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	35.7	27.5	15.5	13.2	11.4	15.5	13.2
	1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	30.9	24.1	13.4	11.7	9.4	13.4	11.7
	1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	75.8	56.6	33.8	31.2	25.2	33.8	31.1
	1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	70.7	50.3	31.0	30.2	26.2	31.0	30.2
	1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	21.4	15.5	7.7	8.1	7.5	7.7	8.1
		ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	576.8	410.7	251.5	231.9	199.2	251.5	231.9

(IGWI)

AVERAGES:

[mm]	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	1991-1996	JAN	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	6.9	4.7	3.4	3.4	2.9	3.4	3.4
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	2.7	1.8	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	4.9	3.7	1.7	1.6	1.6	1.7	1.6
	1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	12.9	8.9	5.0	4.8	4.4	5.0	4.8
	1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	8.3	5.6	4.0	3.5	2.8	4.0	3.5
	1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	6.3	4.3	3.0	2.5	2.0	3.0	2.5
	1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	9.1	6.3	4.4	3.8	3.2	4.4	3.7
	1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	5.3	4.1	2.3	2.0	1.7	2.3	2.0
	1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	4.6	3.6	2.0	1.7	1.4	2.0	1.7
	1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	11.3	8.5	5.1	4.7	3.8	5.1	4.7
	1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	10.6	7.5	4.6	4.5	3.9	4.6	4.5
	1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	3.2	2.3	1.2	1.2	1.1	1.2	1.2
		ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	86.2	61.4	37.6	34.7	29.8	37.6	34.7

Adjustments to Eliminate SURLI from Balance

URF's as per Watershed Land Uses

		Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
	Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
	Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
	Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
		Adjustment Factor = SURLI/(SURLI+SUPY) (Pervious)																											
[mm]	1991-1996	JAN	0.0124	0.0124	0.0124	0.0513	0.0513	0.0513	0.1141	0.1141	0.1141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6777	0.6777	0.6777	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.0125	0.0125	0.0125	0.0516	0.0516	0.0516	0.1148	0.1148	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6790	0.6790	0.6790	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.0109	0.0109	0.0109	0.0451	0.0451	0.0451	0.1012	0.1012	0.1012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6473	0.6473	0.6473	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.0111	0.0111	0.0111	0.0458	0.0458	0.0458	0.1027	0.1027	0.1027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6514	0.6514	0.6514	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.0105	0.0105	0.0105	0.0435	0.0435	0.0435	0.0978	0.0978	0.0978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6388	0.6388	0.6388	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.0101	0.0101	0.0101	0.0418	0.0418	0.0418	0.0942	0.0942	0.0942	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6291	0.6291	0.6291	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.0108	0.0108	0.0108	0.0448	0.0448	0.0448	0.1005	0.1005	0.1005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.0100	0.0100	0.0100	0.0415	0.0415	0.0415	0.0936	0.0936	0.0936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6274	0.6274	0.6274	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.0098	0.0098	0.0098	0.0408	0.0408	0.0408	0.0921	0.0921	0.0921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6234	0.6234	0.6234	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6496	0.6496	0.6496	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.0108	0.0108	0.0108	0.0447	0.0447	0.0447	0.1004	0.1004	0.1004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6563	0.6563	0.6563	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6505	0.6505	0.6505	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.0108	0.0108	0.0108	0.0445	0.0445	0.0445	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000
		Adjustment Factor = SURLI/(SURLI+SUPY) (Impervious)																											
[mm]	1991-1996	JAN	0.4256	0.4380	0.5149	0.4219	0.4291	0.4773	0.3804	0.3864	0.4251	0.7536	0.5943	0.5974	0.6282	0.4884	0.4941	0.5241	0.0165	0.0507	0.2572	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.4164	0.4165	0.4266	0.4126	0.4124	0.4196	0.3705	0.3711	0.3783	0.7475	0.5865	0.5865	0.5901	0.4795	0.4802	0.4902	0.0063	0.0237	0.0709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.3817	0.3842	0.4065	0.3782	0.3793	0.3947	0.3385	0.3391	0.3537	0.7157	0.5464	0.5474	0.5559	0.4385	0.4422	0.4597	0.0145	0.0285	0.1681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.3861	0.3889	0.4134	0.3824	0.3840	0.4014	0.3422	0.3439	0.3610	0.7179	0.5494	0.5504	0.5574	0.4423	0.4458	0.4599	0.0132	0.0392	0.1160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.3733	0.3803	0.4585	0.3696	0.3746	0.4252	0.3303	0.3356	0.3776	0.7039	0.5322	0.5337	0.5655	0.4248	0.4278	0.5007	0.0181	0.0317	0.3637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.3633	0.3792	0.4887	0.3598	0.3718	0.4404	0.3211	0.3341	0.3862	0.6947	0.5212	0.5244	0.5810	0.4141	0.4196	0.5610	0.0106	0.0417	0.5128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.3791	0.3889	0.4656	0.3759	0.3831	0.4334	0.3362	0.3438	0.3883	0.7110	0.5403	0.5425	0.5774	0.4317	0.4362	0.5194	0.0086	0.0225	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.3608	0.3754	0.4774	0.3577	0.3687	0.4343	0.3192	0.3312	0.3844	0.6901	0.5154	0.5186	0.5786	0.4072	0.4133	0.5618	0.0076	0.0284	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.3568	0.3595	0.3869	0.3538	0.3554	0.3749	0.3152	0.3169	0.3374	0.6877	0.5127	0.5134	0.5220	0.4050	0.4067	0.4230	0.0080	0.0132	0.0753	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.3832	0.3900	0.4651	0.3801	0.3859	0.4346	0.3403	0.3482	0.3872	0.7163	0.5468	0.5483	0.5908	0.4381	0.4418	0.5626	0.0047	0.0165	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.3914	0.3945	0.4146	0.3879	0.3890	0.4026	0.3473	0.3485	0.3607	0.7240	0.5568	0.5581	0.5636	0.4501	0.4533	0.4667	0.0089	0.0398	0.1016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.3859	0.3888	0.3968	0.3819	0.3840	0.3882	0.3420	0.3438	0.3467	0.7186	0.5503	0.5530	0.5541	0.4436	0.4530	0.4547	0.0148	0.0619	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.3803	0.3880	0.4522	0.3769	0.3824	0.4234	0.3372	0.3431	0.3774	0.7123	0.5422	0.5441	0.5738	0.4345	0.4386	0.5122	0.0106	0.0311	0.2850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
AVERAGES:		**Total Moisture Supply = SUPY (Pervious)**																											
[mm]	1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9
AVERAGES:		**Total Moisture Supply = SUPY (Impervious)**																											
[mm]	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**SURLI = SURLI (Pervious)**																											
[mm]	1991-1996	JAN	0.5	0.5	0.5	2.0	2.0	2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.5	3.5	3.5	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.3	49.3	49.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.2	3.2	3.2	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	46.3	46.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3	38.3	38.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.0	1.0	1.0	4.3	4.3	4.3	9.7	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	62.5	62.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	38.5	38.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.7	1.7	1.7	3.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	26.3	26.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.7	3.7	3.7	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.1	2.1	2.1	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	41.0	41.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.8	6.8	6.8	28.1	28.1	28.1	63.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.0	417.0	417.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**SURLI = SURLI (Impervious)**																											
[mm]	1991-1996	JAN	16.1	16.5	19.4	15.9	16.2	18.0	14.3	14.6	16.0	28.4	22.4	22.5	23.7	18.4	18.6	19.8	0.6	1.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	4.6	4.6	4.7	4.5	4.5	4.6	4.1	4.1	4.2	8.2	6.5	6.5	6.5	5.3	5.3	5.4	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	10.6	10.7	11.3	10.5	10.5	11.0	9.4	9.4	9.8	19.9	15.2	15.2	15.4	12.2	12.3	12.8	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	29.2	29.4	31.3	28.9	29.1	30.4	25.9	26.0	27.3	54.3	41.6	41.6	42.2	33.5	33.7	34.8	1.0	3.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	27.0	27.5	33.2	26.8	27.1	30.8	23.9	24.3	27.3	51.0	38.5	38.6	40.9	30.8	31.0	36.3	1.3	2.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	22.1	23.1	29.8	21.9	22.7	26.8	19.6	20.4	23.5	42.3	31.8	32.0	35.4	25.2	25.6	34.2	0.6	2.5	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	36.7	37.7	45.1	36.4	37.1	42.0	32.6	33.3	37.6	68.9	52.3	52.6	55.9	41.8	42.3	50.3	0.8	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	22.1	23.0	29.3	22.0	22.6	26.7	19.6	20.3	23.6	42.4	31.6	31.8	35.5	25.0	25.4	34.5	0.5	1.7	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	15.1	15.2	16.3	14.9	15.0	15.8	13.3	13.4	14.2	29.0	21.6	21.7	22.0	17.1	17.2	17.8	0.3	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	31.3	31.8	38.0	31.0	31.5	35.5	27.8	28.4	31.6	58.5	44.6	44.8	48.2	35.8	36.1	45.9	0.4	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	24.4	24.6	25.9	24.2	24.3	25.1	21.7	21.7	22.5	45.2	34.7	34.8	35.2	28.1	28.3	29.1	0.6	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	5.5	5.5	5.7	5.4	5.5	5.5	4.9	4.9	4.9	10.2	7.8	7.9	7.9	6.3	6.5	6.5	0.2	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	245.0	250.0	291.3	242.8	246.3	272.8	217.2	221.0	243.1	458.9	349.3	350.5	369.6	279.9	282.6	330.0	6.9	20.0	183.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**Runoff = SURO+IFWO (pervious areas)**																											
[mm]	1991-1996	JAN	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	18.4	24.5	0.3	1.6	6.6	0.3	1.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	5.3	7.0	0.1	0.3	1.7	0.1	0.3
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	7.0	11.9	0.1	0.3	1.8	0.1	0.3
	1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	23.4	35.5	0.3	1.6	7.4	0.3	1.6
	1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	30.4	40.9	0.7	2.7	9.7	0.7	2.7
	1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	27.6	34.6	0.6	2.6	8.3	0.6	2.6
	1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	39.9	53.1	0.4	2.8	10.7	0.4	2.8
	1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	28.1	33.1	0.3	1.9	7.8	0.3	1.9
	1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	13.3	17.7	0.3	1.3	3.8	0.3	1.3
	1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	32.6	40.3	0.2	2.7	9.0	0.2	2.7
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	24.3	32.3	0.3	1.4	6.2	0.3	1.4
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	5.5	7.3	0.1	0.3	1.4	0.1	0.3
		ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	255.7	338.7	3.6	19.4	74.3	3.6	19.5
AVERAGES:		**Runoff = SURO (impervious areas)**																											
[mm]	1991-1996	JAN	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
		ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**(IMPEV)**																											
[mm]	1991-1996	JAN	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
		ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**(TAET)**																											
[mm]	1991-1996	JAN	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	0.6	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	0.8	2.2	2.2	2.3	2.2	2.2
	1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4
	1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.8	8.7	23.3	24.3	24.4	23.3	24.3
	1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.9	18.2	44.6	47.5	45.8	44.6	47.5
	1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	23.8	22.3	51.3	53.0	50.7	51.3	53.0
	1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	27.3	25.3	61.1	63.1	61.3	61.1	63.1
	1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	27.2	24.8	55.6	58.8	56.1	55.6	58.8
	1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	18.3	16.9	38.4	38.4	36.3	38.4	38.4
	1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	13.1	12.6	30.7	31.4	31.8	30.7	31.4
	1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.1	5.0	13.5	13.8	14.3	13.5	13.8
	1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	1.7	3.9	4.1	4.5	3.9	4.1
		ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	145.1	136.8	333.6	345.8	336.8	333.6	345.8
AVERAGES:		**(AGWO)**																											
[mm]	1991-1996	JAN	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	13.4	9.6	18.3	17.1	14.8	18.3	17.1
	1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	11.9	8.5	16.2	15.3	13.3	16.2	15.3
	1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	13.6	9.7	16.6	15.6	13.8	16.6	15.6
	1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	13.6	9.7	16.5	15.6	13.9	16.5	15.6
	1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	16.7	11.8	19.3	18.3	16.2	19.3	18.3
	1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	16.7	11.8	19.2	17.9	15.6	19.2	17.9
	1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	16.7	11.7	20.6	18.9	16.3	20.6	18.9
	1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	17.9	12.6	21.3	19.2	16.6	21.3	19.2
	1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	16.7	11.8	19.6	17.7	15.1	19.6	17.7
	1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	16.6	11.9	21.1	19.0	16.1	21.1	19.0
	1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	17.2	12.4	22.1	20.1	17.0	22.1	20.1
	1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	17.5	12.6	21.9	20.2	17.2	21.9	20.2
		ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	189.5	134.9	232.6	214.9	185.7	232.6	214.9
AVERAGES:		**(AGWI)**																											
[mm]	1991-1996	JAN	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	15.0	10.2	22.8	22.6	19.7	22.8	22.6
	1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	5.8	4.0	6.1	6.1	6.3	6.1	6.1
	1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	11.5	8.6	11.4	11.0	10.8	11.4	11.0
	1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	30.0	20.7	33.7	32.3	29.4	33.7	32.3
	1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	20.1	13.6	26.5	23.6	18.5	26.5	23.6
	1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	15.7	10.7	19.9	17.0	13.5	19.9	17.0
	1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	21.7	14.9	29.5	25.1	21.4	29.5	25.1
	1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	13.3	10.3	15.5	13.2	11.4	15.5	13.2
	1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	11.6	9.1	13.4	11.7	9.4	13.4	11.7
	1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	26.5	19.8	33.8	31.2	25.2	33.8	31.1
	1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	24.3	17.3	31.0	30.2	26.2	31.0	30.2
	1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	7.5	5.4	7.7	8.1	7.5	7.7	8.1
		ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	204.4	145.5	251.5	231.9	199.2	251.5	231.9
AVERAGES:		**(IGWI)**																											
[mm]	1991-1996	JAN	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	2.2	1.5	3.4	3.4	2.9	3.4	3.4
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.9	0.6	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.7	1.3	1.7	1.6	1.6	1.7	1.6
	1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	4.5	3.1	5.0	4.8	4.4	5.0	4.8
	1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	3.0	2.0	4.0	3.5	2.8	4.0	3.5
	1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	2.3	1.6	3.0	2.5	2.0	3.0	2.5
	1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	3.2	2.2	4.4	3.8	3.2	4.4	3.7
	1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	2.0	1.5	2.3	2.0	1.7	2.3	2.0
	1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.7	1.4	2.0	1.7	1.4	2.0	1.7
	1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	4.0	3.0	5.1	4.7	3.8	5.1	4.7
	1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	3.6	2.6	4.6	4.5	3.9	4.6	4.5
	1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	1.1	0.8	1.2	1.2	1.1	1.2	1.2
		ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	30.5	21.7	37.6	34.7	29.8	37.6	34.7

URF VOLUMES
INPUTS REQ'D

	URF Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
	Pervious Composition (%)	0.70	0.70	0.70	0.50	0.50	0.50	0.35	0.35	0.35	0.04	0.63	0.63	0.63	0.90	0.90	0.90	0.97	0.97	0.97	0.3	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0
	Impervious Composition (%)	0.09	0.09	0.09	0.13	0.13	0.13	0.17	0.17	0.17	0.19	0.11	0.11	0.11	0.05	0.05	0.05	0.03	0.03	0.03	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
URF AREA : 100000	**Pervious Composition (m^2)**	70000	70000	70000	50000	50000	50000	35000	35000	35000	4000	63000	63000	63000	90000	90000	90000	97000	97000	97000	30000	30000	30000	100000	100000	100000	100000	100000	100000
10 ha m^2	**Impervious Composition (m^2)**	9000	9000	9000	13000	13000	13000	17000	17000	17000	19000	11000	11000	11000	5000	5000	5000	3000	3000	3000	70000	70000	70000	0	0	0	0	0	0
	Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)

Total Moisture Supply = SUPY (Pervious)

AVERAGES (m^3):

1991-1996 JAN	2759.9	2759.9	2759.9	1971.3	1971.3	1971.3	1379.9	1379.9	1379.9	157.7	2483.9	2483.9	2483.9	3543.3	3543.3	3543.3	3818.8	3818.8	3818.8	1181.4	1181.4	1181.4	3936.0	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996 FEB	770.5	770.5	770.5	550.4	550.4	550.4	385.2	385.2	385.2	44.0	693.4	693.4	693.4	991.2	991.2	991.2	1068.3	1068.3	1068.3	330.4	330.4	330.4	1101.4	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996 MAR	1942.6	1942.6	1942.6	1387.6	1387.6	1387.6	971.3	971.3	971.3	111.0	1748.3	1748.3	1748.3	2497.7	2497.7	2497.7	2692.0	2692.0	2692.0	832.6	832.6	832.6	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996 APR	5297.2	5297.2	5297.2	3783.7	3783.7	3783.7	2648.6	2648.6	2648.6	302.7	4767.4	4767.4	4767.4	6810.6	6810.6	6810.6	7340.4	7340.4	7340.4	2270.2	2270.2	2270.2	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996 MAY	5068.3	5068.3	5068.3	3620.2	3620.2	3620.2	2534.2	2534.2	2534.2	289.6	4561.5	4561.5	4561.5	6516.4	6516.4	6516.4	7023.3	7023.3	7023.3	2172.1	2172.1	2172.1	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996 JUN	4266.2	4266.2	4266.2	3047.3	3047.3	3047.3	2133.1	2133.1	2133.1	243.8	3839.6	3839.6	3839.6	5485.2	5485.2	5485.2	5911.8	5911.8	5911.8	1828.4	1828.4	1828.4	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996 JUL	6781.2	6781.2	6781.2	4843.7	4843.7	4843.7	3390.6	3390.6	3390.6	387.5	6103.0	6103.0	6103.0	8718.6	8718.6	8718.6	9396.7	9396.7	9396.7	2906.2	2906.2	2906.2	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996 AUG	4296.6	4296.6	4296.6	3069.0	3069.0	3069.0	2148.3	2148.3	2148.3	245.5	3866.9	3866.9	3866.9	5524.2	5524.2	5524.2	5953.9	5953.9	5953.9	1841.4	1841.4	1841.4	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996 SEP	2952.7	2952.7	2952.7	2109.1	2109.1	2109.1	1476.4	1476.4	1476.4	168.7	2657.5	2657.5	2657.5	3796.4	3796.4	3796.4	4091.7	4091.7	4091.7	1265.5	1265.5	1265.5	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996 OCT	5715.2	5715.2	5715.2	4082.3	4082.3	4082.3	2857.6	2857.6	2857.6	326.6	5143.7	5143.7	5143.7	7348.1	7348.1	7348.1	7919.6	7919.6	7919.6	2449.4	2449.4	2449.4	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996 NOV	3244.6	3244.6	3244.6	2317.6	2317.6	2317.6	1622.3	1622.3	1622.3	185.4	2920.2	2920.2	2920.2	5616.2	5616.2	5616.2	6053.0	6053.0	6053.0	1872.0	1872.0	1872.0	6240.4	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996 DEC	1001.3	1001.3	1001.3	715.2	715.2	715.2	500.6	500.6	500.6	57.2	901.1	901.1	901.1	1282.0	1282.0	1282.0	1381.7	1381.7	1381.7	427.3	427.3	427.3	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
ANNUAL	44096.3	44096.3	44096.3	31497.3	31497.3	31497.3	22048.1	22048.1	22048.1	2519.8	39686.6	39686.6	39686.6	58129.8	58129.8	58129.8	62651.0	62651.0	62651.0	19376.8	19376.8	19376.8	64588.0	64588.0	64588.0	64588.0	64588.0	64588.0

Total Moisture Supply = SUPY (Impervious)

1991-1996 JAN	339.4	339.4	339.4	490.3	490.3	490.3	641.1	641.1	641.1	716.2	414.7	414.7	414.7	188.5	188.5	188.5	113.1	113.1	113.1	2638.8	2638.8	2638.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	99.1	99.1	99.1	143.1	143.1	143.1	187.1	187.1	187.1	209.2	121.1	121.1	121.1	55.0	55.0	55.0	33.0	33.0	33.0	770.6	770.6	770.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	249.8	249.8	249.8	360.8	360.8	360.8	471.8	471.8	471.8	527.3	305.3	305.3	305.3	138.8	138.8	138.8	83.3	83.3	83.3	1942.7	1942.7	1942.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	681.1	681.1	681.1	983.8	983.8	983.8	1286.5	1286.5	1286.5	1437.8	832.4	832.4	832.4	378.4	378.4	378.4	227.0	227.0	227.0	5297.2	5297.2	5297.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	651.6	651.6	651.6	941.3	941.3	941.3	1230.9	1230.9	1230.9	1375.7	796.5	796.5	796.5	362.0	362.0	362.0	217.2	217.2	217.2	5068.3	5068.3	5068.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	548.5	548.5	548.5	792.3	792.3	792.3	1036.1	1036.1	1036.1	1158.0	670.4	670.4	670.4	304.7	304.7	304.7	182.8	182.8	182.8	4266.2	4266.2	4266.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	871.9	871.9	871.9	1259.4	1259.4	1259.4	1646.9	1646.9	1646.9	1840.6	1065.6	1065.6	1065.6	484.4	484.4	484.4	290.6	290.6	290.6	6781.2	6781.2	6781.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	552.4	552.4	552.4	797.9	797.9	797.9	1043.5	1043.5	1043.5	1166.2	675.2	675.2	675.2	306.9	306.9	306.9	184.1	184.1	184.1	4296.6	4296.6	4296.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	379.6	379.6	379.6	548.4	548.4	548.4	717.1	717.1	717.1	801.5	464.0	464.0	464.0	210.9	210.9	210.9	126.5	126.5	126.5	2952.7	2952.7	2952.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	734.8	734.8	734.8	1061.4	1061.4	1061.4	1388.0	1388.0	1388.0	1551.3	898.1	898.1	898.1	408.2	408.2	408.2	244.9	244.9	244.9	5715.2	5715.2	5715.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	561.6	561.6	561.6	811.2	811.2	811.2	1060.8	1060.8	1060.8	1185.7	686.4	686.4	686.4	312.0	312.0	312.0	187.2	187.2	187.2	4368.2	4368.2	4368.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	128.2	128.2	128.2	185.2	185.2	185.2	242.2	242.2	242.2	270.6	156.7	156.7	156.7	71.2	71.2	71.2	42.7	42.7	42.7	997.1	997.1	997.1	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	5798.0	5798.0	5798.0	8374.9	8374.9	8374.9	10951.8	10951.8	10951.8	12240.0	7086.3	7086.3	7086.3	3221.1	3221.1	3221.1	1932.6	1932.6	1932.6	45094.7	45094.7	45094.7	0.0	0.0	0.0	0.0	0.0	0.0

Runoff = SURO+IFWO (pervious areas)

1991-1996 JAN	18.1	103.5	400.2	18.8	86.3	317.0	21.5	78.1	262.2	6.4	14.1	84.7	361.5	16.7	100.2	476.1	6.0	60.7	393.0	365.8	551.4	734.0	34.7	157.2	655.7	34.7	157.3	656.7
1991-1996 FEB	4.5	16.8	74.3	4.3	14.1	62.1	4.2	13.5	55.1	0.9	3.6	14.5	75.7	3.3	15.2	106.4	0.6	7.1	61.7	98.4	158.0	209.8	7.5	27.8	168.4	7.5	27.8	167.9
1991-1996 MAR	3.2	15.8	99.4	2.7	14.8	83.1	2.6	16.0	74.5	0.9	2.7	12.9	95.2	3.8	17.8	130.7	2.9	10.2	105.5	116.2	210.7	356.5	5.7	32.3	184.6	5.7	32.3	185.2
1991-1996 APR	16.5	76.8	432.7	14.4	70.2	352.8	13.6	73.1	301.9	4.2	14.0	62.9	406.6	19.3	89.3	576.5	8.5	48.8	483.4	432.0	701.1	1066.5	33.3	159.8	740.0	33.3	159.8	741.1
1991-1996 MAY	33.7	144.8	641.4	29.8	127.7	509.0	30.0	126.4	417.6	8.6	27.8	117.4	577.5	39.0	165.9	803.3	12.7	97.2	749.3	650.8	911.7	1226.2	70.8	267.9	966.6	70.9	268.2	974.9
1991-1996 JUN	30.6	167.6	548.3	29.0	147.8	432.1	31.6	141.5	353.1	10.0	24.8	134.6	499.9	35.3	189.2	696.9	15.5	130.6	651.5	629.4	826.7	1038.4	56.9	262.9	827.4	57.0	263.6	836.4
1991-1996 JUL	18.4	164.0	614.9	18.0	145.4	503.1	20.8	140.1	438.0	9.8	14.9	131.1	593.3	21.3	183.8	816.1	10.1	92.5	564.4	842.0	1197.8	1593.9	36.3	280.1	1075.0	36.3	281.5	1087.7
1991-1996 AUG	12.8	113.6	433.1	13.3	104.5	353.3	18.3	106.6	303.9	7.0	10.0	87.2	425.4	14.3	121.1	582.2	5.6	56.5	411.0	656.1	842.3	993.8	26.5	187.0	776.3	26.5	187.8	790.6
1991-1996 SEP	13.6	72.9	190.3	14.1	61.7	152.7	16.4	56.0	131.5	3.9	10.8	63.2	186.3	15.4	91.2	270.5	5.9	52.0	197.2	274.1	398.5	531.1	28.2	132.7	381.2	28.2	132.4	376.7
1991-1996 OCT	8.0	92.7	417.6	8.4	94.8	347.1	11.2	106.4	304.1	5.2	6.4	70.4	400.9	9.1	99.2	560.2	2.3	12.0	135.6	693.1	976.9	1207.7	24.5	267.5	899.7	24.5	268.5	909.3
1991-1996 NOV	6.8	46.4	234.9	6.5	42.3	189.3	6.8	43.2	161.3	2.6	5.3	37.9	211.0	12.5	76.2	416.6	4.0	36.7	297.5	477.8	729.8	970.3	27.1	135.5	615.3	27.1	135.5	614.5
1991-1996 DEC	2.4	13.1	61.9	2.4	11.7	51.4	2.9	11.8	45.9	0.8	1.9	11.7	56.3	3.1	19.6	88.8	1.1	9.8	63.6	103.0	164.8	219.4	7.0	34.1	135.3	7.0	34.1	134.7
ANNUAL	168.5	1027.9	4148.9	161.8	921.1	3353.1	179.9	912.2	2849.8	60.2	136.3	828.4	3889.5	192.9	1168.7	5524.1	75.3	614.1	4113.6	5329.2	7671.5	10160.6	358.5	1944.7	7425.5	358.6	1948.7	7475.5

Runoff = SURO (impervious areas)

1991-1996 JAN	328.0	328.3	329.8	473.7	473.9	475.3	617.9	618.1	619.6	705.9	404.8	404.9	405.7	182.8	182.9	183.2	106.6	106.8	108.2	2484.4	2484.4	2484.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	93.7	93.7	93.8	135.3	135.3	135.4	176.2	176.2	176.3	204.3	116.4	116.4	116.5	52.4	52.4	52.4	30.0	30.0	30.2	699.1	699.1	699.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	216.8	216.9	218.1	312.9	312.9	314.1	405.1	405.2	406.7	495.2	275.6	275.7	276.3	122.1	122.2	122.7	65.7	66.0	68.5	1528.1	1528.1	1528.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	597.8	598.2	601.6	862.8	863.1	866.6	1118.0	1118.5	1122.8	1357.1	757.8	757.9	759.1	336.4	336.6	337.7	182.4	183.6	187.1	4242.7	4242.7	4242.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	552.9	554.0	566.3	797.8	798.9	810.5	1031.6	1033.1	1045.6	1277.2	706.4	706.7	712.8	311.7	311.9	318.3	165.6	166.4	183.8	3842.7	3842.7	3842.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	453.2	455.6	472.0	653.9	656.5	671.3	844.2	847.9	862.6	1061.6	582.9	583.4	593.8	256.0	256.5	268.2	133.5	135.0	158.5	3102.3	3102.3	3102.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	753.2	755.1	769.8	1087.2	1089.1	1103.0	1407.3	1410.1	1426.1	1724.0	958.3	958.8	966.9	424.1	424.5	433.4	227.5	228.4	247.6	5295.4	5295.4	5295.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	454.2	456.5	472.1	655.4	657.9	672.4	845.9	849.4	864.8	1065.7	584.2	584.8	596.1	256.3	256.8	269.5	133.3	134.4	157.7	3101.7	3101.7	3101.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	308.7	309.0	312.1	445.5	445.7	448.8	574.5	574.9	579.1	728.8	398.4	398.4	399.6	174.5	174.6	175.6	90.1	90.3	92.6	2095.3	2095.3	2095.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	641.8	642.8	654.1	926.4	927.6	938.2	1200.1	1202.3	1213.4	1460.9	814.6	814.8	822.7	361.2	361.5	371.6	194.9	195.5	198.0	4542.4	4542.4	4542.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	499.6	499.9	501.9	721.1	721.2	723.2	935.1	935.3	937.7	1126.3	631.2	631.4	632.0	280.9	281.1	281.8	153.5	154.6	156.7	3575.3	3575.3	3575.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	112.3	112.3	112.6	162.0	162.1	162.3	209.9	210.0	210.1	255.2	142.4	142.5	142.6	63.2	63.3	63.4	34.2	34.6	34.9	795.4	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	5018.0	5027.7	5108.5	7242.1	7252.0	7326.6	9375.9	9390.0	9471.5	11475.6	6382.1	6384.9	6430.6	2825.6	2828.5	2879.9	1517.5	1526.1	1632.6	35304.8	35304.8	35304.8	0.0	0.0	0.0	0.0	0.0	0.0

(IMPEV)

1991-1996 JAN	8.2	8.1	7.0	12.0	11.8	10.8	16.8	16.6	15.6	7.5	7.1	7.1	6.5	4.1	4.0	3.8	4.7	4.5	3.6	111.7	111.7	111.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	8.5	8.5	8.4	12.4	12.4	12.3	17.4	17.4	17.2	7.8	7.4	7.4	7.3	4.2	4.2	4.1	4.8	4.8	4.5	113.6	113.6	113.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	33.4	33.3	32.1	48.6	48.5	47.3	67.6	67.5	66.0	32.4	30.0	29.9	29.3	16.9	16.8	16.2	17.8	17.5	15.0	420.5	420.5	420.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	82.7	82.3	79.0	120.1	119.8	116.4	167.3	166.9	162.5	80.2	74.2	74.0	72.8	41.7	41.5	40.4	44.3	43.1	39.7	1047.2	1047.2	1047.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	101.4	100.2	87.6	147.3	146.1	134.3	204.6	203.0	190.1	101.1	92.5	92.2	85.9	51.7	51.4	44.9	52.9	52.2	34.3	1257.9	1257.9	1257.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	99.6	97.1	80.0	144.7	142.0	126.5	200.6	196.8	181.4	100.9	91.6	90.9	80.1	50.9	50.5	38.2	51.6	50.0	25.4	1217.0	1217.0	1217.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	117.2	115.3	100.8	170.1	168.1	154.4	236.6	233.9	218.0	115.1	106.0	105.5	97.5	59.6	59.1	50.4	62.4	61.5	42.5	1467.6	1467.6	1467.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	97.6	95.4	79.8	141.6	139.2	124.8	196.3	192.9	177.5	99.9	90.4	89.8	78.6	50.3	49.8	37.2	50.5	49.4	26.3	1187.4	1187.4	1187.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	72.5	72.2	69.1	105.2	105.0	101.8	145.8	145.5	141.1	74.3	67.1	67.1	65.9	37.3	37.2	36.1	37.3	37.1	34.7	876.9	876.9	876.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	87.8	86.8	76.2	127.5	126.3	116.3	177.4	175.3	164.8	85.3	78.9	78.6	71.2	44.4	44.2	34.6	47.2	46.7	44.3	1107.4	1107.4	1107.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	60.9	60.6	58.6	88.4	88.3	86.3	123.3	123.1	120.8	58.3	54.2	54.0	53.4	30.6	30.4	29.6	33.0	32.0	30.0	778.1	778.1	778.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	16.2	16.1	15.9	23.6	23.5	23.3	32.8	32.7	32.6	15.7	14.5	14.4	14.4	8.2	8.0	8.0	8.7	8.3	8.0	205.5	205.5	205.5	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	780.0	770.3	689.6	1132.9	1123.0	1048.3	1576.0	1561.9	1480.4	764.5	704.3	701.4	655.8	395.5	392.6	341.1	415.1	406.5	300.0	9790.6	9790.6	9790.6	0.0	0.0	0.0	0.0	0.0	0.0

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1991-1996 JAN	125.5	126.4	129.0	86.2	86.9	88.8	56.5	57.0	58.2	7.3	114.4	115.1	117.6	163.7	164.7	168.3	188.3	188.3	188.4	18.5	18.5	18.3	176.2	178.6	184.6	176.2	178.6	184.7
1991-1996 FEB	154.8	159.0	160.3	106.5	109.6	110.1	69.9	71.9	72.0	9.2	141.0	144.8	146.4	201.4	206.6	208.7	235.4	235.8	236.1	22.5	22.6	22.6	215.4	224.8	227.3	215.4	224.8	227.3
1991-1996 MAR	504.3	516.7	523.8	348.8	358.0	361.6	231.0	237.6	238.6	29.8	458.5	469.5	476.0	654.9	670.7	680.0	741.9	742.9	743.9	81.1	81.1	80.8	714.4	745.0	754.2	714.4	745.0	754.2
1991-1996 APR	1659.6	1705.8	1719.4	1148.2	1179.0	1186.1	760.3	779.1	781.9	98.5	1508.4	1550.9	1556.3	2154.1	2215.0	2223.3	2475.6	2482.9	2485.3	264.9	264.8	261.8	2331.4	2431.4	2436.1	2331.4	2431.4	2436.0
1991-1996 MAY	3257.6	3398.7	3386.9	2267.0	2360.0	2344.4	1516.2	1569.7	1554.0	195.8	2955.3	3085.2	3027.3	4220.7	4407.1	4325.2	5148.4	5186.3	5179.8	571.7	567.3	546.7	4460.4	4747.0	4581.1	4460.4	4747.0	4580.8
1991-1996 JUN	3921.8	4009.2	3953.9	2737.3	2790.0	2745.6	1841.6	1864.6	1829.9	230.8	3554.9	3637.4	3536.8	5077.6	5196.3	5053.4	6698.4	6723.6	6662.1	736.2	714.9	669.3	5130.5	5298.1	5069.8	5130.5	5298.1	5069.3
1991-1996 JUL	4623.7	4724.5	4703.7	3221.7	3286.4	3259.0	2157.6	2196.3	2163.9	272.1	4192.9	4287.7	4196.7	5989.6	6125.5	5996.5	7762.6	7796.2	7665.1	834.0	818.7	759.7	6112.5	6305.3	6134.5	6112.5	6305.2	6133.9
1991-1996 AUG	4262.3	4426.7	4362.3	2986.0	3090.6	3033.6	2021.5	2075.6	2026.7	254.6	3859.3	4012.3	3882.1	5513.1	5732.2	5547.5	7334.1	7379.1	7199.4	837.9	816.7	744.8	5562.2	5880.0	5611.3	5562.2	5879.9	5610.6
1991-1996 SEP	3033.7	3037.2	2939.6	2118.8	2114.1	2040.9	1425.1	1414.0	1359.6	174.9	2748.9	2755.6	2633.9	3927.0	3936.7	3763.8	5421.9	5399.6	5063.9	578.5	547.7	507.4	3842.1	3843.4	3628.3	3842.1	3843.3	3627.8
1991-1996 OCT	2289.8	2326.0	2339.8	1590.1	1612.2	1620.5	1059.5	1071.7	1075.7	134.1	2078.8	2113.3	2114.1	2969.7	3019.0	3020.9	3765.9	3765.9	3674.4	395.5	393.2	378.2	3068.5	3143.0	3178.8	3068.5	3142.9	3178.3
1991-1996 NOV	2710.1	2578.6	2286.7	1952.8	1860.7	1632.2	1385.3	1318.4	1133.9	146.4	2432.7	2314.6	2049.3	1246.4	1259.1	1287.3	1423.6	1424.5	1423.8	152.3	152.0	150.4	1349.8	1376.6	1427.6	1349.8	1376.6	1427.6
1991-1996 DEC	293.7	300.3	315.0	203.2	208.4	219.1	134.8	139.0	145.8	17.3	267.0	272.7	286.6	381.5	389.7	409.4	476.9	477.3	477.3	51.7	51.6	50.5	393.8	411.9	447.9	393.8	411.9	447.8
ANNUAL	26829.7	27301.3	26813.0	18745.0	19033.6	18620.3	12626.3	12761.3	12407.7	1570.9	24312.2	24758.9	24023.0	32499.5	33322.7	32684.4	41672.9	41802.4	40999.4	4445.6	4353.7	4103.2	33357.0	34584.9	33681.3	33357.1	34584.7	33678.1

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1991-1996 JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6	1475.4
1991-1996 FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8	1327.7
1991-1996 MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7	1374.0
1991-1996 APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3	1384.1
1991-1996 MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1	1614.3
1991-1996 JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0	1553.0
1991-1996 JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0	1624.3
1991-1996 AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8	1652.7
1991-1996 SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5	1510.9
1991-1996 OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4	1603.4
1991-1996 NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6	1700.6
1991-1996 DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5	1716.9
ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3	18537.1

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1991-1996 JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1	293.6
1991-1996 FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5	93.8
1991-1996 MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1	160.7
1991-1996 APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9	438.4
1991-1996 MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3	275.3
1991-1996 JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8	201.2
1991-1996 JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0	318.0
1991-1996 AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0	169.4
1991-1996 SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9	140.2
1991-1996 OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4	375.6
1991-1996 NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1	391.8
1991-1996 DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4	112.7
ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2	2970.9

ADDITIONAL URF OUTPUT DATA
REQ'D INPUTS: HSPF OUTPUT

URF's as per Watershed Land Uses

		Code	SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
	Surface	DSN	1013	1014	1015	1114	1115
	Sub-surfa	DSN	1513	1514	1515	1614	1615
		Year	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Impervious)

AVERAGES:		SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
1991-1996	JAN	37.7	37.7	37.7	37.7	37.7
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2
	ANNUAL	**644.2**	**644.2**	**644.2**	**644.2**	**644.2**

SURO (Impervious)

AVERAGES:		SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
1991-1996	JAN	35.5	35.9	35.5	35.2	35.3
1991-1996	FEB	10.0	10.1	10.0	10.0	10.0
1991-1996	MAR	21.9	23.4	21.9	21.0	21.4
1991-1996	APR	60.6	64.9	60.6	57.6	59.0
1991-1996	MAY	54.9	60.1	54.9	50.8	52.7
1991-1996	JUN	44.3	49.0	44.3	40.9	42.5
1991-1996	JUL	75.7	82.3	75.7	70.5	73.0
1991-1996	AUG	44.3	50.1	44.3	39.8	41.9
1991-1996	SEP	29.9	33.4	29.9	27.2	28.5
1991-1996	OCT	64.9	69.5	64.9	61.7	63.2
1991-1996	NOV	51.1	53.7	51.1	49.2	50.2
1991-1996	DEC	11.4	12.1	11.4	11.0	11.1
	ANNUAL	504.4	544.5	504.4	474.8	488.7

IMPEV

AVERAGES:		SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
1991-1996	JAN	1.6	1.6	1.6	1.6	1.6
1991-1996	FEB	1.6	1.2	1.6	2.0	1.8
1991-1996	MAR	6.0	4.4	6.0	6.8	6.4
1991-1996	APR	15.0	10.8	15.0	17.9	16.5
1991-1996	MAY	18.0	12.4	18.0	22.3	20.3
1991-1996	JUN	17.4	12.2	17.4	21.3	19.5
1991-1996	JUL	21.0	14.5	21.0	25.8	23.5
1991-1996	AUG	17.0	11.3	17.0	21.4	19.4
1991-1996	SEP	12.5	8.8	12.5	15.3	14.0
1991-1996	OCT	15.8	11.6	15.8	18.9	17.4
1991-1996	NOV	11.1	8.6	11.1	12.5	11.8
1991-1996	DEC	2.9	2.3	2.9	3.6	3.3
	ANNUAL	**139.9**	**99.7**	**139.9**	**169.4**	**155.5**

ADDITIONAL URF vOLUME DATA

			Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
REQ'D INPUTS:		Sidewalk Composition (%)		0.01	0.01	0.01	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sloped Roof Composition (%)		0.13	0.13	0.13	0.24	0.24	0.24	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Driveway Composition (%)		0.07	0.07	0.07	0.10	0.10	0.10	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Flat Roof Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Ind Park Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.15	0.15	0.15	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
URF AREA	100000	Sidewalk Composition (m^2)		1000	1000	1000	3000	3000	3000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ha	m^2	Sloped Roof Composition (m^2)		13000	13000	13000	24000	24000	24000	32000	32000	32000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Driveway Composition (m^2)		7000	7000	7000	10000	10000	10000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Flat Roof Composition (m^2)		0	0	0	0	0	0	0	0	0	17000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Ind Park Composition (m^2)		0	0	0	0	0	0	0	0	0	60000	15000	15000	15000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0
			Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
		Total Moisture Supply = SUPY (Impervious)																												
		AVERAGES:																												
		1991-1996	JAN	791.82	791.82	791.82	1395.09	1395.09	1395.09	1809.84	1809.84	1809.84	2902.64	980.11	980.11	980.11	188.48	188.48	188.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	FEB	231.18	231.18	231.18	407.31	407.31	407.31	528.40	528.40	528.40	847.64	286.22	286.22	286.22	55.04	55.04	55.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAR	582.81	582.81	582.81	1026.86	1026.86	1026.86	1332.14	1332.14	1332.14	2136.94	721.57	721.57	721.57	138.76	138.76	138.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	APR	1589.15	1589.15	1589.15	2799.93	2799.93	2799.93	3632.34	3632.34	3632.34	5826.89	1967.52	1967.52	1967.52	378.37	378.37	378.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAY	1520.50	1520.50	1520.50	2678.98	2678.98	2678.98	3475.43	3475.43	3475.43	5575.17	1882.53	1882.53	1882.53	362.02	362.02	362.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUN	1279.87	1279.87	1279.87	2255.01	2255.01	2255.01	2925.42	2925.42	2925.42	4692.87	1584.60	1584.60	1584.60	304.73	304.73	304.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUL	2034.35	2034.35	2034.35	3584.33	3584.33	3584.33	4649.94	4649.94	4649.94	7459.27	2518.72	2518.72	2518.72	484.37	484.37	484.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	AUG	1288.98	1288.98	1288.98	2271.06	2271.06	2271.06	2946.24	2946.24	2946.24	4726.26	1595.88	1595.88	1595.88	306.90	306.90	306.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	SEP	885.82	885.82	885.82	1560.73	1560.73	1560.73	2024.74	2024.74	2024.74	3248.01	1096.73	1096.73	1096.73	210.91	210.91	210.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	OCT	1714.55	1714.55	1714.55	3020.88	3020.88	3020.88	3918.98	3918.98	3918.98	6286.69	2122.78	2122.78	2122.78	408.23	408.23	408.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	NOV	1310.42	1310.42	1310.42	2308.83	2308.83	2308.83	2995.24	2995.24	2995.24	4805.01	1622.47	1622.47	1622.47	312.01	312.01	312.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	DEC	299.13	299.13	299.13	527.03	527.03	527.03	683.72	683.72	683.72	1096.80	370.35	370.35	370.35	71.22	71.22	71.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			ANNUAL	13528.57	13528.57	13528.57	23836.05	23836.05	23836.05	30922.43	30922.43	30922.43	49604.20	16749.47	16749.47	16749.47	3221.05	3221.05	3221.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Total SURO = SURO(Impervious)																												
		AVERAGES:																												
		1991-1996	JAN	750.232	750.232	750.232	1322.233	1322.233	1322.233	1715.643	1715.643	1715.643	2716.825	916.495	916.495	916.495	176.601	176.601	176.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	FEB	211.652	211.652	211.652	373.073	373.073	373.073	484.115	484.115	484.115	768.986	259.658	259.658	259.658	49.934	49.934	49.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	MAR	479.452	479.452	479.452	846.480	846.480	846.480	1099.503	1099.503	1099.503	1641.574	552.181	552.181	552.181	107.040	107.040	107.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	APR	1328.709	1328.709	1328.709	2345.791	2345.791	2345.791	3046.925	3046.925	3046.925	4519.835	1518.673	1518.673	1518.673	295.071	295.071	295.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	MAY	1220.443	1220.443	1220.443	2156.010	2156.010	2156.010	2801.492	2801.492	2801.492	4027.777	1350.077	1350.077	1350.077	263.633	263.633	263.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	JUN	991.050	991.050	991.050	1751.231	1751.231	1751.231	2275.891	2275.891	2275.891	3243.016	1086.530	1086.530	1086.530	212.373	212.373	212.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	JUL	1675.041	1675.041	1675.041	2958.539	2958.539	2958.539	3843.851	3843.851	3843.851	5580.032	1871.217	1871.217	1871.217	365.058	365.058	365.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	AUG	1005.931	1005.931	1005.931	1778.709	1778.709	1778.709	2312.531	2312.531	2312.531	3188.516	1065.623	1065.623	1065.623	209.359	209.359	209.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	SEP	673.820	673.820	673.820	1191.022	1191.022	1191.022	1548.123	1548.123	1548.123	2169.670	725.898	725.898	725.898	142.298	142.298	142.298	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	OCT	1423.208	1423.208	1423.208	2512.644	2512.644	2512.644	3263.664	3263.664	3263.664	4838.390	1625.759	1625.759	1625.759	315.857	315.857	315.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	NOV	1106.527	1106.527	1106.527	1952.470	1952.470	1952.470	2535.203	2535.203	2535.203	3846.431	1294.006	1294.006	1294.006	250.773	250.773	250.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	DEC	247.647	247.647	247.647	437.078	437.078	437.078	567.611	567.611	567.611	855.413	287.962	287.962	287.962	55.731	55.731	55.731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			ANNUAL	11113.712	11113.712	11113.712	19625.279	19625.279	19625.279	25494.549	25494.549	25494.549	37396.463	12554.077	12554.077	12554.077	2443.726	2443.726	2443.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Total IMPEV = IMPEV(Impervious)																												
		AVERAGES:																												
		1991-1996	JAN	32.94	32.94	32.94	57.99	57.99	57.99	75.20	75.20	75.20	122.82	41.47	41.47	41.47	7.98	7.98	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	FEB	28.30	28.30	28.30	49.37	49.37	49.37	63.65	63.65	63.65	140.66	48.37	48.37	48.37	8.95	8.95	8.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAR	105.43	105.43	105.43	184.01	184.01	184.01	237.33	237.33	237.33	501.09	170.89	170.89	170.89	32.18	32.18	32.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	APR	259.73	259.73	259.73	453.04	453.04	453.04	584.11	584.11	584.11	1295.11	444.81	444.81	444.81	82.53	82.53	82.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAY	305.44	305.44	305.44	532.09	532.09	532.09	685.49	685.49	685.49	1595.65	549.62	549.62	549.62	101.34	101.34	101.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUN	298.09	298.09	298.09	519.57	519.57	519.57	669.57	669.57	669.57	1531.47	526.95	526.95	526.95	97.38	97.38	97.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUL	356.03	356.03	356.03	620.19	620.19	620.19	798.96	798.96	798.96	1846.75	635.66	635.66	635.66	117.38	117.38	117.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	AUG	282.69	282.69	282.69	491.88	491.88	491.88	633.23	633.23	633.23	1524.93	525.54	525.54	525.54	96.79	96.79	96.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	SEP	214.94	214.94	214.94	374.65	374.65	374.65	482.83	482.83	482.83	1101.41	378.91	378.91	378.91	70.05	70.05	70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	OCT	277.14	277.14	277.14	483.66	483.66	483.66	623.79	623.79	623.79	1367.89	469.42	469.42	469.42	87.24	87.24	87.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	NOV	201.28	201.28	201.28	351.94	351.94	351.94	454.43	454.43	454.43	923.01	315.25	315.25	315.25	59.18	59.18	59.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	DEC	52.99	52.99	52.99	92.64	92.64	92.64	119.60	119.60	119.60	257.33	88.64	88.64	88.64	16.34	16.34	16.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			ANNUAL	2415.00	2415.00	2415.00	4211.01	4211.01	4211.01	5428.19	5428.19	5428.19	12208.11	4195.52	4195.52	4195.52	777.35	777.35	777.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

URF TOTAL INPUTS AND OUTPUTS

10Ha

Total Moisture Supply = SUPY (Pervious)+ SUPY (Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	3891.1	3891.1	3891.1	3856.7	3856.7	3856.7	3830.9	3830.9	3830.9	3776.6	3878.6	3878.6	3878.6	3920.2	3920.2	3920.2	3931.9	3931.9	3931.9	3820.2	3820.2	3820.2	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996	FEB	1100.7	1100.7	1100.7	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.7	1100.7	1100.7	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.0	1101.0	1101.0	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996	MAR	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996	APR	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996	MAY	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996	JUN	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996	JUL	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996	AUG	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996	SEP	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996	OCT	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996	NOV	5116.7	5116.7	5116.7	5437.6	5437.6	5437.6	5678.4	5678.4	5678.4	6176.1	5229.1	5229.1	5229.1	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996	DEC	1428.6	1428.6	1428.6	1427.4	1427.4	1427.4	1426.5	1426.5	1426.5	1424.7	1428.2	1428.2	1428.2	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
	ANNUAL	63422.8	63422.8	63422.8	63708.3	63708.3	63708.3	63922.3	63922.3	63922.3	64364.0	63522.4	63522.4	63522.4	64571.9	64571.9	64571.9	64583.7	64583.7	64583.7	64471.5	64471.5	64471.5	64588.0	64588.0	64588.0	64588.0	64588.0
(m3) for a single Ha		**6342.3**	**6342.3**	**6342.3**	**6370.8**	**6370.8**	**6370.8**	**6392.2**	**6392.2**	**6392.2**	**6436.4**	**6352.2**	**6352.2**	**6352.2**	**6457.2**	**6457.2**	**6457.2**	**6458.4**	**6458.4**	**6458.4**	**6447.2**	**6447.2**	**6447.2**	**6458.8**	**6458.8**	**6458.8**	**6458.8**	**6458.8**

Total Runoff = SURO+IFWO (Pervious)+ SURO(Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1096.3	1182.0	1480.2	1814.8	1882.4	2114.5	2355.1	2411.8	2597.5	3429.1	1335.4	1406.2	1683.6	376.2	459.7	835.9	112.6	167.5	501.1	2850.2	3035.8	3218.4	34.7	157.2	655.7	34.7	157.3
1991-1996	FEB	309.8	322.1	379.8	512.7	522.5	570.5	664.5	673.8	715.6	974.1	379.7	390.6	451.9	105.6	117.5	208.8	30.6	37.1	91.9	797.5	857.1	908.9	7.5	27.8	168.4	7.5	27.8
1991-1996	MAR	699.5	712.1	796.9	1162.1	1174.2	1243.7	1507.3	1520.7	1580.6	2137.6	830.6	840.7	923.6	232.9	247.1	360.5	68.6	76.2	173.9	1644.2	1738.8	1884.6	5.7	32.3	184.6	5.7	32.3
1991-1996	APR	1943.1	2003.8	2363.0	3223.1	3279.1	3565.1	4178.5	4238.5	4471.7	5881.2	2290.4	2339.5	2684.4	650.7	721.0	1209.3	190.9	232.4	670.5	4674.7	4943.8	5309.2	33.3	159.8	740.0	33.3	159.8
1991-1996	MAY	1807.0	1919.2	2428.1	2983.6	3082.6	3475.4	3863.1	3961.0	4264.7	5313.6	2084.3	2174.1	2640.4	614.3	741.5	1385.3	178.4	263.5	933.1	4493.6	4754.4	5069.0	70.8	267.9	966.6	70.9	268.2
1991-1996	JUN	1474.9	1614.3	2011.3	2434.1	2555.5	2854.7	3151.7	3265.2	3491.6	4314.6	1694.2	1804.5	2180.2	503.6	658.1	1177.5	149.0	265.7	810.0	3731.7	3929.0	4140.8	56.9	262.9	827.4	57.0	263.6
1991-1996	JUL	2446.7	2594.2	3059.7	4063.7	4193.0	4564.6	5271.9	5394.0	5708.0	7313.9	2844.4	2961.1	3431.5	810.4	973.4	1614.5	237.6	320.8	812.0	6137.4	6493.2	6889.3	36.3	280.1	1075.0	36.3	281.5
1991-1996	AUG	1472.9	1576.0	1911.2	2447.5	2541.1	2804.4	3176.8	3268.5	3481.3	4261.2	1659.8	1737.6	2087.0	479.9	587.3	1061.0	138.9	190.8	568.7	3757.8	3944.0	4095.5	26.5	187.0	776.3	26.5	187.8
1991-1996	SEP	996.1	1055.8	1176.1	1650.6	1698.5	1792.6	2139.0	2179.0	2258.8	2902.4	1135.1	1187.5	1311.8	332.2	408.1	588.3	96.0	142.3	289.8	2369.4	2493.8	2626.5	28.2	132.7	381.2	28.2	132.4
1991-1996	OCT	2073.0	2158.7	2494.9	3447.4	3535.1	3798.0	4474.9	4572.3	4781.2	6304.5	2446.7	2511.0	2849.3	686.1	776.6	1247.6	197.2	207.5	333.6	5235.5	5519.3	5750.2	24.5	267.5	899.7	24.5	268.5
1991-1996	NOV	1612.9	1652.7	1843.3	2680.0	2716.0	2864.9	3477.1	3513.8	3634.2	4975.3	1930.6	1963.3	2137.1	544.1	608.0	949.1	157.6	191.2	454.2	4053.1	4305.1	4545.6	27.1	135.5	615.3	27.1	135.5
1991-1996	DEC	362.3	373.1	422.1	601.5	610.8	650.7	780.5	789.4	823.7	1111.4	432.3	442.2	486.8	122.0	138.6	207.9	35.3	44.4	98.5	898.5	960.2	1014.8	7.0	34.1	135.3	7.0	34.1
	ANNUAL	16300.3	17169.3	20371.1	27029.1	27798.4	30305.0	35050.3	35796.7	37815.8	48932.2	19072.5	19767.5	22874.2	5462.3	6440.9	10847.8	1592.8	2140.2	5746.2	40634.0	42976.3	45465.4	358.5	1944.7	7425.5	358.6	1948.7
(m3) for a single Ha		**1630.0**	**1716.9**	**2037.1**	**2702.9**	**2779.8**	**3030.5**	**3505.0**	**3579.7**	**3781.6**	**4893.2**	**1907.2**	**1976.7**	**2287.4**	**546.2**	**644.1**	**1084.8**	**159.3**	**214.0**	**574.6**	**4063.4**	**4297.6**	**4546.5**	**35.8**	**194.5**	**742.5**	**35.9**	**194.9**

Total Evapo = IMPEV(Impervious)+ TAET(Pervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	166.7	167.4	168.9	156.2	156.7	157.7	148.4	148.8	149.0	137.6	163.0	163.7	165.6	175.7	176.7	180.0	193.0	192.9	191.9	130.2	130.2	130.0	176.2	178.6	184.6	176.2	178.6
1991-1996	FEB	191.7	195.9	197.0	168.3	171.4	171.7	151.0	152.9	152.9	157.6	196.8	200.5	202.1	214.5	219.7	221.8	240.2	240.5	240.6	136.2	136.2	136.2	215.4	224.8	227.3	215.4	224.8
1991-1996	MAR	643.2	655.4	661.3	581.3	590.5	592.9	535.9	542.4	541.9	563.3	659.4	670.2	676.2	703.9	719.6	728.4	759.6	760.4	758.9	501.6	501.6	501.3	714.4	745.0	754.2	714.4	745.0
1991-1996	APR	2002.0	2047.8	2058.1	1721.4	1751.8	1755.6	1511.7	1530.0	1528.5	1473.7	2027.4	2069.7	2074.0	2278.4	2339.0	2346.3	2519.9	2526.0	2524.9	1312.1	1312.0	1309.0	2331.4	2431.4	2436.1	2331.4	2431.4
1991-1996	MAY	3664.4	3804.4	3779.9	2946.4	3038.1	3010.8	2406.3	2458.1	2429.7	1892.6	3597.4	3727.0	3662.8	4373.8	4559.9	4471.4	5201.4	5238.5	5214.2	1829.6	1825.2	1804.6	4460.4	4747.0	4581.1	4460.4	4747.0
1991-1996	JUN	4319.5	4404.4	4332.0	3401.6	3451.6	3391.6	2711.8	2731.0	2680.9	1863.2	4173.4	4255.2	4143.9	5225.9	5344.1	5189.0	6750.0	6773.6	6687.5	1953.2	1931.9	1886.3	5130.5	5298.1	5069.8	5130.5	5298.1
1991-1996	JUL	5096.9	5195.8	5160.5	4012.0	4074.7	4033.6	3193.1	3229.1	3180.8	2234.0	4934.6	5028.9	4929.9	6166.5	6302.0	6164.3	7825.0	7857.7	7707.5	2301.5	2286.3	2227.3	6112.5	6305.3	6134.5	6112.5	6305.2
1991-1996	AUG	4642.6	4804.8	4724.8	3619.5	3721.7	3650.2	2851.1	2901.7	2837.4	1879.4	4475.3	4627.7	4486.3	5660.2	5878.8	5681.4	7384.6	7428.6	7225.7	2025.3	2004.1	1932.3	5562.2	5880.0	5611.3	5562.2	5879.9
1991-1996	SEP	3321.1	3324.3	3223.7	2598.7	2593.7	2517.3	2053.8	2042.3	1983.5	1350.6	3195.0	3201.5	3078.7	4034.3	4043.9	3870.0	5459.2	5436.7	5098.6	1455.4	1424.5	1384.2	3842.1	3843.4	3628.3	3842.1	3843.3
1991-1996	OCT	2654.8	2689.9	2693.1	2201.2	2222.2	2220.5	1860.7	1870.8	1864.3	1587.3	2627.1	2661.3	2654.7	3101.4	3150.4	3142.8	3813.1	3812.6	3718.7	1502.9	1500.6	1485.6	3068.5	3143.0	3178.8	3068.5	3142.9
1991-1996	NOV	2972.3	2840.5	2546.6	2393.2	2300.9	2070.5	1963.0	1895.9	1709.1	1127.7	2802.2	2683.9	2417.9	1336.2	1348.7	1376.1	1456.7	1456.5	1453.8	930.4	930.1	928.5	1349.8	1376.6	1427.6	1349.8	1376.6
1991-1996	DEC	363.0	369.4	384.0	319.5	324.5	335.1	287.2	291.3	298.0	290.3	370.2	375.8	389.6	406.0	414.0	433.8	485.6	485.5	485.3	257.1	257.0	256.0	393.8	411.9	447.9	393.8	411.9
	ANNUAL	30024.7	30486.7	29917.6	24088.9	24367.6	23879.6	19630.4	19751.4	19316.3	14543.5	29212.0	29655.8	28874.3	33672.3	34492.6	33802.9	42088.0	42208.9	41299.4	14236.2	14144.2	13893.7	33357.0	34584.9	33681.3	33357.1	34584.7
(m3) for a single Ha		**3002.5**	**3048.7**	**2991.8**	**2408.9**	**2436.8**	**2388.0**	**1963.0**	**1975.1**	**1931.6**	**1454.3**	**2921.2**	**2965.6**	**2887.4**	**3367.2**	**3449.3**	**3380.3**	**4208.8**	**4220.9**	**4129.9**	**1423.6**	**1414.4**	**1389.4**	**3335.7**	**3458.5**	**3368.1**	**3335.7**	**3458.5**

(AGWO)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6
1991-1996	FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8
1991-1996	MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7
1991-1996	APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3
1991-1996	MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1
1991-1996	JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0
1991-1996	JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0
1991-1996	AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8
1991-1996	SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5
1991-1996	OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4
1991-1996	NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6
1991-1996	DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5
	ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3
(m3) for a single Ha		**1524.4**	**1426.5**	**1222.9**	**1116.2**	**1040.7**	**883.9**	**812.6**	**751.4**	**627.0**	**80.5**	**1361.2**	**1276.8**	**1099.0**	**1978.1**	**1856.1**	**1603.9**	**1745.8**	**1674.6**	**1471.2**	**729.6**	**568.4**	**404.6**	**2325.7**	**2149.1**	**1857.5**	**2325.7**	**2148.8**

(IGWI)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1
1991-1996	FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5
1991-1996	MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1
1991-1996	APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9
1991-1996	MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3
1991-1996	JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8
1991-1996	JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0
1991-1996	AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0
1991-1996	SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9
1991-1996	OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4
1991-1996	NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1
1991-1996	DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4
	ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2
(m3) for a single Ha		**241.3**	**224.7**	**190.1**	**176.8**	**164.0**	**137.5**	**128.8**	**118.4**	**97.7**	**12.7**	**215.4**	**201.1**	**170.8**	**319.0**	**298.9**	**256.3**	**279.5**	**268.0**	**233.8**	**117.3**	**91.6**	**65.2**	**375.9**	**346.6**	**297.7**	**375.9**	**346.5**

Annual Water Balance
Volume for single Ha (m3)

Paramter (m3)	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab
SUPY	6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2	6352.2	6457.2	6457.2	6457.2	6458.4
RO	1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7	2287.4	546.2	644.1	1084.8	159.3
ET	3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6	2887.4	3367.2	3449.3	3380.3	4208.8
AGWO	1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8	1099.0	1978.1	1856.1	1603.9	1745.8
IGWI	241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1	170.8	319.0	298.9	256.3	279.5

Paramter (m3)	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
SUPY	6458.4	6458.4	6447.2	6447.2	6447.2	6458.8	6458.8	6458.8	6458.8	6458.8	6458.8	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
RO	214.0	574.6	1416.5	1650.7	1899.6	35.8	194.5	742.5	35.9	194.9	747.6	1288.4	1316.3	1430.6	755.3	797.0	966.7
ET	4220.9	4129.9	2482.4	2473.2	2448.1	3335.7	3458.5	3368.1	3335.7	3458.5	3367.8	3097.3	3106.6	3071.5	3350.4	3364.4	3313.7
AGWO	1674.6	1471.2	2317.7	2156.6	1992.8	2325.7	2149.1	1857.5	2325.7	2148.8	1853.7	1976.7	1949.8	1888.8	2216.8	2176.5	2084.9
IGWI	268.0	233.8	117.3	91.6	65.2	375.9	346.6	297.7	375.9	346.5	297.1	66.2	61.7	51.4	99.3	92.5	77.1

REARRANGED

Paramter (m3)	SUPY	RO	ET	AGWO	IGWI
RLD5ab	6342.3	1630.0	3002.5	1524.4	241.3
RLD5bc	6342.3	1716.9	3048.7	1426.5	224.7
RLD5cd	6342.3	2037.1	2991.8	1222.9	190.1
RMD5ab	6370.8	2702.9	2408.9	1116.2	176.8
RMD5bc	6370.8	2779.8	2436.8	1040.7	164.0
RMD5cd	6370.8	3030.5	2388.0	883.9	137.5
RHD5ab	6392.2	3505.0	1963.0	812.6	128.8
RHD5bc	6392.2	3579.7	1975.1	751.4	118.4
RHD5cd	6392.2	3781.6	1931.6	627.0	97.7
CSMbc	6436.4	4893.2	1454.3	80.5	12.7
EISab	6352.2	1907.2	2921.2	1361.2	215.4
EISbc	6352.2	1976.7	2965.6	1276.8	201.1
EIScd	6352.2	2287.4	2887.4	1099.0	170.8
OPLab	6457.2	546.2	3367.2	1978.1	319.0
OPLbc	6457.2	644.1	3449.3	1856.1	298.9
OPLcd	6457.2	1084.8	3380.3	1603.9	256.3
OVLab	6458.4	159.3	4208.8	1745.8	279.5
OVLbc	6458.4	214.0	4220.9	1674.6	268.0
OVLcd	6458.4	574.6	4129.9	1471.2	233.8
THCab	6447.2	1416.5	2482.4	2317.7	117.3
THCbc	6447.2	1650.7	2473.2	2156.6	91.6
THCcd	6447.2	1899.6	2448.1	1992.8	65.2
AGT0ab	6458.8	35.8	3335.7	2325.7	375.9
AGT0bc	6458.8	194.5	3458.5	2149.1	346.6
AGT0cd	6458.8	742.5	3368.1	1857.5	297.7
AGPab	6458.8	35.9	3335.7	2325.7	375.9
AGP0bc	6458.8	194.9	3458.5	2148.8	346.5
AGP0cd	6458.8	747.6	3367.8	1853.7	297.1
IPRab	6413.6	1288.4	3097.3	1976.7	66.2
IPRbc	6413.6	1316.3	3106.6	1949.8	61.7
IPRcd	6413.6	1430.6	3071.5	1888.8	51.4
IPEab	6399.3	755.3	3350.4	2216.8	99.3
IPEbc	6399.3	797.0	3364.4	2176.5	92.5
IPEcd	6399.3	966.7	3313.7	2084.9	77.1

%ET

5	10	20	30	40	50

Required LID Volumes	Required LID Volumes
2596.0	2646.9

TO BE INFLITRATED

Required LID Volumes IPR	Required LID Volumes IPE/Roads
2596.0	2646.9

ACTUAL INFILTRATED VALUES

Required LID Volumes IPR	Required LID Volumes IPE/Roads
1557.6	1588.2

VOLUME EVAPORATED

Required LID Volumes IPR	Required LID Volumes IPE/Roads
1038.4	1058.8

RUNOFF DEFICIT

Required LID Volumes IPR	Required LID Volumes IPE/Roads
2596.0	2646.9

REQ INPUTS:HSPF MODEL

LAND USE IN HA

SUBCATCHMENTS

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	3.60	40.85	15.99	5.25	17.31	18.63	45.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	2.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	2.20	29.35	1.81	1.35	2.21	2.45	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	6.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	6.30
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	1.16					9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.84					5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	1.05					0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.75					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	1.97	1.13				29.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	18.88			1.72		2.19	6.00	19.50	0.00	21.80	4.90	0.00	4.00	3.40	2.50	0.00	0.00
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	13.57			0.22		1.16	3.90	16.10	0.00	49.60	9.70	0.00	18.30	16.40	11.00	0.00	0.00
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00			0.00		0.00	1.50	7.30	0.00	47.60	12.00	0.00	30.90	19.20	21.00	0.00	0.00
Utility/Transport/Parks	2	OPL0ab	4001	4501	8.50	9.60	0.60	9.40	20.61			3.17	3.13	22.44	17.70	18.10	7.80	6.30	1.10	3.40	1.10	1.90	0.50	0.00	0.20
Utility/Transport/Parks	2	OPL0bc	4002	4502	1.10	3.60	0.20	5.90	14.81			0.40	0.41	11.93	11.50	15.00	11.30	14.40	2.20	9.40	5.00	9.30	2.40	0.00	0.60
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.50	3.20	0.20	3.30	0.00			0.00	0.00	0.00	4.30	6.80	6.10	13.80	2.70	8.30	8.40	10.80	4.60	0.00	0.70
Valley Segment	2	OVL0ab	4101	4601	7.40	0.60	0.00	2.40	43.73	3.12	3.72				0.00	1.40	0.00	0.90	0.40	0.00	0.00	0.20	0.20	10.56	0.00
Valley Segment	2	OVL0bc	4102	4602	1.00	0.20	0.00	1.50	31.42	0.35	0.96				0.00	1.10	0.00	2.00	0.90	0.00	0.00	0.80	0.90	22.23	0.00
Valley Segment	2	OVL0cd	4103	4603	0.40	0.20	0.00	0.80	0.00	0.00	0.00				0.00	0.50	0.00	1.90	1.10	0.00	0.00	1.00	1.80	22.11	0.00
Roads	2	THC0ab	5001	5501	0.60	5.00	1.40	2.80	27.62	5.93	2.47	12.48	11.02	48.94	6.90	2.40	2.30	3.90	0.10	0.90	0.30	0.80	0.50		0.90
Roads	2	THC0bc			0.1	1.9	0.4	1.8							4.50	2.00	3.40	8.80	0.30	2.50	1.50	3.80	2.40		2.60
Roads and ROW	2	THC0cd	5003	5503	0.00	1.70	0.40	1.00							1.70	0.90	1.80	8.50	0.30	2.20	2.60	4.40	4.50	2.22	2.70
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	5.30	103.73	44.65	1.93				11.80	19.50	7.00	10.50	4.00	1.80	2.00	3.10	1.50	29.89	3.90
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	3.30	74.53	5.06	0.50				7.70	16.10	10.10	23.80	7.80	5.10	9.30	15.10	6.60	62.92	11.60
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	1.90	0.00	0.00	0.00				2.90	7.30	5.50	22.90	9.70	4.50	15.70	17.60	12.50	62.58	12.30
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00			3.53				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00			0.91				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	24.60							2.90	14.60	5.70	7.50	0.00	7.40	0.00	0.00	0.00		0.00
Industrial/Prestige		IPRbc			0.00	0.00	0.00	15.50							1.90	12.10	8.20	17.00	0.00	20.40	0.00	0.00	0.00		0.00
Industrial/Prestige		IPRcd			0.00	0.00	0.00	8.70							0.70	5.50	4.40	16.30	0.00	17.90	0.00	0.00	0.00		0.00
Prestige Business Park		IPEab			52.20	46.70	14.30	26.40							10.80	22.10	4.10	21.30	0.60	1.00	0.10	2.10	2.70		1.60
Prestige Business Park		IPEbc			7.00	17.70	4.50	16.60							7.00	18.20	6.00	48.30	1.20	2.70	0.60	10.20	11.80		4.60
Prestige Business Park		IPEcd			3.10	15.60	4.40	9.40							2.60	8.30	3.20	46.40	1.50	2.40	1.10	11.90	22.50		4.90
		Sum URF AREAS			**81.9**	**106.0**	**26.4**	**147.7**	**424.9**	**78.0**	**20.6**	**37.5**	**35.6**	**200.9**	**106.3**	**214.8**	**86.9**	**393.5**	**60.5**	**89.9**	**100.9**	**132.0**	**109.9**	**214.0**	**60.9**

Land use	Code	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	RLD5ab	0.00	38.57	0.00	0.00	0.00	0.00	1.46	0.00	0.00	3.14	2.63	2.20	0.00
Res Low Density	RLD5bc	0.00	42.70	0.00	0.00	0.00	0.00	2.18	0.00	0.00	10.00	7.05	21.06	0.00
Res Low Density	RLD5cd	0.00	25.93	0.00	0.00	0.00	0.00	1.69	0.00	0.00	9.12	6.91	20.32	0.00
Res Med Denisty	RMD5ab	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Res Med Denisty	RMD5bc	0.00	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
Res Med Denisty	RMD5cd	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
Res High Density	RHD5ab	0.00	21.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	RHD5bc	0.00	23.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Res High Density	RHD5cd	0.00	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Commercial	CSM1bc	0.00	9.55	0.00	0.00	0.00	0.00	0.29	0.00	0.00	1.36	0.08	0.18	0.00
Institutional	EIS1ab	0.00	4.02	0.00	0.00	0.00	0.00	0.76	7.20	17.90	0.51	0.00	0.00	1.70
Institutional	EIS1bc	0.00	4.45	0.00	0.00	0.00	0.00	1.13	14.80	70.60	1.63	0.00	0.00	9.30
Institutional	EIS1cd	0.00	2.70	0.00	0.00	0.00	0.00	0.88	44.30	91.50	1.48	0.00	0.00	8.70
Utility/Transport/Parks	OPL0ab	5.40	17.24	1.60	0.80	3.50	5.10	0.59	2.20	0.10	0.04	0.14	1.39	0.00
Utility/Transport/Parks	OPL0bc	12.90	19.09	7.90	1.60	9.60	16.00	0.88	4.60	0.50	0.13	0.38	13.30	0.00
Utility/Transport/Parks	OPL0cd	17.70	11.59	17.60	2.50	9.10	15.20	0.69	13.70	0.70	0.12	0.37	12.83	0.00
Valley Segment	OVL0ab	0.00	9.15	0.20	0.90	1.10	0.20	5.90	0.90	0.40	10.97	12.49	1.03	0.10
Valley Segment	OVL0bc	0.00	10.13	1.10	1.80	3.00	0.70	8.82	1.80	1.40	34.97	33.51	9.83	0.40
Valley Segment	OVL0cd	0.00	6.15	2.30	2.70	2.90	0.70	6.85	5.30	1.80	31.88	32.84	9.48	0.40
Roads	THC0ab	0.40		0.10		0.10	0.40		0.70	0.40				0.50
Roads	THC0bc	1.00		0.40		0.30	1.20		1.50	1.40				3.10
Roads and ROW	THC0cd	1.30	44.33	1.00	0.00	0.30	1.10	3.95	4.40	1.90	10.88	10.19	13.04	2.90
Agricultural Tilled	AGT0ab	0.00	36.16	0.00	0.00	0.00	0.00	6.31	0.00	4.00	41.88	42.24	9.95	0.00
Agricultural Tilled	AGT0bc	0.00	40.04	0.00	0.00	0.00	0.00	9.43	0.00	15.80	133.55	113.28	95.04	0.00
Agricultural Tilled	AGT0cd	0.00	24.31	0.00	0.00	0.00	0.00	7.33	0.00	20.50	121.78	111.03	91.73	0.00
Agricultural Pasture/forest	AGPab			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	AGPbc			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	AGPcd			0.00		0.00	0.00		0.00	0.00				0.00
Industrial/Prestige	IPRab	5.60		1.40	5.10	6.60	3.50		12.80	1.30				0.20
Industrial/Prestige	IPRbc	13.40		7.20	10.40	18.00	11.00		26.50	4.90				1.00
Industrial/Prestige	IPRcd	18.30		16.10	15.80	17.10	10.40		79.20	6.40				0.90
Prestige Business Park	IPEab	4.80		2.40	2.90	4.60	8.50		10.00	1.30				3.50
Prestige Business Park	IPEbc	11.50		12.40	5.90	12.50	26.80		20.60	5.20				19.80
Prestige Business Park	IPEcd	15.80		27.50	8.90	11.90	25.40		61.60	6.80				18.60
	Sum URF AREAS	**108.1**	**439.7**	**99.2**	**59.3**	**100.6**	**126.2**	**59.1**	**312.1**	**254.8**	**413.9**	**373.2**	**301.4**	**71.1**

LAND USE IN %

SUBCATCHMENTS

SUMMARY OF WATER BALANCES FOR EACH SUBCATCHMENT

SUBCATCHMENT 1			SUBCATCHMENT 2			SUBCATCHMENT 3		
S (m3)	S (m3)	S (mm)	W (m3)	w (m3)	W (mm)	T (m3)	T (m3)	T (mm)
81.9	81.9		106.3	106.3		108.1	108.1	
525241.4	525241.4	641.3	683687.0	683687.0	643.2	694510.5	694510.5	642.5
56532.3	56532.3	69.0	92316.6	92316.6	86.8	114244.0	114244.0	105.7
281575.8	281575.8	343.8	340790.7	340790.7	320.6	351470.3	351470.3	325.1
173862.2	173862.2	212.3	211869.6	211869.6	199.3	209062.9	209062.9	193.4
11750.0	11750.0	14.3	24084.0	24084.0	22.7	15234.8	15234.8	14.1
106.0	106.0		214.8	214.8		439.7	439.7	
679746.8	679746.8	641.3	1378304.5	1378304.5	641.7	2818679.9	2818679.9	641.0
89193.4	89193.4	84.1	212873.0	212873.0	99.1	721467.3	721467.3	164.1
348737.1	348737.1	329.0	694966.1	694966.1	323.5	1288451.4	1288451.4	293.0
226128.8	226128.8	213.3	408626.9	408626.9	190.2	679422.8	679422.8	154.5
13577.7	13577.7	12.8	43608.8	43608.8	20.3	97159.5	97159.5	22.1
26.4	26.4		86.9	86.9		99.2	99.2	
169105.0	169105.0	640.5	559523.1	559523.1	643.9	637017.0	637017.0	642.2
22717.0	22717.0	86.0	72148.7	72148.7	83.0	101938.5	101938.5	102.8
86461.4	86461.4	327.5	282361.5	282361.5	324.9	327842.3	327842.3	330.5
57451.7	57451.7	217.6	175025.0	175025.0	201.4	191578.7	191578.7	193.1
2705.7	2705.7	10.2	18214.9	18214.9	21.0	13254.3	13254.3	13.4
147.7	147.7		393.5	393.5		59.3	59.3	
947716.3	947716.3	641.6	2519807.3	2519807.3	640.4	380528.2	380528.2	641.7
143850.7	143850.7	97.4	490856.2	490856.2	124.7	64619.9	64619.9	109.0
480157.8	480157.8	325.1	1246277.0	1246277.0	316.7	194893.0	194893.0	328.7
297778.0	297778.0	201.6	705258.6	705258.6	179.2	115147.7	115147.7	194.2
20653.6	20653.6	14.0	67259.3	67259.3	17.1	6050.8	6050.8	10.2
424.9	424.9		60.5	60.5		100.6	100.6	
2731762.2	2731762.2	643.0	387707.8	387707.8	640.8	646097.4	646097.4	642.2
293108.5	293108.5	69.0	74733.4	74733.4	123.5	103257.4	103257.4	102.6
1428264.6	1428264.6	336.2	193906.4	193906.4	320.5	332437.0	332437.0	330.5
813555.3	813555.3	191.5	99285.5	99285.5	164.1	194680.2	194680.2	193.5
123544.6	123544.6	29.1	14805.6	14805.6	24.5	13123.7	13123.7	13.0
78.0	78.0		89.9	89.9		126.2	126.2	
501875.0	501875.0	643.1	578117.4	578117.4	643.1	810273.1	810273.1	642.1
46257.2	46257.2	59.3	98115.6	98115.6	109.1	121000.6	121000.6	95.9
250939.5	250939.5	321.6	286191.9	286191.9	318.3	416853.6	416853.6	330.3
161540.4	161540.4	207.0	174162.5	174162.5	193.7	250563.8	250563.8	198.5
24476.8	24476.8	31.4	13485.8	13485.8	15.0	17667.8	17667.8	14.0
20.6	20.6		100.9	100.9		59.1	59.1	
132380.7	132380.7	642.0	645842.5	645842.5	640.1	380945.7	380945.7	644.2
15642.5	15642.5	75.9	150413.5	150413.5	149.1	40105.0	40105.0	67.8
68808.4	68808.4	333.7	313054.9	313054.9	310.3	210312.5	210312.5	355.7
39483.6	39483.6	191.5	154430.7	154430.7	153.1	106328.2	106328.2	179.8
5697.9	5697.9	27.6	22958.5	22958.5	22.8	16027.7	16027.7	27.1
37.5	37.5		132.0	132.0		312.1	312.1	
239637.4	239637.4	638.9	846825.2	846825.2	641.5	1997769.6	1997769.6	640.1
55392.3	55392.3	147.7	155442.4	155442.4	117.8	426945.8	426945.8	136.8
107421.3	107421.3	286.4	422123.3	422123.3	319.8	984087.6	984087.6	315.3
68100.3	68100.3	181.6	231006.6	231006.6	175.0	560252.1	560252.1	179.5
7683.0	7683.0	20.5	28404.2	28404.2	21.5	34361.5	34361.5	11.0
35.6	35.6		109.9	109.9		254.8	254.8	
227601.4	227601.4	638.6	703870.4	703870.4	640.4	1625114.2	1625114.2	637.8
52157.2	52157.2	146.3	139661.3	139661.3	127.1	439436.1	439436.1	172.5
102714.9	102714.9	288.2	349584.2	349584.2	318.1	774745.2	774745.2	304.1
64388.2	64388.2	180.7	192627.6	192627.6	175.3	364662.6	364662.6	143.1
7459.6	7459.6	20.9	19350.4	19350.4	17.6	50183.7	50183.7	19.7
200.9	200.9		214.0	214.0		413.9	413.9	
1286534.0	1286534.0	640.4	1381706.8	1381706.8	645.8	2670029.9	2670029.9	645.1
396421.1	396421.1	197.3	85789.5	85789.5	40.1	222742.2	222742.2	53.8
537888.1	537888.1	267.7	767490.1	767490.1	358.7	1445674.6	1445674.6	349.3
307335.3	307335.3	153.0	415566.8	415566.8	194.2	792589.7	792589.7	191.5
36595.4	36595.4	18.2	66202.3	66202.3	30.9	124477.5	124477.5	30.1
#N/A	#N/A		60.9	60.9		373.2	373.2	
			390941.2	390941.2	641.9	2408063.2	2408063.2	645.3
			59487.0	59487.0	97.7	184993.0	184993.0	49.6
			195159.4	195159.4	320.5	1314494.1	1314494.1	352.3
			115639.1	115639.1	189.9	718584.3	718584.3	192.6
			14081.1	14081.1	23.1	112790.7	112790.7	30.2
						301.4	301.4	
						1941687.6	1941687.6	644.1
						224961.2	224961.2	74.6
						1013656.7	1013656.7	336.3
						562279.3	562279.3	186.5
						86815.6	86815.6	28.8
						71.1	71.1	
						454457.9	454457.9	639.2
						92457.8	92457.8	130.0
						223903.7	223903.7	314.9
						132484.2	132484.2	186.3
						8218.3	8218.3	11.6

Sulfur

	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b
AREA (ha)	81.9	106.0	26.4	147.7	424.9	78.0	20.6	37.5	35.6	200.9
SUPPLY	641.3	641.3	640.5	641.6	643.0	643.1	642.0	638.9	638.6	640.4
RO	69.0	84.1	86.0	97.4	69.0	59.3	75.9	147.7	146.3	197.3
ET	343.8	329.0	327.5	325.1	336.2	321.6	333.7	286.4	288.2	267.7
AGWO	212.3	213.3	217.6	201.6	191.5	207.0	191.5	181.6	180.7	153.0
IGWI	14.3	12.8	10.2	14.0	29.1	31.4	27.6	20.5	20.9	18.2
Error (%)	0.3	0.3	-0.1	0.6	2.7	3.7	2.1	0.4	0.4	0.6

Welland

	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24
AREA (ha)	106.3	214.8	86.9	393.5	60.5	89.9	100.9	132.0	109.9	214.0	60.9
SUPPLY	643.2	641.7	643.9	640.4	640.8	643.1	640.1	641.5	640.4	645.8	641.9
RO	86.8	99.1	83.0	124.7	123.5	109.1	149.1	117.8	127.1	40.1	97.7
ET	320.6	323.5	324.9	316.7	320.5	318.3	310.3	319.8	318.1	358.7	320.5
AGWO	199.3	190.2	201.4	179.2	164.1	193.7	153.1	175.0	175.3	194.2	189.9
IGWI	22.7	20.3	21.0	17.1	24.5	15.0	22.8	21.5	17.6	30.9	23.1
Error (%)	2.1	1.3	2.1	0.4	1.3	1.1	0.8	1.2	0.4	3.4	1.7

Twenty-Mile

	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
AREA (ha)	108.1	439.7	99.2	59.3	100.6	126.2	59.1	312.1	254.8	413.9	373.2	301.4	71.1
SUPPLY	642.5	641.0	642.2	641.7	642.2	642.1	644.2	640.1	637.8	645.1	645.3	644.1	639.2
RO	105.7	164.1	102.8	109.0	102.6	95.9	67.8	136.8	172.5	53.8	49.6	74.6	130.0
ET	325.1	293.0	330.5	328.7	330.5	330.3	355.7	315.3	304.1	349.3	352.3	336.3	314.9
AGWO	193.4	154.5	193.1	194.2	193.5	198.5	179.8	179.5	143.1	191.5	192.6	186.5	186.3
IGWI	14.1	22.1	13.4	10.2	13.0	14.0	27.1	11.0	19.7	30.1	30.2	28.8	11.6
Error (%)	0.6	1.1	0.4	0.0	0.4	0.5	2.1	-0.4	-0.2	3.2	3.2	2.8	-0.6

Sulfur											
	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	AVERAGE
AREA (ha)	82	106	26	148	425	78	21	38	36	201	
SUPPLY (mm)	641	641	641	642	643	643	642	639	639	640	641
RO (mm)	69	84	86	97	69	59	76	148	146	197	103
ET (mm)	344	329	328	325	336	322	334	286	288	268	316
AGWO (mm)	212	213	218	202	191	207	191	182	181	153	
IGWI (mm)	14	13	10	14	29	31	28	20	21	18	
Infil (mm)	227	226	228	216	221	238	219	202	202	171	215
Error (%)	0.29	4.77	1.19	2.25	2.57	3.53	2.18	1.14	1.07	0.89	

Welland												
	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	AVERAGE
AREA (ha)	106	215	87	394	61	90	101	132	110	214	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	646	642	642
RO (mm)	87	99	83	125	124	109	149	118	127	40	98	105
ET (mm)	321	324	325	317	321	318	310	320	318	359	320	323
AGWO (mm)	199	190	201	179	164	194	153	175	175	194	190	
IGWI (mm)	23	20	21	17	24	15	23	22	18	31	23	
Infil (mm)	222	211	222	196	189	209	176	197	193	225	213	203
Error (%)	2.14	3.77	3.54	2.36	2.58	3.28	2.69	3.01	2.94	3.36	2.31	

Twenty-Mile														
	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37	AVERAGE
AREA (ha)	108	440	99	59	101	126	59	312	255	414	373	301	71	
SUPPLY (mm)	642	641	642	642	642	642	644	640	638	645	645	644	639	642
RO (mm)	106	164	103	109	103	96	68	137	172	54	50	75	130	100
ET (mm)	325	293	330	329	330	330	356	315	304	349	352	336	315	332
AGWO (mm)	193	155	193	194	194	199	180	180	143	191	193	187	186	
IGWI (mm)	14	22	13	10	13	14	27	11	20	30	30	29	12	
Infil (mm)	207	177	206	204	207	213	207	191	163	222	223	215	198	202
Error (%)	0.65	1.14	0.38	-0.05	0.40	0.52	2.15	-0.39	-0.24	3.17	3.21	2.78	-0.57	

Sulphur					
	S-5	S-6	S-7	S-8	AVERAGE
AREA (ha)	**82**	**106**	**26**	**148**	
SUPPLY (mm)	641	641	641	642	641
RO (mm)	69	84	86	97	84
ET (mm)	344	329	328	325	331
INFIL (mm)	227	226	228	216	224

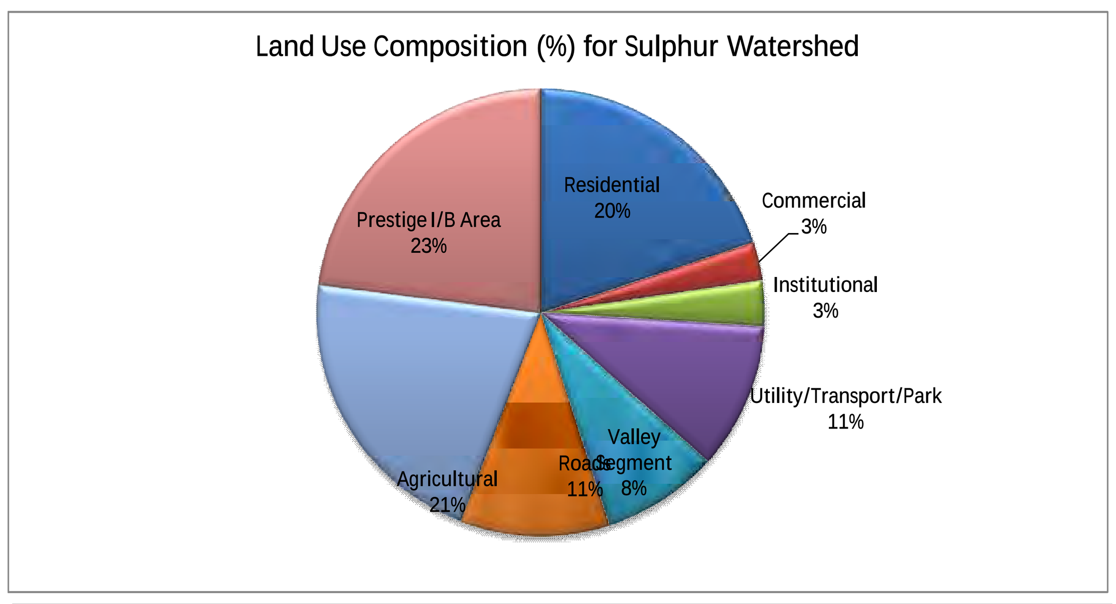
Welland											
	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-24	AVERAGE
AREA (ha)	106	215	87	394	61	90	101	132	110	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	642	642
RO (mm)	87	99	83	125	124	109	149	118	127	98	112
ET (mm)	321	324	325	317	321	318	310	320	318	320	319
INFIL (mm)	222	211	222	196	189	209	176	197	193	213	203

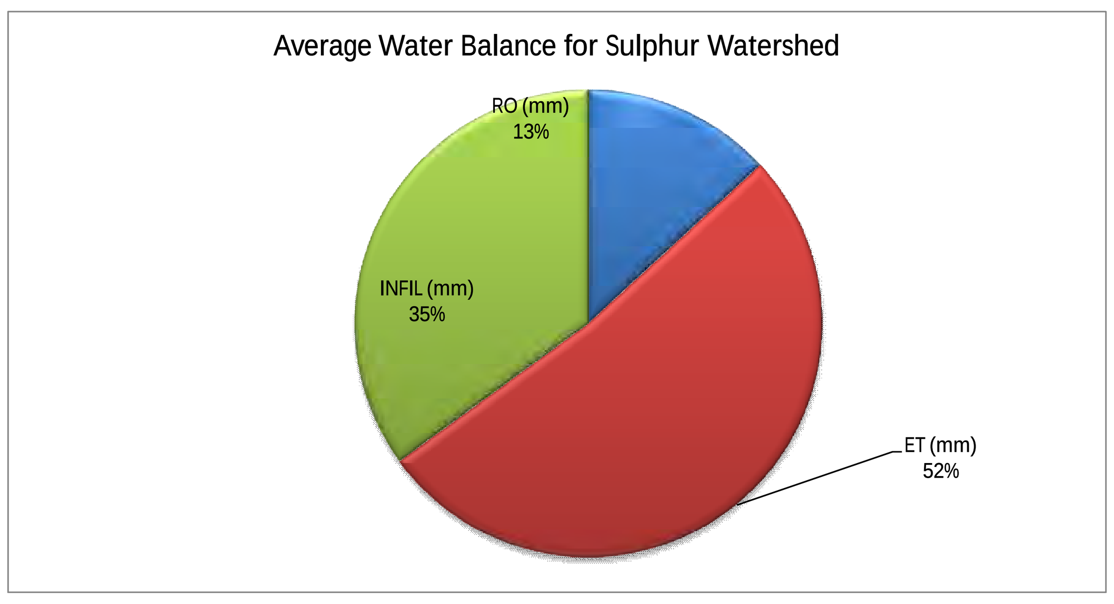
Twenty-Mile									
	T-25	T-27	T-28	T-29	T-30	T-32	T-33	T-37	AVERAGE
AREA (ha)	108	99	59	101	126	312	255	71	
SUPPLY (mm)	642	642	642	642	642	640	638	639	641
RO (mm)	106	103	109	103	96	137	172	130	119
ET (mm)	325	330	329	330	330	315	304	315	322
INFIL (mm)	207	206	204	207	213	191	163	198	199

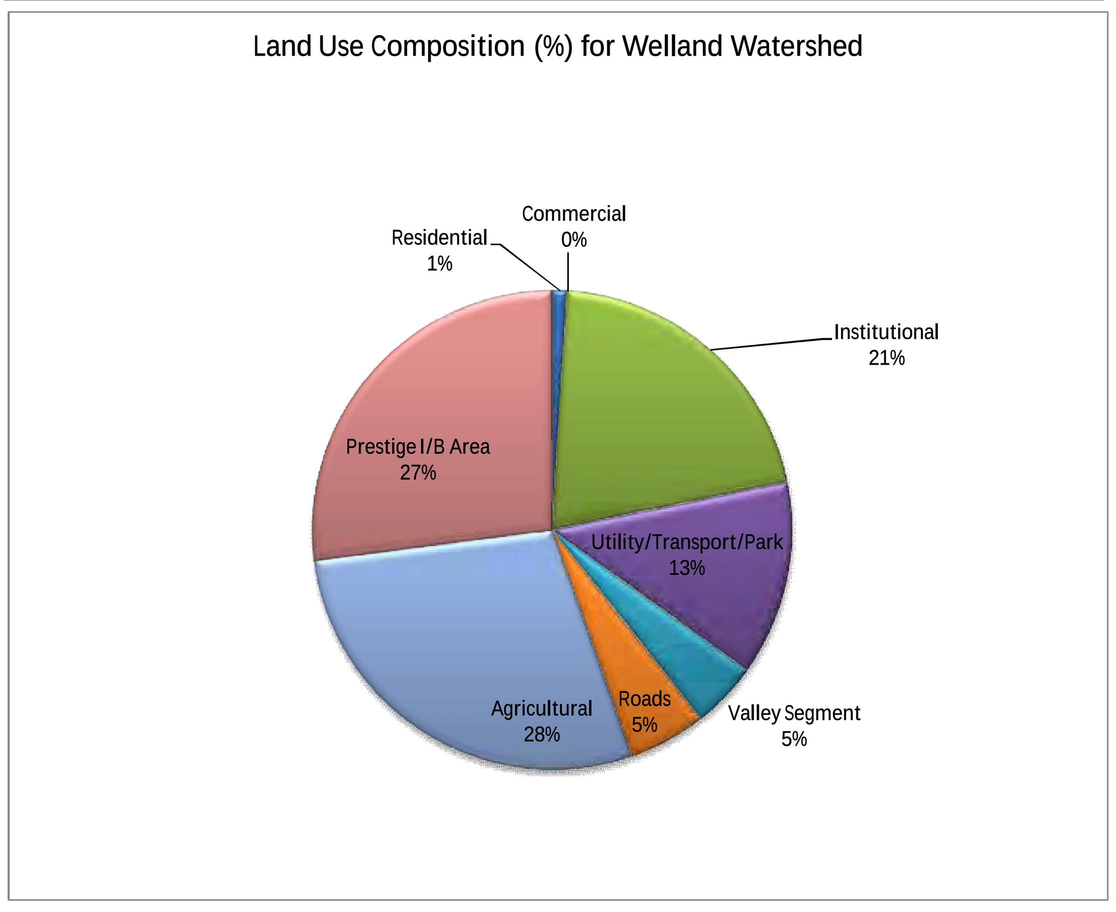
LAND USE COMPOSITION (ha)		**SULFUR**	**WELLAND**	**TWENTY-MILE**
Res Low Density	RLD5ab	147.13	2.28	48.00
Res Low Density	RLD5bc	63.57	6.59	82.99
Res Low Density	RLD5cd	1.30	6.88	63.98
Res Med Denisty	RMD5ab	10.93	0.00	12.34
Res Med Denisty	RMD5bc	6.03	0.00	13.79
Res Med Denisty	RMD5cd	0.00	0.00	8.44
Res High Density	RHD5ab	1.36	0.00	21.41
Res High Density	RHD5bc	0.92	0.00	23.74
Res High Density	RHD5cd	0.00	0.00	14.43
Commercial	CSM1bc	32.21	0.00	11.47
Institutional	EIS1ab	22.79	62.10	32.09
Institutional	EIS1bc	14.95	125.00	101.91
Institutional	EIS1cd	0.00	139.50	149.56
Utility/Transport/Parks	OPL0ab	77.45	58.10	38.11
Utility/Transport/Parks	OPL0bc	38.35	81.10	86.88
Utility/Transport/Parks	OPL0cd	7.20	66.50	102.10
Valley Segment	OVL0ab	60.97	13.66	43.33
Valley Segment	OVL0bc	35.43	27.93	107.44
Valley Segment	OVL0cd	1.40	28.41	103.31
Roads	THC0ab	118.26	19.00	2.60
Roads	THC0bc	4.20	31.80	8.90
Roads and ROW	THC0cd	3.10	31.82	95.29
Agricultural Tilled	AGT0ab	155.61	94.99	140.54
Agricultural Tilled	AGT0bc	83.39	176.12	407.14
Agricultural Tilled	AGT0cd	1.90	173.48	376.67
Agricultural Pasture/forest	AGPab	3.53	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.91	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00
Industrial/Prestige	IPRab	24.60	38.10	36.50
Industrial/Prestige	IPRbc	15.50	59.60	92.40
Industrial/Prestige	IPRcd	8.70	44.80	164.20
Prestige Business Park	IPEab	139.60	66.40	38.00
Prestige Business Park	IPEbc	45.80	110.60	114.70
Prestige Business Park	IPEcd	32.50	104.80	176.50

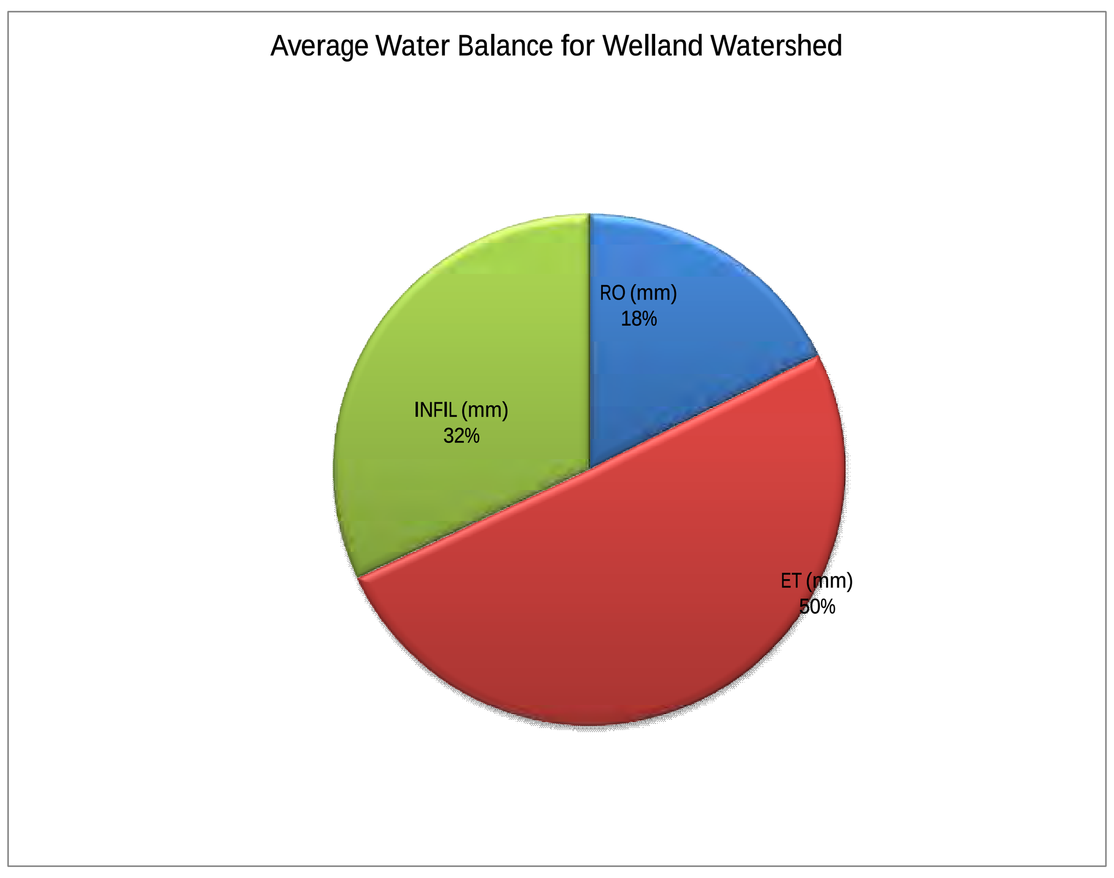
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Res. Low Density	212.00	15.75	194.97
Res. Med Denisty	16.96	0.00	34.57
Res. High Density	2.28	0.00	59.58
Commercial	32.21	0.00	11.47
Institutional	37.74	326.60	283.56
Utility/Transport/Park	123.00	205.70	227.09
Valley Segment	97.80	70.00	254.09
Roads	125.56	82.62	106.79
Agricultural Tilled	240.90	444.59	924.35
Agricultural Pasture/forest	4.44	0.00	0.00
Industrial/Prestige	48.80	142.50	293.10
Prestige Business Park	217.90	281.80	329.20
TOTAL	1159.59	1569.56	2718.76

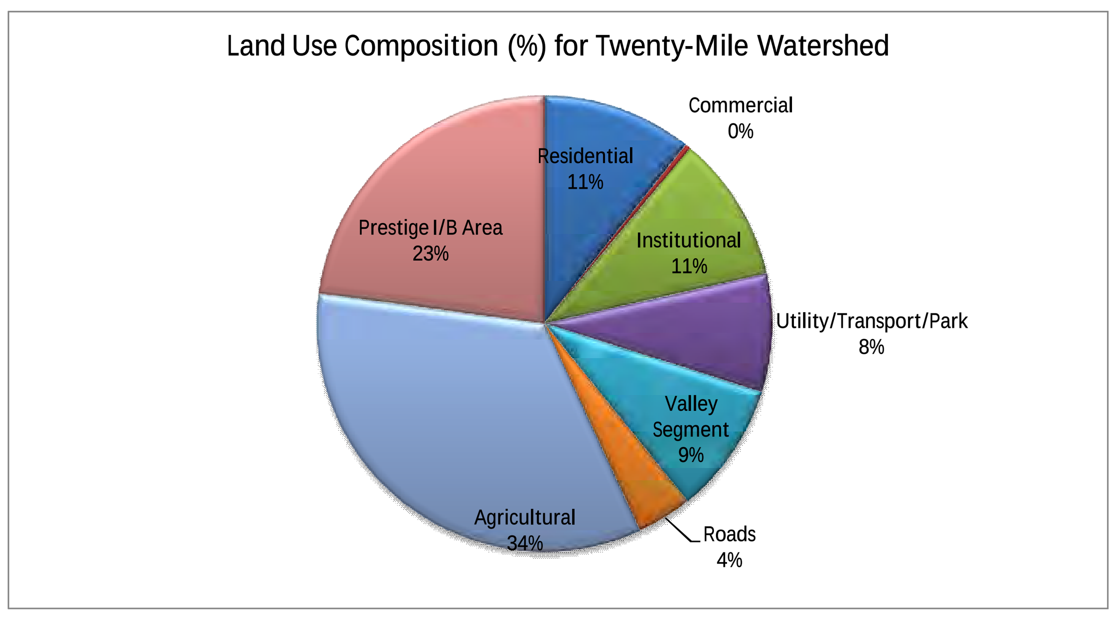
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Residential	231.2	15.8	289.1
Commercial	32.2	0.0	11.5
Institutional	37.7	326.6	283.6
Utility/Transport/Park	123.0	205.7	227.1
Valley Segment	97.8	70.0	254.1
Roads	125.6	82.6	106.8
Agricultural	245.3	444.6	924.4
Prestige I/B Area	266.70	424.30	622.30
TOTAL	1159.59	1569.56	2718.76

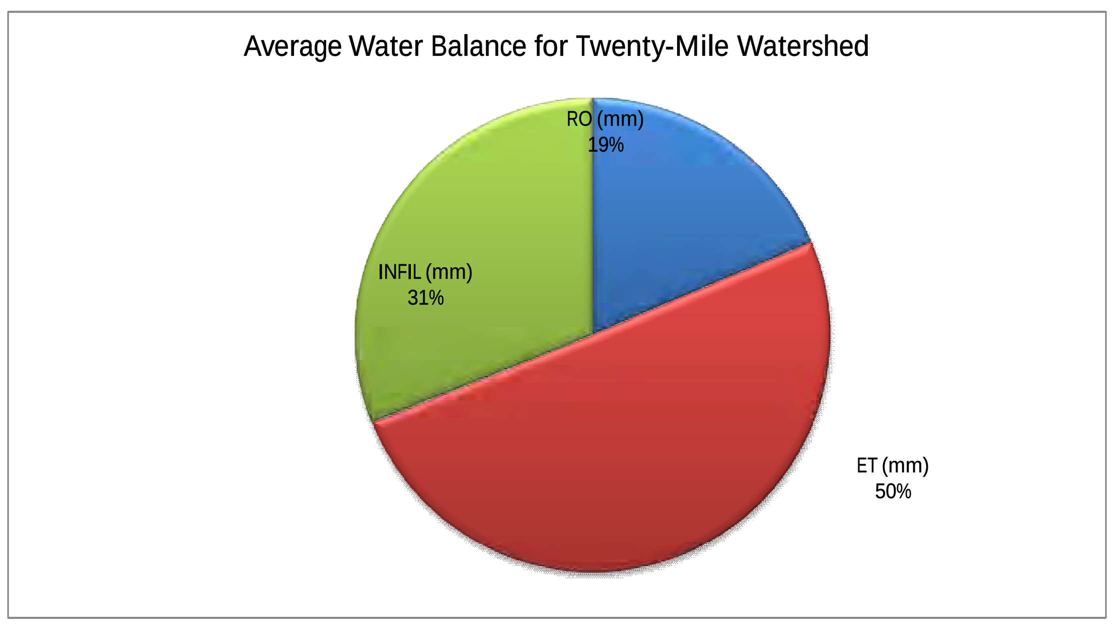












ORIGINAL DATA OUTPUT FROM HSPF
REQ"D INPUT FROM HSPF OUTPUT
CALCULATED AVERAGES:

URF's as per Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] AGWO																												
1991-1996	JAN	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SUPLY + SURLI = (Pervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	39.9	39.9	39.9	41.6	41.6	41.6	44.5	44.5	44.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	122.2	122.2	122.2	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.1	11.1	11.1	11.6	11.6	11.6	12.4	12.4	12.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	34.3	34.3	34.3	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	28.1	28.1	28.1	29.1	29.1	29.1	30.9	30.9	30.9	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	78.7	78.7	78.7	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	76.5	76.5	76.5	79.3	79.3	79.3	84.3	84.3	84.3	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	217.1	217.1	217.1	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	73.2	73.2	73.2	75.7	75.7	75.7	80.3	80.3	80.3	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	200.5	200.5	200.5	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	61.6	61.6	61.6	63.6	63.6	63.6	67.3	67.3	67.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	164.3	164.3	164.3	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	97.9	97.9	97.9	101.4	101.4	101.4	107.7	107.7	107.7	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	273.4	273.4	273.4	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	62.0	62.0	62.0	64.0	64.0	64.0	67.7	67.7	67.7	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	164.8	164.8	164.8	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.6	42.6	42.6	44.0	44.0	44.0	46.5	46.5	46.5	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	112.0	112.0	112.0	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	82.6	82.6	82.6	85.5	85.5	85.5	90.9	90.9	90.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	233.0	233.0	233.0	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.9	46.9	46.9	48.5	48.5	48.5	51.5	51.5	51.5	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	181.6	181.6	181.6	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.5	14.5	14.5	15.0	15.0	15.0	15.9	15.9	15.9	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	40.8	40.8	40.8	14.2	14.2	14.2	14.2	14.2
	ANNUAL	636.8	636.8	636.8	659.3	659.3	659.3	699.9	699.9	699.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	1,822.6	1,822.6	1,822.6	645.9	645.9	645.9	645.9	645.9

SUPLY + SURLI = (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	65.7	67.1	77.7	65.2	66.1	72.2	60.9	61.5	65.6	153.0	92.9	93.6	101.4	73.7	74.5	79.2	38.3	39.7	50.8	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	18.9	18.9	19.2	18.7	18.7	19.0	17.5	17.5	17.7	43.6	26.6	26.6	26.9	21.2	21.2	21.6	11.1	11.3	11.8	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	44.9	45.1	46.8	44.6	44.7	45.8	41.9	42.0	42.9	97.6	61.2	61.3	62.5	49.4	49.8	51.4	28.2	28.6	33.4	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	123.3	123.8	129.0	122.5	122.8	126.4	115.0	115.3	118.4	268.3	167.9	168.3	171.0	135.7	136.5	140.1	76.7	78.8	85.6	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	115.5	116.8	133.7	114.9	115.8	126.0	108.1	109.0	116.3	244.5	154.8	155.3	166.6	125.9	126.5	145.0	73.7	74.8	113.8	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	95.7	98.2	119.2	95.2	97.0	108.9	89.8	91.5	99.3	199.6	127.3	128.2	145.4	104.0	105.0	138.8	61.6	63.6	125.1	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	156.0	158.5	181.3	155.2	157.0	171.0	145.9	147.6	158.4	335.2	210.7	211.7	229.2	170.5	171.8	201.6	97.7	99.1	143.5	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	96.0	98.3	117.4	95.6	97.2	108.5	90.2	91.8	99.7	198.1	126.7	127.5	145.7	103.5	104.6	140.1	61.8	63.2	118.9	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	65.6	65.9	68.8	65.3	65.4	67.5	61.6	61.8	63.7	135.1	86.6	86.7	88.3	70.9	71.1	73.1	42.5	42.7	45.6	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	132.4	133.9	152.6	131.7	133.0	144.4	123.8	125.3	133.2	287.8	180.1	180.8	199.5	145.3	146.3	186.6	82.0	83.0	87.4	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	102.5	103.1	106.6	101.9	102.1	104.4	95.6	95.8	97.6	226.1	140.8	141.2	143.0	113.5	114.1	117.0	63.0	65.0	69.5	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	23.2	23.3	23.6	23.0	23.1	23.3	21.6	21.7	21.8	50.6	31.7	31.9	31.9	25.6	26.0	26.1	14.5	15.2	15.7	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
	ANNUAL	1,039.6	1,052.7	1,176.0	1,034.0	1,043.0	1,117.3	971.9	980.7	1,034.7	2,239.4	1,407.3	1,413.1	1,511.4	1,139.1	1,147.5	1,320.6	651.1	664.9	901.0	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

Runoff = SURO+IFWO (pervious areas) REQ MANUAL SUMMATION OF SURO + IFWO

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	57.0	75.9	0.3	1.6	6.6	0.3	1.6
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	16.4	21.8	0.1	0.3	1.7	0.1	0.3
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	19.9	33.7	0.1	0.3	1.8	0.1	0.3
1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	67.0	102.0	0.3	1.6	7.4	0.3	1.6
1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	84.1	113.2	0.7	2.7	9.7	0.7	2.7
1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	74.3	93.3	0.6	2.6	8.3	0.6	2.6
1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	112.7	149.9	0.4	2.8	10.7	0.4	2.8
1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	75.4	88.9	0.3	1.9	7.8	0.3	1.9
1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	35.3	47.0	0.3	1.3	3.8	0.3	1.3
1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	92.9	114.9	0.2	2.7	9.0	0.2	2.7
1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	70.8	94.1	0.3	1.4	6.2	0.3	1.4
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	15.7	20.9	0.1	0.3	1.4	0.1	0.3
	ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	721.6	955.7	3.6	19.4	74.3	3.6	19.5

Runoff = SURO (impervious areas)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
	ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0

(IMPEV)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
	ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0

(TAET)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8
1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2
1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4
1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.3	25.0	23.3	24.3	24.4	23.3	24.3
1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	52.4	50.5	44.6	47.5	45.8	44.6	47.5
1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	64.3	60.2	51.3	53.0	50.7	51.3	53.0
1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	77.0	71.5	61.1	63.1	61.3	61.1	63.1
1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	73.1	66.6	55.6	58.8	56.1	55.6	58.8
1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	48.5	44.9	38.4	38.4	36.3	38.4	38.4
1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	37.4	36.0	30.7	31.4	31.8	30.7	31.4
1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.7	14.6	13.5	13.8	14.3	13.5	13.8
1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1
	ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	409.5	385.9	333.6	345.8	336.8	333.6	345.8

(AGWO)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	41.7	29.9	18.3	17.1	14.8	18.3	17.1
1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	37.0	26.3	16.2	15.3	13.3	16.2	15.3
1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	38.4	27.5	16.6	15.6	13.8	16.6	15.6
1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	39.1	27.9	16.5	15.6	13.9	16.5	15.6
1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	46.2	32.6	19.3	18.3	16.2	19.3	18.3
1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	45.1	31.7	19.2	17.9	15.6	19.2	17.9
1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	47.1	33.0	20.6	18.9	16.3	20.6	18.9
1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	48.2	33.9	21.3	19.2	16.6	21.3	19.2
1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	44.4	31.4	19.6	17.7	15.1	19.6	17.7
1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	47.3	34.0	21.1	19.0	16.1	21.1	19.0
1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	50.0	36.1	22.1	20.1	17.0	22.1	20.1
1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	50.2	36.2	21.9	20.2	17.2	21.9	20.2
	ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	534.6	380.6	232.6	214.9	185.7	232.6	214.9

(AGWI)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	46.5	31.6	22.8	22.6	19.7	22.8	22.6
1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	18.0	12.4	6.1	6.1	6.3	6.1	6.1
1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	32.6	24.5	11.4	11.0	10.8	11.4	11.0
1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	86.1	59.5	33.7	32.3	29.4	33.7	32.3
1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	55.7	37.8	26.5	23.6	18.5	26.5	23.6
1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	42.3	28.8	19.9	17.0	13.5	19.9	17.0
1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	61.2	42.1	29.5	25.1	21.4	29.5	25.1
1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	35.7	27.5	15.5	13.2	11.4	15.5	13.2
1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	30.9	24.1	13.4	11.7	9.4	13.4	11.7
1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	75.8	56.6	33.8	31.2	25.2	33.8	31.1
1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	70.7	50.3	31.0	30.2	26.2	31.0	30.2
1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	21.4	15.5	7.7	8.1	7.5	7.7	8.1
	ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	576.8	410.7	251.5	231.9	199.2	251.5	231.9

(IGWI)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	ElSab	ElSbc	ElScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm] 1991-1996	JAN	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	6.9	4.7	3.4	3.4	2.9	3.4	3.4
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	2.7	1.8	0.9	0.9	0.9	0.9	0.9
1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	4.9	3.7	1.7	1.6	1.6	1.7	1.6
1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	12.9	8.9	5.0	4.8	4.4	5.0	4.8
1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	8.3	5.6	4.0	3.5	2.8	4.0	3.5
1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	6.3	4.3	3.0	2.5	2.0	3.0	2.5
1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	9.1	6.3	4.4	3.8	3.2	4.4	3.7
1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	5.3	4.1	2.3	2.0	1.7	2.3	2.0
1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	4.6	3.6	2.0	1.7	1.4	2.0	1.7
1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	11.3	8.5	5.1	4.7	3.8	5.1	4.7
1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	10.6	7.5	4.6	4.5	3.9	4.6	4.5
1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	3.2	2.3	1.2	1.2	1.1	1.2	1.2
	ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	86.2	61.4	37.6	34.7	29.8	37.6	34.7

Adjustments to Eliminate SURLI from Balance

URF's as per Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	5003	6201	6202	6203	6301	6302
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	5503	6701	6702	6703	6801	6802
Year	Month	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Adjustment Factor = SURLI/(SURLI+SUPY) (Pervious)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.0124	0.0124	0.0124	0.0513	0.0513	0.0513	0.1141	0.1141	0.1141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6777	0.6777	0.6777	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.0125	0.0125	0.0125	0.0516	0.0516	0.0516	0.1148	0.1148	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6790	0.6790	0.6790	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.0109	0.0109	0.0109	0.0451	0.0451	0.0451	0.1012	0.1012	0.1012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6473	0.6473	0.6473	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.0111	0.0111	0.0111	0.0458	0.0458	0.0458	0.1027	0.1027	0.1027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6514	0.6514	0.6514	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.0105	0.0105	0.0105	0.0435	0.0435	0.0435	0.0978	0.0978	0.0978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6388	0.6388	0.6388	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.0101	0.0101	0.0101	0.0418	0.0418	0.0418	0.0942	0.0942	0.0942	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6291	0.6291	0.6291	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.0108	0.0108	0.0108	0.0448	0.0448	0.0448	0.1005	0.1005	0.1005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.0100	0.0100	0.0100	0.0415	0.0415	0.0415	0.0936	0.0936	0.0936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6274	0.6274	0.6274	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.0098	0.0098	0.0098	0.0408	0.0408	0.0408	0.0921	0.0921	0.0921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6234	0.6234	0.6234	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6496	0.6496	0.6496	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.0108	0.0108	0.0108	0.0447	0.0447	0.0447	0.1004	0.1004	0.1004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6563	0.6563	0.6563	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6505	0.6505	0.6505	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.0108	0.0108	0.0108	0.0445	0.0445	0.0445	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000

Adjustment Factor = SURLI/(SURLI+SUPY) (Impervious)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.4256	0.4380	0.5149	0.4219	0.4291	0.4773	0.3804	0.3864	0.4251	0.7536	0.5943	0.5974	0.6282	0.4884	0.4941	0.5241	0.0165	0.0507	0.2572	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	FEB	0.4164	0.4165	0.4266	0.4126	0.4124	0.4196	0.3705	0.3711	0.3783	0.7475	0.5865	0.5865	0.5901	0.4795	0.4802	0.4902	0.0063	0.0237	0.0709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAR	0.3817	0.3842	0.4065	0.3782	0.3793	0.3947	0.3385	0.3391	0.3537	0.7157	0.5464	0.5474	0.5559	0.4385	0.4422	0.4597	0.0145	0.0285	0.1681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	APR	0.3861	0.3889	0.4134	0.3824	0.3840	0.4014	0.3422	0.3439	0.3610	0.7179	0.5494	0.5504	0.5574	0.4423	0.4458	0.4599	0.0132	0.0392	0.1160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	MAY	0.3733	0.3803	0.4585	0.3696	0.3746	0.4252	0.3303	0.3356	0.3776	0.7039	0.5322	0.5337	0.5655	0.4248	0.4278	0.5007	0.0181	0.0317	0.3637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUN	0.3633	0.3792	0.4887	0.3598	0.3718	0.4404	0.3211	0.3341	0.3862	0.6947	0.5212	0.5244	0.5810	0.4141	0.4196	0.5610	0.0106	0.0417	0.5128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	JUL	0.3791	0.3889	0.4656	0.3759	0.3831	0.4334	0.3362	0.3438	0.3883	0.7110	0.5403	0.5425	0.5774	0.4317	0.4362	0.5194	0.0086	0.0225	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	AUG	0.3608	0.3754	0.4774	0.3577	0.3687	0.4343	0.3192	0.3312	0.3844	0.6901	0.5154	0.5186	0.5786	0.4072	0.4133	0.5618	0.0076	0.0284	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	SEP	0.3568	0.3595	0.3869	0.3538	0.3554	0.3749	0.3152	0.3169	0.3374	0.6877	0.5127	0.5134	0.5220	0.4050	0.4067	0.4230	0.0080	0.0132	0.0753	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	OCT	0.3832	0.3900	0.4651	0.3801	0.3859	0.4346	0.3403	0.3482	0.3872	0.7163	0.5468	0.5483	0.5908	0.4381	0.4418	0.5626	0.0047	0.0165	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	NOV	0.3914	0.3945	0.4146	0.3879	0.3890	0.4026	0.3473	0.3485	0.3607	0.7240	0.5568	0.5581	0.5636	0.4501	0.4533	0.4667	0.0089	0.0398	0.1016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	1991-1996	DEC	0.3859	0.3888	0.3968	0.3819	0.3840	0.3882	0.3420	0.3438	0.3467	0.7186	0.5503	0.5530	0.5541	0.4436	0.4530	0.4547	0.0148	0.0619	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
		ANNUAL	0.3803	0.3880	0.4522	0.3769	0.3824	0.4234	0.3372	0.3431	0.3774	0.7123	0.5422	0.5441	0.5738	0.4345	0.4386	0.5122	0.0106	0.0311	0.2850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.5	0.5	0.5	2.0	2.0	2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.5	3.5	3.5	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.3	49.3	49.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.2	3.2	3.2	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	46.3	46.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3	38.3	38.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.0	1.0	1.0	4.3	4.3	4.3	9.7	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	62.5	62.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	38.5	38.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.7	1.7	1.7	3.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	26.3	26.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.7	3.7	3.7	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.1	2.1	2.1	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	41.0	41.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.8	6.8	6.8	28.1	28.1	28.1	63.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.0	417.0	417.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

SURLI = SURLI (Impervious)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	16.1	16.5	19.4	15.9	16.2	18.0	14.3	14.6	16.0	28.4	22.4	22.5	23.7	18.4	18.6	19.8	0.6	1.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	4.6	4.6	4.7	4.5	4.5	4.6	4.1	4.1	4.2	8.2	6.5	6.5	6.5	5.3	5.3	5.4	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	10.6	10.7	11.3	10.5	10.5	11.0	9.4	9.4	9.8	19.9	15.2	15.2	15.4	12.2	12.3	12.8	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	29.2	29.4	31.3	28.9	29.1	30.4	25.9	26.0	27.3	54.3	41.6	41.6	42.2	33.5	33.7	34.8	1.0	3.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	27.0	27.5	33.2	26.8	27.1	30.8	23.9	24.3	27.3	51.0	38.5	38.6	40.9	30.8	31.0	36.3	1.3	2.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	22.1	23.1	29.8	21.9	22.7	26.8	19.6	20.4	23.5	42.3	31.8	32.0	35.4	25.2	25.6	34.2	0.6	2.5	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	36.7	37.7	45.1	36.4	37.1	42.0	32.6	33.3	37.6	68.9	52.3	52.6	55.9	41.8	42.3	50.3	0.8	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	22.1	23.0	29.3	22.0	22.6	26.7	19.6	20.3	23.6	42.4	31.6	31.8	35.5	25.0	25.4	34.5	0.5	1.7	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	15.1	15.2	16.3	14.9	15.0	15.8	13.3	13.4	14.2	29.0	21.6	21.7	22.0	17.1	17.2	17.8	0.3	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	31.3	31.8	38.0	31.0	31.5	35.5	27.8	28.4	31.6	58.5	44.6	44.8	48.2	35.8	36.1	45.9	0.4	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	24.4	24.6	25.9	24.2	24.3	25.1	21.7	21.7	22.5	45.2	34.7	34.8	35.2	28.1	28.3	29.1	0.6	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	5.5	5.5	5.7	5.4	5.5	5.5	4.9	4.9	4.9	10.2	7.8	7.9	7.9	6.3	6.5	6.5	0.2	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	245.0	250.0	291.3	242.8	246.3	272.8	217.2	221.0	243.1	458.9	349.3	350.5	369.6	279.9	282.6	330.0	6.9	20.0	183.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

Runoff = SURO+IFWO (pervious areas)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	18.4	24.5	0.3	1.6	6.6	0.3	1.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	5.3	7.0	0.1	0.3	1.7	0.1	0.3
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	7.0	11.9	0.1	0.3	1.8	0.1	0.3
	1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	23.4	35.5	0.3	1.6	7.4	0.3	1.6
	1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	30.4	40.9	0.7	2.7	9.7	0.7	2.7
	1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	27.6	34.6	0.6	2.6	8.3	0.6	2.6
	1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	39.9	53.1	0.4	2.8	10.7	0.4	2.8
	1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	28.1	33.1	0.3	1.9	7.8	0.3	1.9
	1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	13.3	17.7	0.3	1.3	3.8	0.3	1.3
	1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	32.6	40.3	0.2	2.7	9.0	0.2	2.7
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	24.3	32.3	0.3	1.4	6.2	0.3	1.4
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	5.5	7.3	0.1	0.3	1.4	0.1	0.3
		ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	255.7	338.7	3.6	19.4	74.3	3.6	19.5

AVERAGES:

Runoff = SURO (impervious areas)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0
		ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(IMPEV)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0
		ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(TAET)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	0.6	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	0.8	2.2	2.2	2.3	2.2	2.2
	1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4
	1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.8	8.7	23.3	24.3	24.4	23.3	24.3
	1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.9	18.2	44.6	47.5	45.8	44.6	47.5
	1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	23.8	22.3	51.3	53.0	50.7	51.3	53.0
	1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	27.3	25.3	61.1	63.1	61.3	61.1	63.1
	1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	27.2	24.8	55.6	58.8	56.1	55.6	58.8
	1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	18.3	16.9	38.4	38.4	36.3	38.4	38.4
	1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	13.1	12.6	30.7	31.4	31.8	30.7	31.4
	1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.1	5.0	13.5	13.8	14.3	13.5	13.8
	1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	1.7	3.9	4.1	4.5	3.9	4.1
		ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	145.1	136.8	333.6	345.8	336.8	333.6	345.8

AVERAGES:

(AGWO)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	13.4	9.6	18.3	17.1	14.8	18.3	17.1
	1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	11.9	8.5	16.2	15.3	13.3	16.2	15.3
	1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	13.6	9.7	16.6	15.6	13.8	16.6	15.6
	1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	13.6	9.7	16.5	15.6	13.9	16.5	15.6
	1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	16.7	11.8	19.3	18.3	16.2	19.3	18.3
	1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	16.7	11.8	19.2	17.9	15.6	19.2	17.9
	1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	16.7	11.7	20.6	18.9	16.3	20.6	18.9
	1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	17.9	12.6	21.3	19.2	16.6	21.3	19.2
	1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	16.7	11.8	19.6	17.7	15.1	19.6	17.7
	1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	16.6	11.9	21.1	19.0	16.1	21.1	19.0
	1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	17.2	12.4	22.1	20.1	17.0	22.1	20.1
	1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	17.5	12.6	21.9	20.2	17.2	21.9	20.2
		ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	189.5	134.9	232.6	214.9	185.7	232.6	214.9

AVERAGES:

(AGWI)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	15.0	10.2	22.8	22.6	19.7	22.8	22.6
	1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	5.8	4.0	6.1	6.1	6.3	6.1	6.1
	1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	11.5	8.6	11.4	11.0	10.8	11.4	11.0
	1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	30.0	20.7	33.7	32.3	29.4	33.7	32.3
	1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	20.1	13.6	26.5	23.6	18.5	26.5	23.6
	1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	15.7	10.7	19.9	17.0	13.5	19.9	17.0
	1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	21.7	14.9	29.5	25.1	21.4	29.5	25.1
	1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	13.3	10.3	15.5	13.2	11.4	15.5	13.2
	1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	11.6	9.1	13.4	11.7	9.4	13.4	11.7
	1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	26.5	19.8	33.8	31.2	25.2	33.8	31.1
	1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	24.3	17.3	31.0	30.2	26.2	31.0	30.2
	1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	7.5	5.4	7.7	8.1	7.5	7.7	8.1
		ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	204.4	145.5	251.5	231.9	199.2	251.5	231.9

AVERAGES:

(IGWI)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
[mm]	1991-1996	JAN	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	2.2	1.5	3.4	3.4	2.9	3.4	3.4
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.9	0.6	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.7	1.3	1.7	1.6	1.6	1.7	1.6
	1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	4.5	3.1	5.0	4.8	4.4	5.0	4.8
	1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	3.0	2.0	4.0	3.5	2.8	4.0	3.5
	1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	2.3	1.6	3.0	2.5	2.0	3.0	2.5
	1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	3.2	2.2	4.4	3.8	3.2	4.4	3.7
	1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	2.0	1.5	2.3	2.0	1.7	2.3	2.0
	1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.7	1.4	2.0	1.7	1.4	2.0	1.7
	1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	4.0	3.0	5.1	4.7	3.8	5.1	4.7
	1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	3.6	2.6	4.6	4.5	3.9	4.6	4.5
	1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	1.1	0.8	1.2	1.2	1.1	1.2	1.2
		ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	30.5	21.7	37.6	34.7	29.8	37.6	34.7

URF VOLUMES

INPUTS REQ'D

URF AREA : 100000 m^2 (10 ha)

URF Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
Pervious Composition (%)	0.70	0.70	0.70	0.50	0.50	0.50	0.35	0.35	0.35	0.04	0.63	0.63	0.63	0.90	0.90	0.90	0.97	0.97	0.97	0.3	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0
Impervious Composition (%)	0.09	0.09	0.09	0.13	0.13	0.13	0.17	0.17	0.17	0.19	0.11	0.11	0.11	0.05	0.05	0.05	0.03	0.03	0.03	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Pervious Composition (m^2)	70000	70000	70000	50000	50000	50000	35000	35000	35000	4000	63000	63000	63000	90000	90000	90000	97000	97000	97000	30000	30000	30000	100000	100000	100000	100000	100000	100000
Impervious Composition (m^2)	9000	9000	9000	13000	13000	13000	17000	17000	17000	19000	11000	11000	11000	5000	5000	5000	3000	3000	3000	70000	70000	70000	0	0	0	0	0	0
Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
Total Moisture Supply = SUPY (Pervious)																												
AVERAGES (m^3):																												
1991-1996 JAN	2759.9	2759.9	2759.9	1971.3	1971.3	1971.3	1379.9	1379.9	1379.9	157.7	2483.9	2483.9	2483.9	3543.3	3543.3	3543.3	3818.8	3818.8	3818.8	1181.4	1181.4	1181.4	3936.0	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996 FEB	770.5	770.5	770.5	550.4	550.4	550.4	385.2	385.2	385.2	44.0	693.4	693.4	693.4	991.2	991.2	991.2	1068.3	1068.3	1068.3	330.4	330.4	330.4	1101.4	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996 MAR	1942.6	1942.6	1942.6	1387.6	1387.6	1387.6	971.3	971.3	971.3	111.0	1748.3	1748.3	1748.3	2497.7	2497.7	2497.7	2692.0	2692.0	2692.0	832.6	832.6	832.6	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996 APR	5297.2	5297.2	5297.2	3783.7	3783.7	3783.7	2648.6	2648.6	2648.6	302.7	4767.4	4767.4	4767.4	6810.6	6810.6	6810.6	7340.4	7340.4	7340.4	2270.2	2270.2	2270.2	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996 MAY	5068.3	5068.3	5068.3	3620.2	3620.2	3620.2	2534.2	2534.2	2534.2	289.6	4561.5	4561.5	4561.5	6516.4	6516.4	6516.4	7023.3	7023.3	7023.3	2172.1	2172.1	2172.1	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996 JUN	4266.2	4266.2	4266.2	3047.3	3047.3	3047.3	2133.1	2133.1	2133.1	243.8	3839.6	3839.6	3839.6	5485.2	5485.2	5485.2	5911.8	5911.8	5911.8	1828.4	1828.4	1828.4	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996 JUL	6781.2	6781.2	6781.2	4843.7	4843.7	4843.7	3390.6	3390.6	3390.6	387.5	6103.0	6103.0	6103.0	8718.6	8718.6	8718.6	9396.7	9396.7	9396.7	2906.2	2906.2	2906.2	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996 AUG	4296.6	4296.6	4296.6	3069.0	3069.0	3069.0	2148.3	2148.3	2148.3	245.5	3866.9	3866.9	3866.9	5524.2	5524.2	5524.2	5953.9	5953.9	5953.9	1841.4	1841.4	1841.4	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996 SEP	2952.7	2952.7	2952.7	2109.1	2109.1	2109.1	1476.4	1476.4	1476.4	168.7	2657.5	2657.5	2657.5	3796.4	3796.4	3796.4	4091.7	4091.7	4091.7	1265.5	1265.5	1265.5	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996 OCT	5715.2	5715.2	5715.2	4082.3	4082.3	4082.3	2857.6	2857.6	2857.6	326.6	5143.7	5143.7	5143.7	7348.1	7348.1	7348.1	7919.6	7919.6	7919.6	2449.4	2449.4	2449.4	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996 NOV	3244.6	3244.6	3244.6	2317.6	2317.6	2317.6	1622.3	1622.3	1622.3	185.4	2920.2	2920.2	2920.2	5616.2	5616.2	5616.2	6053.0	6053.0	6053.0	1872.0	1872.0	1872.0	6240.4	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996 DEC	1001.3	1001.3	1001.3	715.2	715.2	715.2	500.6	500.6	500.6	57.2	901.1	901.1	901.1	1282.0	1282.0	1282.0	1381.7	1381.7	1381.7	427.3	427.3	427.3	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
ANNUAL	44096.3	44096.3	44096.3	31497.3	31497.3	31497.3	22048.1	22048.1	22048.1	2519.8	39686.6	39686.6	39686.6	58129.8	58129.8	58129.8	62651.0	62651.0	62651.0	19376.8	19376.8	19376.8	64588.0	64588.0	64588.0	64588.0	64588.0	64588.0
Total Moisture Supply = SUPY (Impervious)																												
1991-1996 JAN	339.4	339.4	339.4	490.3	490.3	490.3	641.1	641.1	641.1	716.2	414.7	414.7	414.7	188.5	188.5	188.5	113.1	113.1	113.1	2638.8	2638.8	2638.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	99.1	99.1	99.1	143.1	143.1	143.1	187.1	187.1	187.1	209.2	121.1	121.1	121.1	55.0	55.0	55.0	33.0	33.0	33.0	770.6	770.6	770.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	249.8	249.8	249.8	360.8	360.8	360.8	471.8	471.8	471.8	527.3	305.3	305.3	305.3	138.8	138.8	138.8	83.3	83.3	83.3	1942.7	1942.7	1942.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	681.1	681.1	681.1	983.8	983.8	983.8	1286.5	1286.5	1286.5	1437.8	832.4	832.4	832.4	378.4	378.4	378.4	227.0	227.0	227.0	5297.2	5297.2	5297.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	651.6	651.6	651.6	941.3	941.3	941.3	1230.9	1230.9	1230.9	1375.7	796.5	796.5	796.5	362.0	362.0	362.0	217.2	217.2	217.2	5068.3	5068.3	5068.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	548.5	548.5	548.5	792.3	792.3	792.3	1036.1	1036.1	1036.1	1158.0	670.4	670.4	670.4	304.7	304.7	304.7	182.8	182.8	182.8	4266.2	4266.2	4266.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	871.9	871.9	871.9	1259.4	1259.4	1259.4	1646.9	1646.9	1646.9	1840.6	1065.6	1065.6	1065.6	484.4	484.4	484.4	290.6	290.6	290.6	6781.2	6781.2	6781.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	552.4	552.4	552.4	797.9	797.9	797.9	1043.5	1043.5	1043.5	1166.2	675.2	675.2	675.2	306.9	306.9	306.9	184.1	184.1	184.1	4296.6	4296.6	4296.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	379.6	379.6	379.6	548.4	548.4	548.4	717.1	717.1	717.1	801.5	464.0	464.0	464.0	210.9	210.9	210.9	126.5	126.5	126.5	2952.7	2952.7	2952.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	734.8	734.8	734.8	1061.4	1061.4	1061.4	1388.0	1388.0	1388.0	1551.3	898.1	898.1	898.1	408.2	408.2	408.2	244.9	244.9	244.9	5715.2	5715.2	5715.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	561.6	561.6	561.6	811.2	811.2	811.2	1060.8	1060.8	1060.8	1185.7	686.4	686.4	686.4	312.0	312.0	312.0	187.2	187.2	187.2	4368.2	4368.2	4368.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	128.2	128.2	128.2	185.2	185.2	185.2	242.2	242.2	242.2	270.6	156.7	156.7	156.7	71.2	71.2	71.2	42.7	42.7	42.7	997.1	997.1	997.1	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	5798.0	5798.0	5798.0	8374.9	8374.9	8374.9	10951.8	10951.8	10951.8	12240.0	7086.3	7086.3	7086.3	3221.1	3221.1	3221.1	1932.6	1932.6	1932.6	45094.7	45094.7	45094.7	0.0	0.0	0.0	0.0	0.0	0.0
Runoff = SURO+IFWO (pervious areas)																												
1991-1996 JAN	18.1	103.5	400.2	18.8	86.3	317.0	21.5	78.1	262.2	6.4	14.1	84.7	361.5	16.7	100.2	476.1	6.0	60.7	393.0	365.8	551.4	734.0	34.7	157.2	655.7	34.7	157.3	656.7
1991-1996 FEB	4.5	16.8	74.3	4.3	14.1	62.1	4.2	13.5	55.1	0.9	3.6	14.5	75.7	3.3	15.2	106.4	0.6	7.1	61.7	98.4	158.0	209.8	7.5	27.8	168.4	7.5	27.8	167.9
1991-1996 MAR	3.2	15.8	99.4	2.7	14.8	83.1	2.6	16.0	74.5	0.9	2.7	12.9	95.2	3.8	17.8	130.7	2.9	10.2	105.5	116.2	210.7	356.5	5.7	32.3	184.6	5.7	32.3	185.2
1991-1996 APR	16.5	76.8	432.7	14.4	70.2	352.8	13.6	73.1	301.9	4.2	14.0	62.9	406.6	19.3	89.3	576.5	8.5	48.8	483.4	432.0	701.1	1066.5	33.3	159.8	740.0	33.3	159.8	741.1
1991-1996 MAY	33.7	144.8	641.4	29.8	127.7	509.0	30.0	126.4	417.6	8.6	27.8	117.4	577.5	39.0	165.9	803.3	12.7	97.2	749.3	650.8	911.7	1226.2	70.8	267.9	966.6	70.9	268.2	974.9
1991-1996 JUN	30.6	167.6	548.3	29.0	147.8	432.1	31.6	141.5	353.1	10.0	24.8	134.6	499.9	35.3	189.2	696.9	15.5	130.6	651.5	629.4	826.7	1038.4	56.9	262.9	827.4	57.0	263.6	836.4
1991-1996 JUL	18.4	164.0	614.9	18.0	145.4	503.1	20.8	140.1	438.0	9.8	14.9	131.1	593.3	21.3	183.8	816.1	10.1	92.5	564.4	842.0	1197.8	1593.9	36.3	280.1	1075.0	36.3	281.5	1087.7
1991-1996 AUG	12.8	113.6	433.1	13.3	104.5	353.3	18.3	106.6	303.9	7.0	10.0	87.2	425.4	14.3	121.1	582.2	5.6	56.5	411.0	656.1	842.3	993.8	26.5	187.0	776.3	26.5	187.8	790.6
1991-1996 SEP	13.6	72.9	190.3	14.1	61.7	152.7	16.4	56.0	131.5	3.9	10.8	63.2	186.3	15.4	91.2	270.5	5.9	52.0	197.2	274.1	398.5	531.1	28.2	132.7	381.2	28.2	132.4	376.7
1991-1996 OCT	8.0	92.7	417.6	8.4	94.8	347.1	11.2	106.4	304.1	5.2	6.4	70.4	400.9	9.1	99.2	560.2	2.3	12.0	135.6	693.1	976.9	1207.7	24.5	267.5	899.7	24.5	268.5	909.3
1991-1996 NOV	6.8	46.4	234.9	6.5	42.3	189.3	6.8	43.2	161.3	2.6	5.3	37.9	211.0	12.5	76.2	416.6	4.0	36.7	297.5	477.8	729.8	970.3	27.1	135.5	615.3	27.1	135.5	614.5
1991-1996 DEC	2.4	13.1	61.9	2.4	11.7	51.4	2.9	11.8	45.9	0.8	1.9	11.7	56.3	3.1	19.6	88.8	1.1	9.8	63.6	103.0	164.8	219.4	7.0	34.1	135.3	7.0	34.1	134.7
ANNUAL	168.5	1027.9	4148.9	161.8	921.1	3353.1	179.9	912.2	2849.8	60.2	136.3	828.4	3889.5	192.9	1168.7	5524.1	75.3	614.1	4113.6	5329.2	7671.5	10160.6	358.5	1944.7	7425.5	358.6	1948.7	7475.5
Runoff = SURO (impervious areas)																												
1991-1996 JAN	328.0	328.3	329.8	473.7	473.9	475.3	617.9	618.1	619.6	705.9	404.8	404.9	405.7	182.8	182.9	183.2	106.6	106.8	108.2	2484.4	2484.4	2484.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	93.7	93.7	93.8	135.3	135.3	135.4	176.2	176.2	176.3	204.3	116.4	116.4	116.5	52.4	52.4	52.4	30.0	30.0	30.2	699.1	699.1	699.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	216.8	216.9	218.1	312.9	312.9	314.1	405.1	405.2	406.7	495.2	275.6	275.7	276.3	122.1	122.2	122.7	65.7	66.0	68.5	1528.1	1528.1	1528.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	597.8	598.2	601.6	862.8	863.1	866.6	1118.0	1118.5	1122.8	1357.1	757.8	757.9	759.1	336.4	336.6	337.7	182.4	183.6	187.1	4242.7	4242.7	4242.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	552.9	554.0	566.3	797.8	798.9	810.5	1031.6	1033.1	1045.6	1277.2	706.4	706.7	712.8	311.7	311.9	318.3	165.6	166.4	183.8	3842.7	3842.7	3842.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	453.2	455.6	472.0	653.9	656.5	671.3	844.2	847.9	862.6	1061.6	582.9	583.4	593.8	256.0	256.5	268.2	133.5	135.0	158.5	3102.3	3102.3	3102.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	753.2	755.1	769.8	1087.2	1089.1	1103.0	1407.3	1410.1	1426.1	1724.0	958.3	958.8	966.9	424.1	424.5	433.4	227.5	228.4	247.6	5295.4	5295.4	5295.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	454.2	456.5	472.1	655.4	657.9	672.4	845.9	849.4	864.8	1065.7	584.2	584.8	596.1	256.3	256.8	269.5	133.3	134.4	157.7	3101.7	3101.7	3101.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	308.7	309.0	312.1	445.5	445.7	448.8	574.5	574.9	579.1	728.8	398.4	398.4	399.6	174.5	174.6	175.6	90.1	90.3	92.6	2095.3	2095.3	2095.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	641.8	642.8	654.1	926.4	927.6	938.2	1200.1	1202.3	1213.4	1460.9	814.6	814.8	822.7	361.2	361.5	371.6	194.9	195.5	198.0	4542.4	4542.4	4542.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	499.6	499.9	501.9	721.1	721.2	723.2	935.1	935.3	937.7	1126.3	631.2	631.4	632.0	280.9	281.1	281.8	153.5	154.6	156.7	3575.3	3575.3	3575.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	112.3	112.3	112.6	162.0	162.1	162.3	209.9	210.0	210.1	255.2	142.4	142.5	142.6	63.2	63.3	63.4	34.2	34.6	34.9	795.4	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	5018.0	5027.7	5108.5	7242.1	7252.0	7326.6	9375.9	9390.0	9471.5	11475.6	6382.1	6384.9	6430.6	2825.6	2828.5	2879.9	1517.5	1526.1	1632.6	35304.8	35304.8	35304.8	0.0	0.0	0.0	0.0	0.0	0.0
(IMPEV)																												
1991-1996 JAN	8.2	8.1	7.0	12.0	11.8	10.8	16.8	16.6	15.6	7.5	7.1	7.1	6.5	4.1	4.0	3.8	4.7	4.5	3.6	111.7	111.7	111.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 FEB	8.5	8.5	8.4	12.4	12.4	12.3	17.4	17.4	17.2	7.8	7.4	7.4	7.3	4.2	4.2	4.1	4.8	4.8	4.5	113.6	113.6	113.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAR	33.4	33.3	32.1	48.6	48.5	47.3	67.6	67.5	66.0	32.4	30.0	29.9	29.3	16.9	16.8	16.2	17.8	17.5	15.0	420.5	420.5	420.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 APR	82.7	82.3	79.0	120.1	119.8	116.4	167.3	166.9	162.5	80.2	74.2	74.0	72.8	41.7	41.5	40.4	44.3	43.1	39.7	1047.2	1047.2	1047.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 MAY	101.4	100.2	87.6	147.3	146.1	134.3	204.6	203.0	190.1	101.1	92.5	92.2	85.9	51.7	51.4	44.9	52.9	52.2	34.3	1257.9	1257.9	1257.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUN	99.6	97.1	80.0	144.7	142.0	126.5	200.6	196.8	181.4	100.9	91.6	90.9	80.1	50.9	50.5	38.2	51.6	50.0	25.4	1217.0	1217.0	1217.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 JUL	117.2	115.3	100.8	170.1	168.1	154.4	236.6	233.9	218.0	115.1	106.0	105.5	97.5	59.6	59.1	50.4	62.4	61.5	42.5	1467.6	1467.6	1467.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 AUG	97.6	95.4	79.8	141.6	139.2	124.8	196.3	192.9	177.5	99.9	90.4	89.8	78.6	50.3	49.8	37.2	50.5	49.4	26.3	1187.4	1187.4	1187.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 SEP	72.5	72.2	69.1	105.2	105.0	101.8	145.8	145.5	141.1	74.3	67.1	67.1	65.9	37.3	37.2	36.1	37.3	37.1	34.7	876.9	876.9	876.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 OCT	87.8	86.8	76.2	127.5	126.3	116.3	177.4	175.3	164.8	85.3	78.9	78.6	71.2	44.4	44.2	34.6	47.2	46.7	44.3	1107.4	1107.4	1107.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 NOV	60.9	60.6	58.6	88.4	88.3	86.3	123.3	123.1	120.8	58.3	54.2	54.0	53.4	30.6	30.4	29.6	33.0	32.0	30.0	778.1	778.1	778.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996 DEC	16.2	16.1	15.9	23.6	23.5	23.3	32.8	32.7	32.6	15.7	14.5	14.4	14.4	8.2	8.0	8.0	8.7	8.3	8.0	205.5	205.5	205.5	0.0	0.0	0.0	0.0	0.0	0.0
ANNUAL	780.0	770.3	689.6	1132.9	1123.0	1048.3	1576.0	1561.9	1480.4	764.5	704.3	701.4	655.8	395.5	392.6	341.1	415.1	406.5	300.0	9790.6	9790.6	9790.6	0.0	0.0	0.0	0.0	0.0	0.0
p **(TAET)**																												
1991-1996 JAN	125.5	126.4	129.0	86.2	86.9	88.8	56.5	57.0	58.2	7.3	114.4	115.1	117.6	163.7	164.7	168.3	188.3	188.3	188.4	18.5	18.5	18.3	176.2	178.6	184.6	176.2	178.6	184.7
1991-1996 FEB	154.8	159.0	160.3	106.5	109.6	110.1	69.9	71.9	72.0	9.2	141.0	144.8	146.4	201.4	206.6	208.7	235.4	235.8	236.1	22.5	22.6	22.6	215.4	224.8	227.3	215.4	224.8	227.3
1991-1996 MAR	504.3	516.7	523.8	348.8	358.0	361.6	231.0	237.6	238.6	29.8	458.5	469.5	476.0	654.9	670.7	680.0	741.9	742.9	743.9	81.1	81.1	80.8	714.4	745.0	754.2	714.4	745.0	754.2
1991-1996 APR	1659.6	1705.8	1719.4	1148.2	1179.0	1186.1	760.3	779.1	781.9	98.5	1508.4	1550.9	1556.3	2154.1	2215.0	2223.3	2475.6	2482.9	2485.3	264.9	264.8	261.8	2331.4	2431.4	2436.1	2331.4	2431.4	2436.0
1991-1996 MAY	3257.6	3398.7	3386.9	2267.0	2360.0	2344.4	1516.2	1569.7	1554.0	195.8	2955.3	3085.2	3027.3	4220.7	4407.1	4325.2	5148.4	5186.3	5179.8	571.7	567.3	546.7	4460.4	4747.0	4581.1	4460.4	4747.0	4580.8
1991-1996 JUN	3921.8	4009.2	3953.9	2737.3	2790.0	2745.6	1841.6	1864.6	1829.9	230.8	3554.9	3637.4	3536.8	5077.6	5196.3	5053.4	6698.4	6723.6	6662.1	736.2	714.9	669.3	5130.5	5298.1	5069.8	5130.5	5298.1	5069.3
1991-1996 JUL	4623.7	4724.5	4703.7	3221.7	3286.4	3259.0	2157.6	2196.3	2163.9	272.1	4192.9	4287.7	4196.7	5989.6	6125.5	5996.5	7762.6	7796.2	7665.1	834.0	818.7	759.7	6112.5	6305.3	6134.5	6112.5	6305.2	6133.9
1991-1996 AUG	4262.3	4426.7	4362.3	2986.0	3090.6	3033.6	2021.5	2075.6	2026.7	254.6	3859.3	4012.3	3882.1	5513.1	5732.2	5547.5	7334.1	7379.1	7199.4	837.9	816.7	744.8	5562.2	5880.0	5611.3	5562.2	5879.9	5610.6
1991-1996 SEP	3033.7	3037.2	2939.6	2118.8	2114.1	2040.9	1425.1	1414.0	1359.6	174.9	2748.9	2755.6	2633.9	3927.0	3936.7	3763.8	5421.9	5399.6	5063.9	578.5	547.7	507.4	3842.1	3843.4	3628.3	3842.1	3843.3	3627.8
1991-1996 OCT	2289.8	2326.0	2339.8	1590.1	1612.2	1620.5	1059.5	1071.7	1075.7	134.1	2078.8	2113.3	2114.1	2969.7	3019.0	3020.9	3765.9	3765.9	3674.4	395.5	393.2	378.2	3068.5	3143.0	3178.8	3068.5	3142.9	3178.3
1991-1996 NOV	2710.1	2578.6	2286.7	1952.8	1860.7	1632.2	1385.3	1318.4	1133.9	146.4	2432.7	2314.6	2049.3	1246.4	1259.1	1287.3	1423.6	1424.5	1423.8	152.3	152.0	150.4	1349.8	1376.6	1427.6	1349.8	1376.6	1427.6
1991-1996 DEC	293.7	300.3	315.0	203.2	208.4	219.1	134.8	139.0	145.8	17.3	267.0	272.7	286.6	381.5	389.7	409.4	476.9	477.3	477.3	51.7	51.6	50.5	393.8	411.9	447.9	393.8	411.9	447.8
ANNUAL	26829.7	27301.3	26813.0	18745.0	19033.6	18620.3	12626.3	12761.3	12407.7	1570.9	24312.2	24758.9	24023.0	32499.5	33322.7	32684.4	41672.9	41802.4	40999.4	4445.6	4353.7	4103.2	33357.0	34584.9	33681.3	33357.1	34584.7	33678.1
p **(AGWO)**																												
1991-1996 JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6	1475.4
1991-1996 FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8	1327.7
1991-1996 MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7	1374.0
1991-1996 APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3	1384.1
1991-1996 MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1	1614.3
1991-1996 JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0	1553.0
1991-1996 JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0	1624.3
1991-1996 AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8	1652.7
1991-1996 SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5	1510.9
1991-1996 OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4	1603.4
1991-1996 NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6	1700.6
1991-1996 DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5	1716.9
ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3	18537.1
p **(IGWI)**																												
1991-1996 JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1	293.6
1991-1996 FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5	93.8
1991-1996 MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1	160.7
1991-1996 APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9	438.4
1991-1996 MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3	275.3
1991-1996 JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8	201.2
1991-1996 JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0	318.0
1991-1996 AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0	169.4
1991-1996 SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9	140.2
1991-1996 OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4	375.6
1991-1996 NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1	391.8
1991-1996 DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4	112.7
ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2	2970.9

ADDITIONAL URF OUTPUT DATA
REQ'D INPUTS: HSPF OUTPUT

URF's as per Watershed Land Uses

		Code	SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
Surface		DSN	1013	1014	1015	1114	1115
Sub-surfa		DSN	1513	1514	1515	1614	1615
		Year	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Impervious)

AVERAGES:							
	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2
		ANNUAL	**644.2**	**644.2**	**644.2**	**644.2**	**644.2**

SURO (Impervious)

AVERAGES:							
	1991-1996	JAN	35.5	35.9	35.5	35.2	35.3
	1991-1996	FEB	10.0	10.1	10.0	10.0	10.0
	1991-1996	MAR	21.9	23.4	21.9	21.0	21.4
	1991-1996	APR	60.6	64.9	60.6	57.6	59.0
	1991-1996	MAY	54.9	60.1	54.9	50.8	52.7
	1991-1996	JUN	44.3	49.0	44.3	40.9	42.5
	1991-1996	JUL	75.7	82.3	75.7	70.5	73.0
	1991-1996	AUG	44.3	50.1	44.3	39.8	41.9
	1991-1996	SEP	29.9	33.4	29.9	27.2	28.5
	1991-1996	OCT	64.9	69.5	64.9	61.7	63.2
	1991-1996	NOV	51.1	53.7	51.1	49.2	50.2
	1991-1996	DEC	11.4	12.1	11.4	11.0	11.1
		ANNUAL	504.4	544.5	504.4	474.8	488.7

IMPEV

AVERAGES:							
	1991-1996	JAN	1.6	1.6	1.6	1.6	1.6
	1991-1996	FEB	1.6	1.2	1.6	2.0	1.8
	1991-1996	MAR	6.0	4.4	6.0	6.8	6.4
	1991-1996	APR	15.0	10.8	15.0	17.9	16.5
	1991-1996	MAY	18.0	12.4	18.0	22.3	20.3
	1991-1996	JUN	17.4	12.2	17.4	21.3	19.5
	1991-1996	JUL	21.0	14.5	21.0	25.8	23.5
	1991-1996	AUG	17.0	11.3	17.0	21.4	19.4
	1991-1996	SEP	12.5	8.8	12.5	15.3	14.0
	1991-1996	OCT	15.8	11.6	15.8	18.9	17.4
	1991-1996	NOV	11.1	8.6	11.1	12.5	11.8
	1991-1996	DEC	2.9	2.3	2.9	3.6	3.3
		ANNUAL	**139.9**	**99.7**	**139.9**	**169.4**	**155.5**

ADDITIONAL URF vOLUME DATA

		Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
REQ'D INPUTS:		**Sidewalk Composition (%)**	0.01	0.01	0.01	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sloped Roof Composition (%)	0.13	0.13	0.13	0.24	0.24	0.24	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Driveway Composition (%)	0.07	0.07	0.07	0.10	0.10	0.10	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Flat Roof Composition (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Ind Park Composition (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.15	0.15	0.15	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
URF AREA	**100000**	**Sidewalk Composition (m^2)**	1000	1000	1000	3000	3000	3000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ha	**m^2**	**Sloped Roof Composition (m^2)**	13000	13000	13000	24000	24000	24000	32000	32000	32000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Driveway Composition (m^2)	7000	7000	7000	10000	10000	10000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Flat Roof Composition (m^2)	0	0	0	0	0	0	0	0	0	17000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Ind Park Composition (m^2)	0	0	0	0	0	0	0	0	0	60000	15000	15000	15000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

	Year	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
		(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
1991-1996	**JAN**	791.82	791.82	791.82	1395.09	1395.09	1395.09	1809.84	1809.84	1809.84	2902.64	980.11	980.11	980.11	188.48	188.48	188.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	FEB	231.18	231.18	231.18	407.31	407.31	407.31	528.40	528.40	528.40	847.64	286.22	286.22	286.22	55.04	55.04	55.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	MAR	582.81	582.81	582.81	1026.86	1026.86	1026.86	1332.14	1332.14	1332.14	2136.94	721.57	721.57	721.57	138.76	138.76	138.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	APR	1589.15	1589.15	1589.15	2799.93	2799.93	2799.93	3632.34	3632.34	3632.34	5826.89	1967.52	1967.52	1967.52	378.37	378.37	378.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	MAY	1520.50	1520.50	1520.50	2678.98	2678.98	2678.98	3475.43	3475.43	3475.43	5575.17	1882.53	1882.53	1882.53	362.02	362.02	362.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	JUN	1279.87	1279.87	1279.87	2255.01	2255.01	2255.01	2925.42	2925.42	2925.42	4692.87	1584.60	1584.60	1584.60	304.73	304.73	304.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	JUL	2034.35	2034.35	2034.35	3584.33	3584.33	3584.33	4649.94	4649.94	4649.94	7459.27	2518.72	2518.72	2518.72	484.37	484.37	484.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	AUG	1288.98	1288.98	1288.98	2271.06	2271.06	2271.06	2946.24	2946.24	2946.24	4726.26	1595.88	1595.88	1595.88	306.90	306.90	306.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	SEP	885.82	885.82	885.82	1560.73	1560.73	1560.73	2024.74	2024.74	2024.74	3248.01	1096.73	1096.73	1096.73	210.91	210.91	210.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	OCT	1714.55	1714.55	1714.55	3020.88	3020.88	3020.88	3918.98	3918.98	3918.98	6286.69	2122.78	2122.78	2122.78	408.23	408.23	408.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	NOV	1310.42	1310.42	1310.42	2308.83	2308.83	2308.83	2995.24	2995.24	2995.24	4805.01	1622.47	1622.47	1622.47	312.01	312.01	312.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	DEC	299.13	299.13	299.13	527.03	527.03	527.03	683.72	683.72	683.72	1096.80	370.35	370.35	370.35	71.22	71.22	71.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	ANNUAL	13528.57	13528.57	13528.57	23836.05	23836.05	23836.05	30922.43	30922.43	30922.43	49604.20	16749.47	16749.47	16749.47	3221.05	3221.05	3221.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total SURO = SURO(Impervious)

AVERAGES:

		RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	**JAN**	750.232	750.232	750.232	1322.233	1322.233	1322.233	1715.643	1715.643	1715.643	2716.825	916.495	916.495	916.495	176.601	176.601	176.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	FEB	211.652	211.652	211.652	373.073	373.073	373.073	484.115	484.115	484.115	768.986	259.658	259.658	259.658	49.934	49.934	49.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	MAR	479.452	479.452	479.452	846.480	846.480	846.480	1099.503	1099.503	1099.503	1641.574	552.181	552.181	552.181	107.040	107.040	107.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	APR	1328.709	1328.709	1328.709	2345.791	2345.791	2345.791	3046.925	3046.925	3046.925	4519.835	1518.673	1518.673	1518.673	295.071	295.071	295.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	MAY	1220.443	1220.443	1220.443	2156.010	2156.010	2156.010	2801.492	2801.492	2801.492	4027.777	1350.077	1350.077	1350.077	263.633	263.633	263.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	JUN	991.050	991.050	991.050	1751.231	1751.231	1751.231	2275.891	2275.891	2275.891	3243.016	1086.530	1086.530	1086.530	212.373	212.373	212.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	JUL	1675.041	1675.041	1675.041	2958.539	2958.539	2958.539	3843.851	3843.851	3843.851	5580.032	1871.217	1871.217	1871.217	365.058	365.058	365.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	AUG	1005.931	1005.931	1005.931	1778.709	1778.709	1778.709	2312.531	2312.531	2312.531	3188.516	1065.623	1065.623	1065.623	209.359	209.359	209.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	SEP	673.820	673.820	673.820	1191.022	1191.022	1191.022	1548.123	1548.123	1548.123	2169.670	725.898	725.898	725.898	142.298	142.298	142.298	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	OCT	1423.208	1423.208	1423.208	2512.644	2512.644	2512.644	3263.664	3263.664	3263.664	4838.390	1625.759	1625.759	1625.759	315.857	315.857	315.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	NOV	1106.527	1106.527	1106.527	1952.470	1952.470	1952.470	2535.203	2535.203	2535.203	3846.431	1294.006	1294.006	1294.006	250.773	250.773	250.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1991-1996	DEC	247.647	247.647	247.647	437.078	437.078	437.078	567.611	567.611	567.611	855.413	287.962	287.962	287.962	55.731	55.731	55.731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	ANNUAL	11113.712	11113.712	11113.712	19625.279	19625.279	19625.279	25494.549	25494.549	25494.549	37396.463	12554.077	12554.077	12554.077	2443.726	2443.726	2443.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Total IMPEV = IMPEV(Impervious)

AVERAGES:

		RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	**JAN**	32.94	32.94	32.94	57.99	57.99	57.99	75.20	75.20	75.20	122.82	41.47	41.47	41.47	7.98	7.98	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	FEB	28.30	28.30	28.30	49.37	49.37	49.37	63.65	63.65	63.65	140.66	48.37	48.37	48.37	8.95	8.95	8.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	MAR	105.43	105.43	105.43	184.01	184.01	184.01	237.33	237.33	237.33	501.09	170.89	170.89	170.89	32.18	32.18	32.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	APR	259.73	259.73	259.73	453.04	453.04	453.04	584.11	584.11	584.11	1295.11	444.81	444.81	444.81	82.53	82.53	82.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	MAY	305.44	305.44	305.44	532.09	532.09	532.09	685.49	685.49	685.49	1595.65	549.62	549.62	549.62	101.34	101.34	101.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	JUN	298.09	298.09	298.09	519.57	519.57	519.57	669.57	669.57	669.57	1531.47	526.95	526.95	526.95	97.38	97.38	97.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	JUL	356.03	356.03	356.03	620.19	620.19	620.19	798.96	798.96	798.96	1846.75	635.66	635.66	635.66	117.38	117.38	117.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	AUG	282.69	282.69	282.69	491.88	491.88	491.88	633.23	633.23	633.23	1524.93	525.54	525.54	525.54	96.79	96.79	96.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	SEP	214.94	214.94	214.94	374.65	374.65	374.65	482.83	482.83	482.83	1101.41	378.91	378.91	378.91	70.05	70.05	70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	OCT	277.14	277.14	277.14	483.66	483.66	483.66	623.79	623.79	623.79	1367.89	469.42	469.42	469.42	87.24	87.24	87.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	NOV	201.28	201.28	201.28	351.94	351.94	351.94	454.43	454.43	454.43	923.01	315.25	315.25	315.25	59.18	59.18	59.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991-1996	DEC	52.99	52.99	52.99	92.64	92.64	92.64	119.60	119.60	119.60	257.33	88.64	88.64	88.64	16.34	16.34	16.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	ANNUAL	2415.00	2415.00	2415.00	4211.01	4211.01	4211.01	5428.19	5428.19	5428.19	12208.11	4195.52	4195.52	4195.52	777.35	777.35	777.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

URF TOTAL INPUTS AND OUTPUTS

10Ha

Total Moisture Supply = SUPY (Pervious)+ SUPY (Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd
1991-1996	JAN	3891.1	3891.1	3891.1	3856.7	3856.7	3856.7	3830.9	3830.9	3830.9	3776.6	3878.6	3878.6	3878.6
1991-1996	FEB	1100.7	1100.7	1100.7	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.8	1100.7	1100.7	1100.7
1991-1996	MAR	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2
1991-1996	APR	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996	MAY	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996	JUN	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996	JUL	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996	AUG	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996	SEP	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996	OCT	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996	NOV	5116.7	5116.7	5116.7	5437.6	5437.6	5437.6	5678.4	5678.4	5678.4	6176.1	5229.1	5229.1	5229.1
1991-1996	DEC	1428.6	1428.6	1428.6	1427.4	1427.4	1427.4	1426.5	1426.5	1426.5	1424.7	1428.2	1428.2	1428.2
	ANNUAL	63422.8	63422.8	63422.8	63708.3	63708.3	63708.3	63922.3	63922.3	63922.3	64364.0	63522.4	63522.4	63522.4
(m3) for a single Ha		**6342.3**	**6342.3**	**6342.3**	**6370.8**	**6370.8**	**6370.8**	**6392.2**	**6392.2**	**6392.2**	**6436.4**	**6352.2**	**6352.2**	**6352.2**

	Code	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	3920.2	3920.2	3920.2	3931.9	3931.9	3931.9	3820.2	3820.2	3820.2	3936.0	3936.0	3936.0	3936.0	3936.0
1991-1996	FEB	1101.3	1101.3	1101.3	1101.3	1101.3	1101.3	1101.0	1101.0	1101.0	1101.4	1101.4	1101.4	1101.4	1101.4
1991-1996	MAR	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3	2775.2	2775.2	2775.2	2775.3	2775.3	2775.3	2775.3	2775.3
1991-1996	APR	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
1991-1996	MAY	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
1991-1996	JUN	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
1991-1996	JUL	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
1991-1996	AUG	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
1991-1996	SEP	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
1991-1996	OCT	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
1991-1996	NOV	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.2	6240.4	6240.4	6240.4	6240.4	6240.4
1991-1996	DEC	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
	ANNUAL	64571.9	64571.9	64571.9	64583.7	64583.7	64583.7	64471.5	64471.5	64471.5	64588.0	64588.0	64588.0	64588.0	64588.0
(m3) for a single Ha		**6457.2**	**6457.2**	**6457.2**	**6458.4**	**6458.4**	**6458.4**	**6447.2**	**6447.2**	**6447.2**	**6458.8**	**6458.8**	**6458.8**	**6458.8**	**6458.8**

Total Runoff = SURO+IFWO (Pervious)+ SURO(Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd
1991-1996	JAN	1096.3	1182.0	1480.2	1814.8	1882.4	2114.5	2355.1	2411.8	2597.5	3429.1	1335.4	1406.2	1683.6
1991-1996	FEB	309.8	322.1	379.8	512.7	522.5	570.5	664.5	673.8	715.6	974.1	379.7	390.6	451.9
1991-1996	MAR	699.5	712.1	796.9	1162.1	1174.2	1243.7	1507.3	1520.7	1580.6	2137.6	830.6	840.7	923.6
1991-1996	APR	1943.1	2003.8	2363.0	3223.1	3279.1	3565.1	4178.5	4238.5	4471.7	5881.2	2290.4	2339.5	2684.4
1991-1996	MAY	1807.0	1919.2	2428.1	2983.6	3082.6	3475.4	3863.1	3961.0	4264.7	5313.6	2084.3	2174.1	2640.4
1991-1996	JUN	1474.9	1614.3	2011.3	2434.1	2555.5	2854.7	3151.7	3265.2	3491.6	4314.6	1694.2	1804.5	2180.2
1991-1996	JUL	2446.7	2594.2	3059.7	4063.7	4193.0	4564.6	5271.9	5394.0	5708.0	7313.9	2844.4	2961.1	3431.5
1991-1996	AUG	1472.9	1576.0	1911.2	2447.5	2541.1	2804.4	3176.8	3268.5	3481.3	4261.2	1659.8	1737.6	2087.0
1991-1996	SEP	996.1	1055.8	1176.1	1650.6	1698.5	1792.6	2139.0	2179.0	2258.8	2902.4	1135.1	1187.5	1311.8
1991-1996	OCT	2073.0	2158.7	2494.9	3447.4	3535.1	3798.0	4474.9	4572.3	4781.2	6304.5	2446.7	2511.0	2849.3
1991-1996	NOV	1612.9	1652.7	1843.3	2680.0	2716.0	2864.9	3477.1	3513.8	3634.2	4975.3	1930.6	1963.3	2137.1
1991-1996	DEC	362.3	373.1	422.1	601.5	610.8	650.7	780.5	789.4	823.7	1111.4	432.3	442.2	486.8
	ANNUAL	16300.3	17169.3	20371.1	27029.1	27798.4	30305.0	35050.3	35796.7	37815.8	48932.2	19072.5	19767.5	22874.2
(m3) for a single Ha		**1630.0**	**1716.9**	**2037.1**	**2702.9**	**2779.8**	**3030.5**	**3505.0**	**3579.7**	**3781.6**	**4893.2**	**1907.2**	**1976.7**	**2287.4**

	Code	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	376.2	459.7	835.9	112.6	167.5	501.1	2850.2	3035.8	3218.4	34.7	157.2	655.7	34.7	157.3
1991-1996	FEB	105.6	117.5	208.8	30.6	37.1	91.9	797.5	857.1	908.9	7.5	27.8	168.4	7.5	27.8
1991-1996	MAR	232.9	247.1	360.5	68.6	76.2	173.9	1644.2	1738.8	1884.6	5.7	32.3	184.6	5.7	32.3
1991-1996	APR	650.7	721.0	1209.3	190.9	232.4	670.5	4674.7	4943.8	5309.2	33.3	159.8	740.0	33.3	159.8
1991-1996	MAY	614.3	741.5	1385.3	178.4	263.5	933.1	4493.6	4754.4	5069.0	70.8	267.9	966.6	70.9	268.2
1991-1996	JUN	503.6	658.1	1177.5	149.0	265.7	810.0	3731.7	3929.0	4140.8	56.9	262.9	827.4	57.0	263.6
1991-1996	JUL	810.4	973.4	1614.5	237.6	320.8	812.0	6137.4	6493.2	6889.3	36.3	280.1	1075.0	36.3	281.5
1991-1996	AUG	479.9	587.3	1061.0	138.9	190.8	568.7	3757.8	3944.0	4095.5	26.5	187.0	776.3	26.5	187.8
1991-1996	SEP	332.2	408.1	588.3	96.0	142.3	289.8	2369.4	2493.8	2626.5	28.2	132.7	381.2	28.2	132.4
1991-1996	OCT	686.1	776.6	1247.6	197.2	207.5	333.6	5235.5	5519.3	5750.2	24.5	267.5	899.7	24.5	268.5
1991-1996	NOV	544.1	608.0	949.1	157.6	191.2	454.2	4053.1	4305.1	4545.6	27.1	135.5	615.3	27.1	135.5
1991-1996	DEC	122.0	138.6	207.9	35.3	44.4	98.5	898.5	960.2	1014.8	7.0	34.1	135.3	7.0	34.1
	ANNUAL	5462.3	6440.9	10847.8	1592.8	2140.2	5746.2	40634.0	42976.3	45465.4	358.5	1944.7	7425.5	358.6	1948.7
(m3) for a single Ha		**546.2**	**644.1**	**1084.8**	**159.3**	**214.0**	**574.6**	**4063.4**	**4297.6**	**4546.5**	**35.8**	**194.5**	**742.5**	**35.9**	**194.9**

Total Evapo = IMPEV(Impervious)+ TAET(Pervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd
1991-1996	JAN	166.7	167.4	168.9	156.2	156.7	157.7	148.4	148.8	149.0	137.6	163.0	163.7	165.6
1991-1996	FEB	191.7	195.9	197.0	168.3	171.4	171.7	151.0	152.9	152.9	157.6	196.8	200.5	202.1
1991-1996	MAR	643.2	655.4	661.3	581.3	590.5	592.9	535.9	542.4	541.9	563.3	659.4	670.2	676.2
1991-1996	APR	2002.0	2047.8	2058.1	1721.4	1751.8	1755.6	1511.7	1530.0	1528.5	1473.7	2027.4	2069.7	2074.0
1991-1996	MAY	3664.4	3804.4	3779.9	2946.4	3038.1	3010.8	2406.3	2458.1	2429.7	1892.6	3597.4	3727.0	3662.8
1991-1996	JUN	4319.5	4404.4	4332.0	3401.6	3451.6	3391.6	2711.8	2731.0	2680.9	1863.2	4173.4	4255.2	4143.9
1991-1996	JUL	5096.9	5195.8	5160.5	4012.0	4074.7	4033.6	3193.1	3229.1	3180.8	2234.0	4934.6	5028.9	4929.9
1991-1996	AUG	4642.6	4804.8	4724.8	3619.5	3721.7	3650.2	2851.1	2901.7	2837.4	1879.4	4475.3	4627.7	4486.3
1991-1996	SEP	3321.1	3324.3	3223.7	2598.7	2593.7	2517.3	2053.8	2042.3	1983.5	1350.6	3195.0	3201.5	3078.7
1991-1996	OCT	2654.8	2689.9	2693.1	2201.2	2222.2	2220.5	1860.7	1870.8	1864.3	1587.3	2627.1	2661.3	2654.7
1991-1996	NOV	2972.3	2840.5	2546.6	2393.2	2300.9	2070.5	1963.0	1895.9	1709.1	1127.7	2802.2	2683.9	2417.9
1991-1996	DEC	363.0	369.4	384.0	319.5	324.5	335.1	287.2	291.3	298.0	290.3	370.2	375.8	389.6
	ANNUAL	30024.7	30486.7	29917.6	24088.9	24367.6	23879.6	19630.4	19751.4	19316.3	14543.5	29212.0	29655.8	28874.3
(m3) for a single Ha		**3002.5**	**3048.7**	**2991.8**	**2408.9**	**2436.8**	**2388.0**	**1963.0**	**1975.1**	**1931.6**	**1454.3**	**2921.2**	**2965.6**	**2887.4**

	Code	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	175.7	176.7	180.0	193.0	192.9	191.9	130.2	130.2	130.0	176.2	178.6	184.6	176.2	178.6
1991-1996	FEB	214.5	219.7	221.8	240.2	240.5	240.6	136.2	136.2	136.2	215.4	224.8	227.3	215.4	224.8
1991-1996	MAR	703.9	719.6	728.4	759.6	760.4	758.9	501.6	501.6	501.3	714.4	745.0	754.2	714.4	745.0
1991-1996	APR	2278.4	2339.0	2346.3	2519.9	2526.0	2524.9	1312.1	1312.0	1309.0	2331.4	2431.4	2436.1	2331.4	2431.4
1991-1996	MAY	4373.8	4559.9	4471.4	5201.4	5238.5	5214.2	1829.6	1825.2	1804.6	4460.4	4747.0	4581.1	4460.4	4747.0
1991-1996	JUN	5225.9	5344.1	5189.0	6750.0	6773.6	6687.5	1953.2	1931.9	1886.3	5130.5	5298.1	5069.8	5130.5	5298.1
1991-1996	JUL	6166.5	6302.0	6164.3	7825.0	7857.7	7707.5	2301.5	2286.3	2227.3	6112.5	6305.3	6134.5	6112.5	6305.2
1991-1996	AUG	5660.2	5878.8	5681.4	7384.6	7428.6	7225.7	2025.3	2004.1	1932.3	5562.2	5880.0	5611.3	5562.2	5879.9
1991-1996	SEP	4034.3	4043.9	3870.0	5459.2	5436.7	5098.6	1455.4	1424.5	1384.2	3842.1	3843.4	3628.3	3842.1	3843.3
1991-1996	OCT	3101.4	3150.4	3142.8	3813.1	3812.6	3718.7	1502.9	1500.6	1485.6	3068.5	3143.0	3178.8	3068.5	3142.9
1991-1996	NOV	1336.2	1348.7	1376.1	1456.7	1456.5	1453.8	930.4	930.1	928.5	1349.8	1376.6	1427.6	1349.8	1376.6
1991-1996	DEC	406.0	414.0	433.8	485.6	485.5	485.3	257.1	257.0	256.0	393.8	411.9	447.9	393.8	411.9
	ANNUAL	33672.3	34492.6	33802.9	42088.0	42208.9	41299.4	14236.2	14144.2	13893.7	33357.0	34584.9	33681.3	33357.1	34584.7
(m3) for a single Ha		**3367.2**	**3449.3**	**3380.3**	**4208.8**	**4220.9**	**4129.9**	**1423.6**	**1414.4**	**1389.4**	**3335.7**	**3458.5**	**3368.1**	**3335.7**	**3458.5**

(AGWO)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd
1991-1996	JAN	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8
1991-1996	FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6
1991-1996	MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4
1991-1996	APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5
1991-1996	MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4
1991-1996	JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9
1991-1996	JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9
1991-1996	AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5
1991-1996	SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8
1991-1996	OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7
1991-1996	NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8
1991-1996	DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4
	ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8
(m3) for a single Ha		**1524.4**	**1426.5**	**1222.9**	**1116.2**	**1040.7**	**883.9**	**812.6**	**751.4**	**627.0**	**80.5**	**1361.2**	**1276.8**	**1099.0**

	Code	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6
1991-1996	FEB	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8
1991-1996	MAR	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7
1991-1996	APR	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3
1991-1996	MAY	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1
1991-1996	JUN	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0
1991-1996	JUL	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0
1991-1996	AUG	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8
1991-1996	SEP	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5
1991-1996	OCT	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4
1991-1996	NOV	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6
1991-1996	DEC	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5
	ANNUAL	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3
(m3) for a single Ha		**1978.1**	**1856.1**	**1603.9**	**1745.8**	**1674.6**	**1471.2**	**729.6**	**568.4**	**404.6**	**2325.7**	**2149.1**	**1857.5**	**2325.7**	**2148.8**

(IGWI)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd
1991-1996	JAN	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0
1991-1996	FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5
1991-1996	MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4
1991-1996	APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3
1991-1996	MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4
1991-1996	JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5
1991-1996	JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2
1991-1996	AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9
1991-1996	SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4
1991-1996	OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6
1991-1996	NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1
1991-1996	DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4
	ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8
(m3) for a single Ha		**241.3**	**224.7**	**190.1**	**176.8**	**164.0**	**137.5**	**128.8**	**118.4**	**97.7**	**12.7**	**215.4**	**201.1**	**170.8**

	Code	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc
1991-1996	JAN	283.1	289.2	257.6	248.8	261.5	240.4	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1
1991-1996	FEB	72.0	75.5	80.2	59.2	63.5	69.9	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5
1991-1996	MAR	146.2	142.9	142.7	140.1	139.5	144.0	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1
1991-1996	APR	430.7	419.1	394.0	409.5	412.6	413.4	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9
1991-1996	MAY	344.7	315.0	251.1	331.0	321.2	270.9	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3
1991-1996	JUN	260.8	229.9	184.3	256.5	239.1	194.8	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8
1991-1996	JUL	384.0	329.9	280.7	349.2	302.4	245.6	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0
1991-1996	AUG	205.5	177.1	143.6	182.5	164.9	120.4	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0
1991-1996	SEP	168.7	150.3	115.5	140.3	129.1	82.0	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9
1991-1996	OCT	411.8	379.6	284.0	277.1	243.7	175.6	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4
1991-1996	NOV	383.8	377.1	332.5	311.9	309.6	291.0	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1
1991-1996	DEC	98.3	103.3	96.7	89.1	93.5	89.5	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4
	ANNUAL	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2
(m3) for a single Ha		**319.0**	**298.9**	**256.3**	**279.5**	**268.0**	**233.8**	**117.3**	**91.6**	**65.2**	**375.9**	**346.6**	**297.7**	**375.9**	**346.5**

Annual Water Balance
Volume for single Ha (m3)

Paramter (m3)	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd
SUPY	6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2	6352.2	6457.2	6457.2	6457.2
RO	1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7	2287.4	546.2	644.1	1084.8
ET	3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6	2887.4	3367.2	3449.3	3380.3
AGWO	1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8	1099.0	1978.1	1856.1	1603.9
IGWI	241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1	170.8	319.0	298.9	256.3

Paramter (m3)	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
SUPY	6458.4	6458.4	6458.4	6447.2	6447.2	6447.2	6458.8	6458.8	6458.8	6458.8	6458.8	6458.8	6413.6	6413.6	6413.6	6399.3	6399.3	6399.3
RO	159.3	214.0	574.6	1230.8	1465.0	1713.9	35.8	194.5	742.5	35.9	194.9	747.6	1101.7	1129.5	1243.9	569.6	611.3	781.0
ET	4208.8	4220.9	4129.9	2556.7	2547.5	2522.4	3335.7	3458.5	3368.1	3335.7	3458.5	3367.8	3172.0	3181.3	3146.2	3424.7	3438.7	3388.0
AGWO	1745.8	1674.6	1471.2	2429.1	2268.0	2104.2	2325.7	2149.1	1857.5	2325.7	2148.8	1853.7	2088.7	2061.9	2000.8	2328.2	2287.9	2196.3
IGWI	279.5	268.0	233.8	117.3	91.6	65.2	375.9	346.6	297.7	375.9	346.5	297.1	66.2	61.7	51.4	99.3	92.5	77.1

REARRANGED

Paramter (m3)	SUPY	RO	ET	AGWO	IGWI
RLD5ab	6342.3	1630.0	3002.5	1524.4	241.3
RLD5bc	6342.3	1716.9	3048.7	1426.5	224.7
RLD5cd	6342.3	2037.1	2991.8	1222.9	190.1
RMD5ab	6370.8	2702.9	2408.9	1116.2	176.8
RMD5bc	6370.8	2779.8	2436.8	1040.7	164.0
RMD5cd	6370.8	3030.5	2388.0	883.9	137.5
RHD5ab	6392.2	3505.0	1963.0	812.6	128.8
RHD5bc	6392.2	3579.7	1975.1	751.4	118.4
RHD5cd	6392.2	3781.6	1931.6	627.0	97.7
CSMbc	6436.4	4893.2	1454.3	80.5	12.7
EISab	6352.2	1907.2	2921.2	1361.2	215.4
EISbc	6352.2	1976.7	2965.6	1276.8	201.1
EIScd	6352.2	2287.4	2887.4	1099.0	170.8
OPLab	6457.2	546.2	3367.2	1978.1	319.0
OPLbc	6457.2	644.1	3449.3	1856.1	298.9
OPLcd	6457.2	1084.8	3380.3	1603.9	256.3
OVLab	6458.4	159.3	4208.8	1745.8	279.5
OVLbc	6458.4	214.0	4220.9	1674.6	268.0
OVLcd	6458.4	574.6	4129.9	1471.2	233.8
THCab	6447.2	1230.8	2556.7	2429.1	117.3
THCbc	6447.2	1465.0	2547.5	2268.0	91.6
THCcd	6447.2	1713.9	2522.4	2104.2	65.2
AGT0ab	6458.8	35.8	3335.7	2325.7	375.9
AGT0bc	6458.8	194.5	3458.5	2149.1	346.6
AGT0cd	6458.8	742.5	3368.1	1857.5	297.7
AGPab	6458.8	35.9	3335.7	2325.7	375.9
AGP0bc	6458.8	194.9	3458.5	2148.8	346.5
AGP0cd	6458.8	747.6	3367.8	1853.7	297.1
IPRab	6413.6	1101.7	3172.0	2088.7	66.2
IPRbc	6413.6	1129.5	3181.3	2061.9	61.7
IPRcd	6413.6	1243.9	3146.2	2000.8	51.4
IPEab	6399.3	569.6	3424.7	2328.2	99.3
IPEbc	6399.3	611.3	3438.7	2287.9	92.5
IPEcd	6399.3	781.0	3388.0	2196.3	77.1

%ET

5	10	20	30	40	50

Required LID Volumes	Required LID Volumes
2782.7	2832.6

TO BE INFLITRATED

Required LID Volumes IPR	Required LID Volumes IPE/Roads
2782.7	2832.6

ACTUAL INFILTRATED VALUES

Required LID Volumes IPR	Required LID Volumes IPE/Roads
1669.6	1699.6

VOLUME EVAPORATED

Required LID Volumes IPR	Required LID Volumes IPE/Roads
1113.1	1133.0

RUNOFF DEFICIT

Required LID Volumes IPR	Required LID Volumes IPE/Roads
2782.7	2832.6

REQ INPUTS:HSPF MODEL

LAND USE IN HA

SUBCATCHMENTS

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	3.60	40.85	15.99	5.25	17.31	18.63	45.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	2.00	0.00	38.57	0.00	0.00	0.00	0.00	1.46	0.00	0.00	3.14	2.63	2.20	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	2.20	29.35	1.81	1.35	2.21	2.45	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	6.00	0.00	42.70	0.00	0.00	0.00	0.00	2.18	0.00	0.00	10.00	7.05	21.06	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	6.30	0.00	25.93	0.00	0.00	0.00	0.00	1.69	0.00	0.00	9.12	6.91	20.32	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	1.16					9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.84					5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	1.05					0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.75					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	1.97	1.13				29.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.55	0.00	0.00	0.00	0.00	0.29	0.00	0.00	1.36	0.08	0.18	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	18.88			1.72		2.19	6.00	19.50	0.00	21.80	4.90	0.00	4.00	3.40	2.50	0.00	0.00	0.00	4.02	0.00	0.00	0.00	0.00	0.76	7.20	17.90	0.51	0.00	0.00	1.70
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	13.57			0.22		1.16	3.90	16.10	0.00	49.60	9.70	0.00	18.30	16.40	11.00	0.00	0.00	0.00	4.45	0.00	0.00	0.00	0.00	1.13	14.80	70.60	1.63	0.00	0.00	9.30
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00			0.00		0.00	1.50	7.30	0.00	47.60	12.00	0.00	30.90	19.20	21.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.88	44.30	91.50	1.48	0.00	0.00	8.70
Utility/Transport/Parks	2	OPL0ab	4001	4501	8.50	9.60	0.60	9.40	20.61			3.17	3.13	22.44	17.70	18.10	7.80	6.30	1.10	3.40	1.10	1.90	0.50	0.00	0.20	5.40	17.24	1.60	0.80	3.50	5.10	0.59	2.20	0.10	0.04	0.14	1.39	0.00
Utility/Transport/Parks	2	OPL0bc	4002	4502	1.10	3.60	0.20	5.90	14.81			0.40	0.41	11.93	11.50	15.00	11.30	14.40	2.20	9.40	5.00	9.30	2.40	0.00	0.60	12.90	19.09	7.90	1.60	9.60	16.00	0.88	4.60	0.50	0.13	0.38	13.30	0.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.50	3.20	0.20	3.30	0.00			0.00	0.00	0.00	4.30	6.80	6.10	13.80	2.70	8.30	8.40	10.80	4.60	0.00	0.70	17.70	11.59	17.60	2.50	9.10	15.20	0.69	13.70	0.70	0.12	0.37	12.83	0.00
Valley Segment	2	OVL0ab	4101	4601	7.40	0.60	0.00	2.40	43.73	3.12	3.72				0.00	1.40	0.00	0.90	0.40	0.00	0.00	0.20	0.20	10.56	0.00	0.00	9.15	0.20	0.90	1.10	0.20	5.90	0.90	0.40	10.97	12.49	1.03	0.10
Valley Segment	2	OVL0bc	4102	4602	1.00	0.20	0.00	1.50	31.42	0.35	0.96				0.00	1.10	0.00	2.00	0.90	0.00	0.00	0.80	0.90	22.23	0.00	0.00	10.13	1.10	1.80	3.00	0.70	8.82	1.80	1.40	34.97	33.51	9.83	0.40
Valley Segment	2	OVL0cd	4103	4603	0.40	0.20	0.00	0.80	0.00	0.00	0.00				0.00	0.50	0.00	1.90	1.10	0.00	0.00	1.00	1.80	22.11	0.00	0.00	6.15	2.30	2.70	2.90	0.70	6.85	5.30	1.80	31.88	32.84	9.48	0.40
Roads	2	THC0ab	5001	5501	0.60	5.00	1.40	2.80	27.62	5.93	2.47	12.48	11.02	48.94	6.90	2.40	2.30	3.90	0.10	0.90	0.30	0.80	0.50		0.90	0.40		0.10		0.10	0.40		0.70	0.40				0.50
Roads	2	THC0bc			0.1	1.9	0.4	1.8							4.50	2.00	3.40	8.80	0.30	2.50	1.50	3.80	2.40		2.60	1.00		0.40		0.30	1.20		1.50	1.40				3.10
Roads and ROW	2	THC0cd	5003	5503	0.00	1.70	0.40	1.00							1.70	0.90	1.80	8.50	0.30	2.20	2.60	4.40	4.50	2.22	2.70	1.30	44.33	1.00	0.00	0.30	1.10	3.95	4.40	1.90	10.88	10.19	13.04	2.90
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	5.30	103.73	44.65	1.93				11.80	19.50	7.00	10.50	4.00	1.80	2.00	3.10	1.50	29.89	3.90	0.00	36.16	0.00	0.00	0.00	0.00	6.31	0.00	4.00	41.88	42.24	9.95	0.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	3.30	74.53	5.06	0.50				7.70	16.10	10.10	23.80	7.80	5.10	9.30	15.10	6.60	62.92	11.60	0.00	40.04	0.00	0.00	0.00	0.00	9.43	0.00	15.80	133.55	113.28	95.04	0.00
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	1.90	0.00	0.00	0.00				2.90	7.30	5.50	22.90	9.70	4.50	15.70	17.60	12.50	62.58	12.30	0.00	24.31	0.00	0.00	0.00	0.00	7.33	0.00	20.50	121.78	111.03	91.73	0.00
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00			3.53				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00			0.91				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	24.60							2.90	14.60	5.70	7.50	0.00	7.40	0.00	0.00	0.00		0.00	5.60		1.40	5.10	6.60	3.50		12.80	1.30				0.20
Industrial/Prestige		IPRbc			0.00	0.00	0.00	15.50							1.90	12.10	8.20	17.00	0.00	20.40	0.00	0.00	0.00		0.00	13.40		7.20	10.40	18.00	11.00		26.50	4.90				1.00
Industrial/Prestige		IPRcd			0.00	0.00	0.00	8.70							0.70	5.50	4.40	16.30	0.00	17.90	0.00	0.00	0.00		0.00	18.30		16.10	15.80	17.10	10.40		79.20	6.40				0.90
Prestige Business Park		IPEab			52.20	46.70	14.30	26.40							10.80	22.10	4.10	21.30	0.60	1.00	0.10	2.10	2.70		1.60	4.80		2.40	2.90	4.60	8.50		10.00	1.30				3.50
Prestige Business Park		IPEbc			7.00	17.70	4.50	16.60							7.00	18.20	6.00	48.30	1.20	2.70	0.60	10.20	11.80		4.60	11.50		12.40	5.90	12.50	26.80		20.60	5.20				19.80
Prestige Business Park		IPEcd			3.10	15.60	4.40	9.40							2.60	8.30	3.20	46.40	1.50	2.40	1.10	11.90	22.50		4.90	15.80		27.50	8.90	11.90	25.40		61.60	6.80				18.60
		Sum URF AREAS			**81.9**	**106.0**	**26.4**	**147.7**	**424.9**	**78.0**	**20.6**	**37.5**	**35.6**	**200.9**	**106.3**	**214.8**	**86.9**	**393.5**	**60.5**	**89.9**	**100.9**	**132.0**	**109.9**	**214.0**	**60.9**	**108.1**	**439.7**	**99.2**	**59.3**	**100.6**	**126.2**	**59.1**	**312.1**	**254.8**	**413.9**	**373.2**	**301.4**	**71.1**

LAND USE IN %

SUBCATCHMENTS

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	0.02	0.10	0.20	0.25	0.46	0.52	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.01	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	0.01	0.07	0.02	0.07	0.06	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.02	0.02	0.07	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.02	0.07	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05	0.00	0.01	0.06	0.09	0.00	0.06	0.08	0.00	0.04	0.03	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.00	0.00	0.00	0.02
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.01	0.04	0.07	0.00	0.13	0.16	0.00	0.18	0.12	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.05	0.28	0.00	0.00	0.00	0.13
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.12	0.20	0.00	0.31	0.15	0.19	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.14	0.36	0.00	0.00	0.00	0.12
Utility/Transport/Parks	2	OPL0ab	4001	4501	0.10	0.09	0.02	0.06	0.05	0.00	0.00	0.08	0.09	0.11	0.17	0.08	0.09	0.02	0.02	0.04	0.01	0.01	0.00	0.00	0.00	0.05	0.04	0.02	0.01	0.03	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Utility/Transport/Parks	2	OPL0bc	4002	4502	0.01	0.03	0.01	0.04	0.03	0.00	0.00	0.01	0.01	0.06	0.11	0.07	0.13	0.04	0.04	0.10	0.05	0.07	0.02	0.00	0.01	0.12	0.04	0.08	0.03	0.10	0.13	0.01	0.01	0.00	0.00	0.00	0.04	0.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.01	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.07	0.04	0.04	0.09	0.08	0.08	0.04	0.00	0.01	0.16	0.03	0.18	0.04	0.09	0.12	0.01	0.04	0.00	0.00	0.00	0.04	0.00
Valley Segment	2	OVL0ab	4101	4601	0.09	0.01	0.00	0.02	0.10	0.04	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.10	0.00	0.00	0.03	0.03	0.00	0.00
Valley Segment	2	OVL0bc	4102	4602	0.01	0.00	0.00	0.01	0.07	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.10	0.00	0.00	0.02	0.01	0.03	0.03	0.01	0.15	0.01	0.01	0.08	0.09	0.03	0.01
Valley Segment	2	OVL0cd	4103	4603	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.02	0.10	0.00	0.00	0.01	0.02	0.05	0.03	0.01	0.12	0.02	0.01	0.08	0.09	0.03	0.01
Roads	2	THC0ab	5001	5501	0.01	0.05	0.05	0.02	0.07	0.08	0.12	0.33	0.31	0.24	0.06	0.01	0.03	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Roads	2	THC0bc			0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.04	0.02	0.00	0.03	0.01	0.03	0.02	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.04
Roads and ROW	2	THC0cd	5003	5503	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.02	0.03	0.03	0.04	0.01	0.04	0.01	0.10	0.01	0.00	0.00	0.01	0.07	0.01	0.01	0.03	0.03	0.04	0.04
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	0.04	0.24	0.57	0.09	0.00	0.00	0.00	0.11	0.09	0.08	0.03	0.07	0.02	0.02	0.02	0.01	0.14	0.06	0.00	0.08	0.00	0.00	0.00	0.00	0.11	0.00	0.02	0.10	0.11	0.03	0.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	0.02	0.18	0.06	0.02	0.00	0.00	0.00	0.07	0.07	0.12	0.06	0.13	0.06	0.09	0.11	0.06	0.29	0.19	0.00	0.09	0.00	0.00	0.00	0.00	0.16	0.00	0.06	0.32	0.30	0.32	0.00
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.06	0.06	0.16	0.05	0.16	0.13	0.11	0.29	0.20	0.00	0.06	0.00	0.00	0.00	0.00	0.12	0.00	0.08	0.29	0.30	0.30	0.00
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.07	0.02	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.09	0.07	0.03	0.00	0.04	0.01	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRbc			0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.09	0.04	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.07	0.18	0.18	0.09	0.00	0.08	0.02	0.00	0.00	0.00	0.01
Industrial/Prestige		IPRcd			0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.04	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.16	0.27	0.17	0.08	0.00	0.25	0.03	0.00	0.00	0.00	0.01
Prestige Business Park		IPEab			0.64	0.44	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.05	0.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.04	0.00	0.02	0.05	0.05	0.07	0.00	0.03	0.01	0.00	0.00	0.00	0.05
Prestige Business Park		IPEbc			0.09	0.17	0.17	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.07	0.12	0.02	0.03	0.01	0.08	0.11	0.00	0.08	0.11	0.00	0.13	0.10	0.12	0.21	0.00	0.07	0.02	0.00	0.00	0.00	0.28
Prestige Business Park		IPEcd			0.04	0.15	0.17	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.12	0.02	0.03	0.01	0.09	0.20	0.00	0.08	0.15	0.00	0.28	0.15	0.12	0.20	0.00	0.20	0.03	0.00	0.00	0.00	0.26
		Sum URF AREAS			**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**

SUMMARY OF WATER BALANCES FOR EACH SUBCATCHMENT

SUBCATCHMENT 1			SUBCATCHMENT 2			SUBCATCHMENT 3		
S (m3)	S (m3)	S (mm)	W (m3)	w (m3)	W (mm)	T (m3)	T (m3)	T (mm)
81.9	**81.9**		106.3	**106.3**		108.1	**108.1**	
525241.4	**525241.4**	**641.3**	**683687.0**	**683687.0**	**643.2**	**694510.5**	**694510.5**	**642.5**
44834.8	**44834.8**	**54.7**	85069.4	**85069.4**	**80.0**	100816.8	**100816.8**	**93.3**
286254.8	**286254.8**	**349.5**	343689.6	**343689.6**	**323.3**	356841.2	**356841.2**	**330.1**
180880.7	**180880.7**	**220.9**	216217.9	**216217.9**	**203.4**	217119.3	**217119.3**	**200.9**
11750.0	**11750.0**	**14.3**	24084.0	**24084.0**	**22.7**	15234.8	**15234.8**	**14.1**
106.0	**106.0**		214.8	**214.8**		439.7	**439.7**	
679746.8	**679746.8**	**641.3**	1378304.5	**1378304.5**	**641.7**	2818679.9	**2818679.9**	**641.0**
72742.6	**72742.6**	**68.6**	196851.8	**196851.8**	**91.6**	713235.7	**713235.7**	**162.2**
355317.4	**355317.4**	**335.2**	701374.6	**701374.6**	**326.5**	1291744.0	**1291744.0**	**293.8**
235999.3	**235999.3**	**222.6**	418239.6	**418239.6**	**194.7**	684361.8	**684361.8**	**155.6**
13577.7	**13577.7**	**12.8**	43608.8	**43608.8**	**20.3**	97159.5	**97159.5**	**22.1**
26.4	**26.4**		86.9	**86.9**		99.2	**99.2**	
169105.0	**169105.0**	**640.5**	559523.1	**559523.1**	**643.9**	637017.0	**637017.0**	**642.2**
18000.8	**18000.8**	**68.2**	64869.2	**64869.2**	**74.6**	89193.2	**89193.2**	**89.9**
88347.9	**88347.9**	**334.7**	285273.3	**285273.3**	**328.3**	332940.4	**332940.4**	**335.6**
60281.4	**60281.4**	**228.3**	179392.8	**179392.8**	**206.4**	199225.8	**199225.8**	**200.8**
2705.7	**2705.7**	**10.2**	18214.9	**18214.9**	**21.0**	13254.3	**13254.3**	**13.4**
147.7	**147.7**		393.5	**393.5**		59.3	**59.3**	
947716.3	**947716.3**	**641.6**	2519807.3	**2519807.3**	**640.4**	380528.2	**380528.2**	**641.7**
123968.2	**123968.2**	**83.9**	457762.2	**457762.2**	**116.3**	55488.3	**55488.3**	**93.6**
488110.7	**488110.7**	**330.5**	1259514.6	**1259514.6**	**320.1**	198545.7	**198545.7**	**334.8**
309707.4	**309707.4**	**209.7**	725115.0	**725115.0**	**184.3**	120626.7	**120626.7**	**203.4**
20653.6	**20653.6**	**14.0**	67259.3	**67259.3**	**17.1**	6050.8	**6050.8**	**10.2**
424.9	**424.9**		60.5	**60.5**		100.6	**100.6**	
2731762.2	**2731762.2**	**643.0**	387707.8	**387707.8**	**640.8**	646097.4	**646097.4**	**642.2**
287980.1	**287980.1**	**67.8**	73990.7	**73990.7**	**122.3**	89955.5	**89955.5**	**89.4**
1430316.0	**1430316.0**	**336.6**	194203.5	**194203.5**	**321.0**	337757.7	**337757.7**	**335.7**
816632.3	**816632.3**	**192.2**	99731.1	**99731.1**	**164.8**	202661.3	**202661.3**	**201.5**
123544.6	**123544.6**	**29.1**	14805.6	**14805.6**	**24.5**	13123.7	**13123.7**	**13.0**
78.0	**78.0**		89.9	**89.9**		126.2	**126.2**	
501875.0	**501875.0**	**643.1**	578117.4	**578117.4**	**643.1**	810273.1	**810273.1**	**642.1**
45156.2	**45156.2**	**57.9**	87408.9	**87408.9**	**97.2**	104578.7	**104578.7**	**82.9**
251379.9	**251379.9**	**322.1**	290474.6	**290474.6**	**323.1**	423422.3	**423422.3**	**335.5**
162201.0	**162201.0**	**207.8**	180586.6	**180586.6**	**200.9**	260416.9	**260416.9**	**206.4**
24476.8	**24476.8**	**31.4**	13485.8	**13485.8**	**15.0**	17667.8	**17667.8**	**14.0**
20.6	**20.6**		100.9	**100.9**		59.1	**59.1**	
132380.7	**132380.7**	**642.0**	645842.5	**645842.5**	**640.1**	380945.7	**380945.7**	**644.2**
15183.9	**15183.9**	**73.6**	149262.3	**149262.3**	**147.9**	39372.4	**39372.4**	**66.6**
68991.8	**68991.8**	**334.6**	313515.4	**313515.4**	**310.7**	210605.5	**210605.5**	**356.2**
39758.8	**39758.8**	**192.8**	155121.4	**155121.4**	**153.7**	106767.8	**106767.8**	**180.6**
5697.9	**5697.9**	**27.6**	22958.5	**22958.5**	**22.8**	16027.7	**16027.7**	**27.1**
37.5	**37.5**		132.0	**132.0**		312.1	**312.1**	
239637.4	**239637.4**	**638.9**	846825.2	**846825.2**	**641.5**	1997769.6	**1997769.6**	**640.1**
53075.1	**53075.1**	**141.5**	149277.9	**149277.9**	**113.1**	386471.5	**386471.5**	**123.8**
108348.2	**108348.2**	**288.9**	424589.1	**424589.1**	**321.7**	1000277.3	**1000277.3**	**320.5**
69490.6	**69490.6**	**185.3**	234705.3	**234705.3**	**177.8**	584536.7	**584536.7**	**187.3**
7683.0	**7683.0**	**20.5**	28404.2	**28404.2**	**21.5**	34361.5	**34361.5**	**11.0**
35.6	**35.6**		109.9	**109.9**		254.8	**254.8**	
227601.4	**227601.4**	**638.6**	703870.4	**703870.4**	**640.4**	1625114.2	**1625114.2**	**637.8**
50111.1	**50111.1**	**140.6**	131417.3	**131417.3**	**119.6**	433926.6	**433926.6**	**170.3**
103533.3	**103533.3**	**290.5**	352881.8	**352881.8**	**321.1**	776949.0	**776949.0**	**304.9**
65615.9	**65615.9**	**184.1**	197574.0	**197574.0**	**179.8**	367968.3	**367968.3**	**144.4**
7459.6	**7459.6**	**20.9**	19350.4	**19350.4**	**17.6**	50183.7	**50183.7**	**19.7**
200.9	**200.9**		214.0	**214.0**		413.9	**413.9**	
1286534.0	**1286534.0**	**640.4**	1381706.8	**1381706.8**	**645.8**	2670029.9	**2670029.9**	**645.1**
387334.2	**387334.2**	**192.8**	85376.9	**85376.9**	**39.9**	220722.0	**220722.0**	**53.3**
541522.9	**541522.9**	**269.5**	767655.2	**767655.2**	**358.8**	1446482.7	**1446482.7**	**349.5**
312787.5	**312787.5**	**155.7**	415814.4	**415814.4**	**194.3**	793801.8	**793801.8**	**191.8**
36595.4	**36595.4**	**18.2**	66202.3	**66202.3**	**30.9**	124477.5	**124477.5**	**30.1**
#N/A	**#N/A**		60.9	**60.9**		373.2	**373.2**	
			390941.2	**390941.2**	**641.9**	2408063.2	**2408063.2**	**645.3**
			56274.8	**56274.8**	**92.4**	183100.3	**183100.3**	**49.1**
			196444.2	**196444.2**	**322.6**	1315251.2	**1315251.2**	**352.5**
			117566.4	**117566.4**	**193.0**	719719.9	**719719.9**	**192.9**
			14081.1	**14081.1**	**23.1**	112790.7	**112790.7**	**30.2**
						301.4	**301.4**	
						1941687.6	**1941687.6**	**644.1**
						222540.8	**222540.8**	**73.8**
						1014624.9	**1014624.9**	**336.6**
						563731.6	**563731.6**	**187.0**
						86815.6	**86815.6**	**28.8**
						71.1	**71.1**	
						454457.9	**454457.9**	**639.2**
						83079.0	**83079.0**	**116.8**
						227655.3	**227655.3**	**320.2**
						138111.5	**138111.5**	**194.2**
						8218.3	**8218.3**	**11.6**

Sulfur

	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b
AREA (ha)	**81.9**	**106.0**	**26.4**	**147.7**	**424.9**	**78.0**	**20.6**	**37.5**	**35.6**	**200.9**
SUPPLY	641.3	641.3	640.5	641.6	643.0	643.1	642.0	638.9	638.6	640.4
RO	54.7	68.6	68.2	83.9	67.8	57.9	73.6	141.5	140.6	192.8
ET	349.5	335.2	334.7	330.5	336.6	322.1	334.6	288.9	290.5	269.5
AGWO	220.9	222.6	228.3	209.7	192.2	207.8	192.8	185.3	184.1	155.7
IGWI	14.3	12.8	10.2	14.0	29.1	31.4	27.6	20.5	20.9	18.2
Error (%)	0.3	0.3	-0.1	0.6	2.7	3.7	2.1	0.4	0.4	0.6

Welland

	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24
AREA (ha)	**106.3**	**214.8**	**86.9**	**393.5**	**60.5**	**89.9**	**100.9**	**132.0**	**109.9**	**214.0**	**60.9**
SUPPLY	643.2	641.7	643.9	640.4	640.8	643.1	640.1	641.5	640.4	645.8	641.9
RO	80.0	91.6	74.6	116.3	122.3	97.2	147.9	113.1	119.6	39.9	92.4
ET	323.3	326.5	328.3	320.1	321.0	323.1	310.7	321.7	321.1	358.8	322.6
AGWO	203.4	194.7	206.4	184.3	164.8	200.9	153.7	177.8	179.8	194.3	193.0
IGWI	22.7	20.3	21.0	17.1	24.5	15.0	22.8	21.5	17.6	30.9	23.1
Error (%)	2.1	1.3	2.1	0.4	1.3	1.1	0.8	1.2	0.4	3.4	1.7

Twenty-Mile

	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
AREA (ha)	**108.1**	**439.7**	**99.2**	**59.3**	**100.6**	**126.2**	**59.1**	**312.1**	**254.8**	**413.9**	**373.2**	**301.4**	**71.1**
SUPPLY	642.5	641.0	642.2	641.7	642.2	642.1	644.2	640.1	637.8	645.1	645.3	644.1	639.2
RO	93.3	162.2	89.9	93.6	89.4	82.9	66.6	123.8	170.3	53.3	49.1	73.8	116.8
ET	330.1	293.8	335.6	334.8	335.7	335.5	356.2	320.5	304.9	349.5	352.5	336.6	320.2
AGWO	200.9	155.6	200.8	203.4	201.5	206.4	180.6	187.3	144.4	191.8	192.9	187.0	194.2
IGWI	14.1	22.1	13.4	10.2	13.0	14.0	27.1	11.0	19.7	30.1	30.2	28.8	11.6
Error (%)	0.6	1.1	0.4	0.0	0.4	0.5	2.1	-0.4	-0.2	3.2	3.2	2.8	-0.6

Sulfur											
	S-5	**S-6**	**S-7**	**S-8**	**S-9**	**S-10**	**S-11**	**S-12**	**S-13a**	**S-13b**	**AVERAGE**
AREA (ha)	82	106	26	148	425	78	21	38	36	201	
SUPPLY (mm)	641	641	641	642	643	643	642	639	639	640	641
RO (mm)	55	69	68	84	68	58	74	141	141	193	95
ET (mm)	350	335	335	330	337	322	335	289	290	270	319
AGWO (mm)	221	223	228	210	192	208	193	185	184	156	
IGWI (mm)	14	13	10	14	29	31	28	20	21	18	
Infil (mm)	235	235	239	224	221	239	220	206	205	174	220
Error (%)	0.29	4.77	1.19	2.25	2.57	3.53	2.18	1.14	1.07	0.89	

Welland												
	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-23**	**W-24**	**AVERAGE**
AREA (ha)	106	215	87	394	61	90	101	132	110	214	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	646	642	642
RO (mm)	80	92	75	116	122	97	148	113	120	40	92	100
ET (mm)	323	327	328	320	321	323	311	322	321	359	323	325
AGWO (mm)	203	195	206	184	165	201	154	178	180	194	193	
IGWI (mm)	23	20	21	17	24	15	23	22	18	31	23	
Infil (mm)	226	215	227	201	189	216	176	199	197	225	216	206
Error (%)	2.14	3.77	3.54	2.36	2.58	3.28	2.69	3.01	2.94	3.36	2.31	

Twenty-Mile														
	T-25	**T-26**	**T-27**	**T-28**	**T-29**	**T-30**	**T-31**	**T-32**	**T-33**	**T-34**	**T-35**	**T-36**	**T-37**	**AVERAGE**
AREA (ha)	108	440	99	59	101	126	59	312	255	414	373	301	71	
SUPPLY (mm)	642	641	642	642	642	642	644	640	638	645	645	644	639	642
RO (mm)	93	162	90	94	89	83	67	124	170	53	49	74	117	92
ET (mm)	330	294	336	335	336	336	356	320	305	349	352	337	320	335
AGWO (mm)	201	156	201	203	201	206	181	187	144	192	193	187	194	
IGWI (mm)	14	22	13	10	13	14	27	11	20	30	30	29	12	
Infil (mm)	215	178	214	214	214	220	208	198	164	222	223	216	206	207
Error (%)	0.65	1.14	0.38	-0.05	0.40	0.52	2.15	-0.39	-0.24	3.17	3.21	2.78	-0.57	

Sulphur					
	S-5	**S-6**	**S-7**	**S-8**	**AVERAGE**
AREA (ha)	**82**	**106**	**26**	**148**	
SUPPLY (mm)	641	641	641	642	641
RO (mm)	55	69	68	84	69
ET (mm)	350	335	335	330	337
INFIL (mm)	235	235	239	224	233

Welland											
	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-24**	**AVERAGE**
AREA (ha)	106	215	87	394	61	90	101	132	110	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	642	642
RO (mm)	80	92	75	116	122	97	148	113	120	92	106
ET (mm)	323	327	328	320	321	323	311	322	321	323	322
INFIL (mm)	226	215	227	201	189	216	176	199	197	216	206

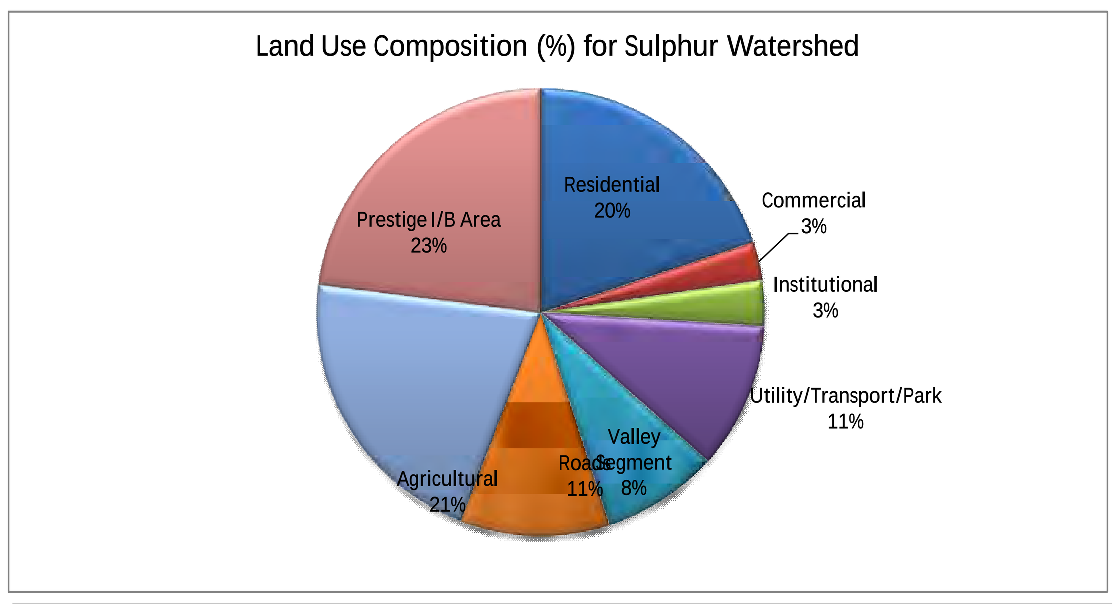
Twenty-Mile									
	T-25	**T-27**	**T-28**	**T-29**	**T-30**	**T-32**	**T-33**	**T-37**	**AVERAGE**
AREA (ha)	108	99	59	101	126	312	255	71	
SUPPLY (mm)	642	642	642	642	642	640	638	639	641
RO (mm)	93	90	94	89	83	124	170	117	108
ET (mm)	330	336	335	336	336	320	305	320	327
INFIL (mm)	215	214	214	214	220	198	164	206	206

LAND USE COMPOSITION (ha)

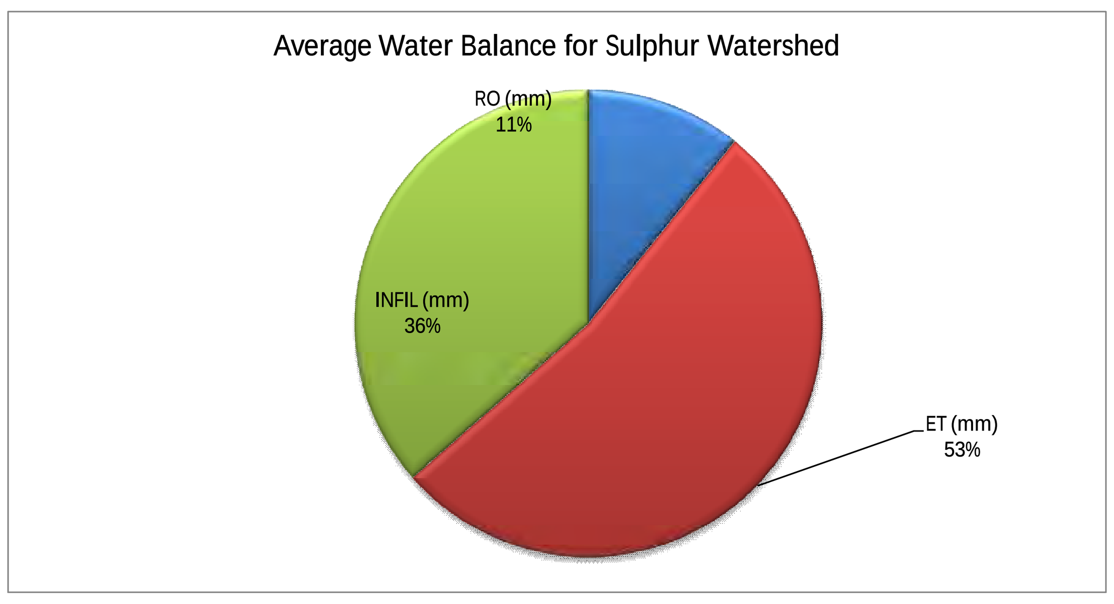
		SULFUR	**WELLAND**	**TWENTY-MILE**
Res Low Density	RLD5ab	147.13	2.28	48.00
Res Low Density	RLD5bc	63.57	6.59	82.99
Res Low Density	RLD5cd	1.30	6.88	63.98
Res Med Denisty	RMD5ab	10.93	0.00	12.34
Res Med Denisty	RMD5bc	6.03	0.00	13.79
Res Med Denisty	RMD5cd	0.00	0.00	8.44
Res High Density	RHD5ab	1.36	0.00	21.41
Res High Density	RHD5bc	0.92	0.00	23.74
Res High Density	RHD5cd	0.00	0.00	14.43
Commercial	CSM1bc	32.21	0.00	11.47
Institutional	EIS1ab	22.79	62.10	32.09
Institutional	EIS1bc	14.95	125.00	101.91
Institutional	EIS1cd	0.00	139.50	149.56
Utility/Transport/Parks	OPL0ab	77.45	58.10	38.11
Utility/Transport/Parks	OPL0bc	38.35	81.10	86.88
Utility/Transport/Parks	OPL0cd	7.20	66.50	102.10
Valley Segment	OVL0ab	60.97	13.66	43.33
Valley Segment	OVL0bc	35.43	27.93	107.44
Valley Segment	OVL0cd	1.40	28.41	103.31
Roads	THC0ab	118.26	19.00	2.60
Roads	THC0bc	4.20	31.80	8.90
Roads and ROW	THC0cd	3.10	31.82	95.29
Agricultural Tilled	AGT0ab	155.61	94.99	140.54
Agricultural Tilled	AGT0bc	83.39	176.12	407.14
Agricultural Tilled	AGT0cd	1.90	173.48	376.67
Agricultural Pasture/forest	AGPab	3.53	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.91	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00
Industrial/Prestige	IPRab	24.60	38.10	36.50
Industrial/Prestige	IPRbc	15.50	59.60	92.40
Industrial/Prestige	IPRcd	8.70	44.80	164.20
Prestige Business Park	IPEab	139.60	66.40	38.00
Prestige Business Park	IPEbc	45.80	110.60	114.70
Prestige Business Park	IPEcd	32.50	104.80	176.50

LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Res. Low Density	212.00	15.75	194.97
Res. Med Denisty	16.96	0.00	34.57
Res. High Density	2.28	0.00	59.58
Commercial	32.21	0.00	11.47
Institutional	37.74	326.60	283.56
Utility/Transport/Park	123.00	205.70	227.09
Valley Segment	97.80	70.00	254.09
Roads	125.56	82.62	106.79
Agricultural Tilled	240.90	444.59	924.35
Agricultural Pasture/forest	4.44	0.00	0.00
Industrial/Prestige	48.80	142.50	293.10
Prestige Business Park	217.90	281.80	329.20
TOTAL	1159.59	1569.56	2718.76

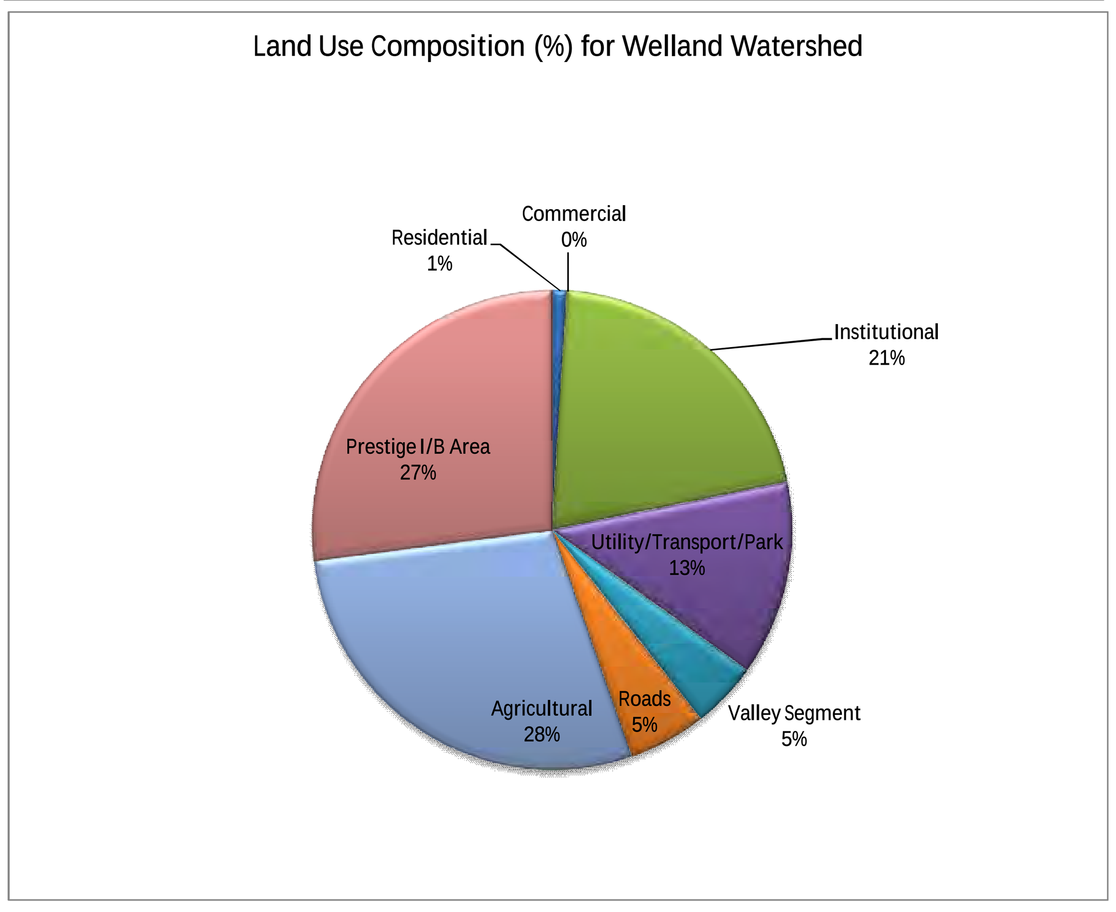
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Residential	231.2	15.8	289.1
Commercial	32.2	0.0	11.5
Institutional	37.7	326.6	283.6
Utility/Transport/Park	123.0	205.7	227.1
Valley Segment	97.8	70.0	254.1
Roads	125.6	82.6	106.8
Agricultural	245.3	444.6	924.4
Prestige I/B Area	266.70	424.30	622.30
TOTAL	1159.59	1569.56	2718.76



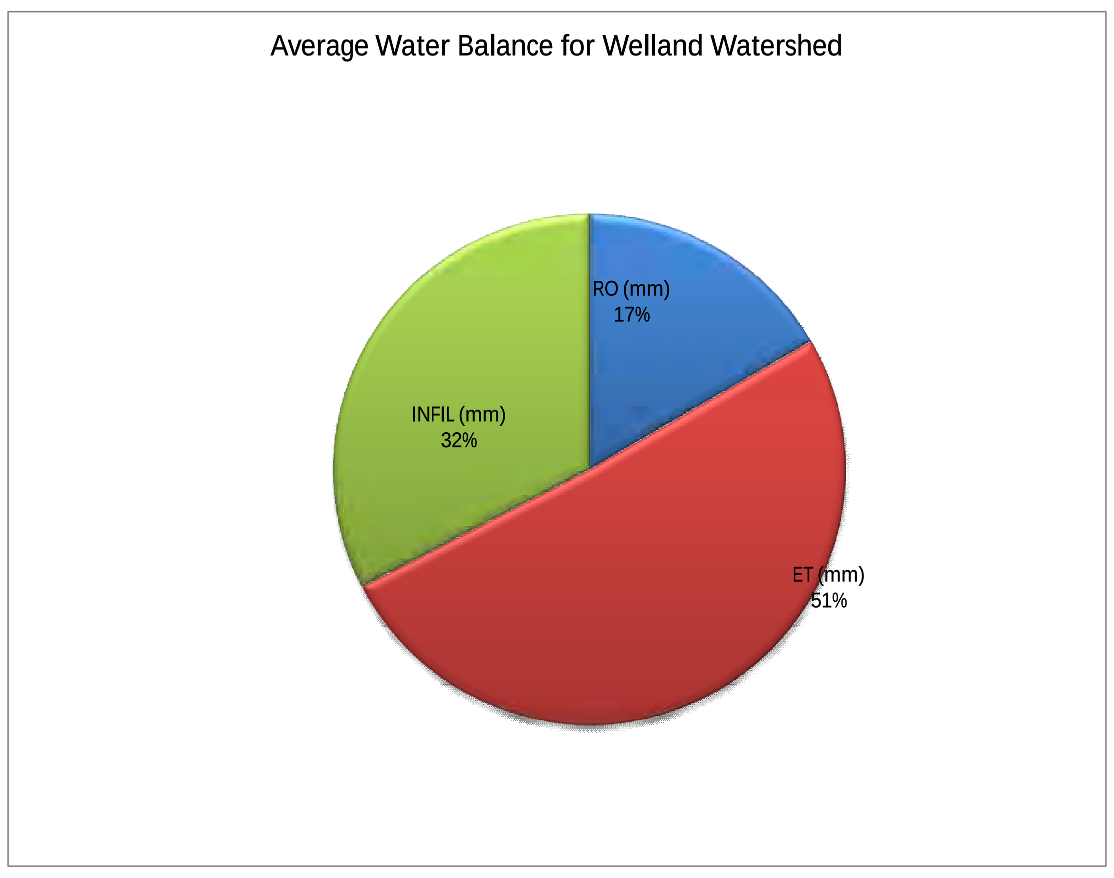
Land Use Composition (%) for Sulphur Watershed



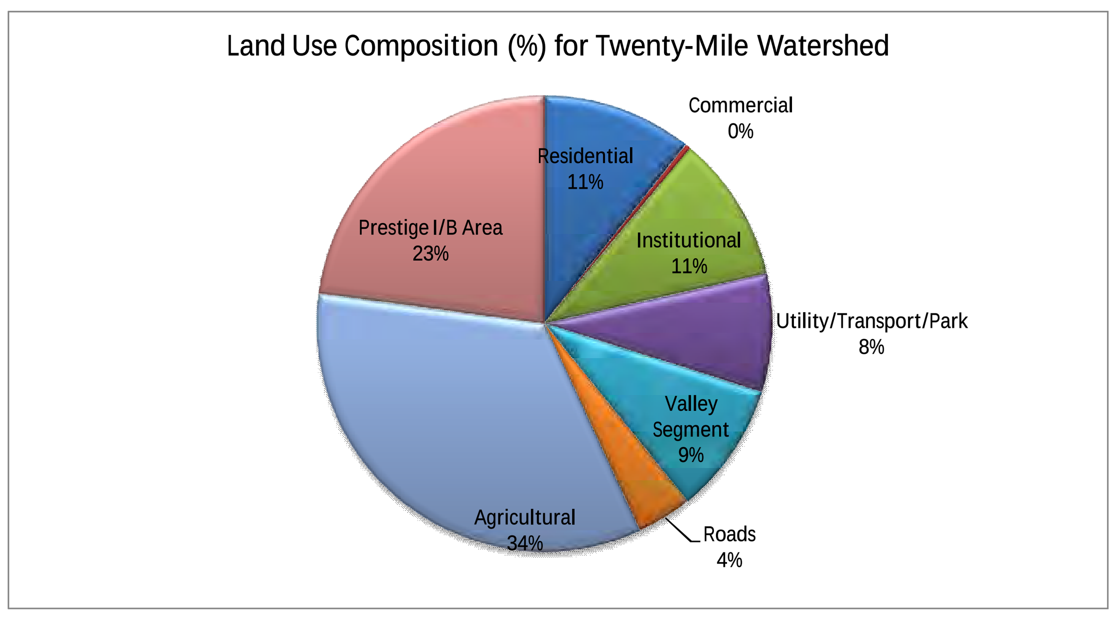
Average Water Balance for Sulphur Watershed



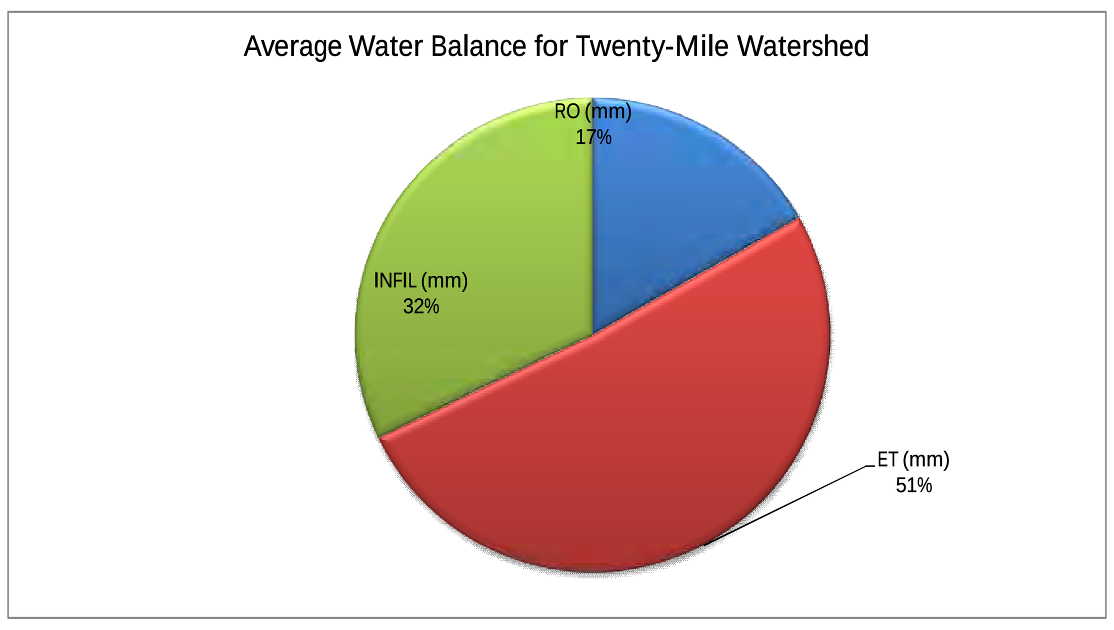
Land Use Composition (%) for Welland Watershed



Average Water Balance for Welland Watershed



Land Use Composition (%) for Twenty-Mile Watershed



Average Water Balance for Twenty-Mile Watershed

AVERAGES:

Annual Average URF Output Data (mm)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001		5003	6201	6202	6203	6301	6302	6303						
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501		5503	6701	6702	6703	6801	6802	6803						
	Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	Total Moisture Supply = SUPY (Pervious)
Year	Month
1991-1996	**JAN**	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	46.4	46.4	46.4	46.4	46.4	46.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.3	14.3
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	629.9	629.9	629.9	629.9	629.9	629.9
	Total Moisture Supply = SUPY (Impervious)
1991-1996	**JAN**	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0	37.7	37.7	37.7	37.7	37.7	37.7
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0	644.2	644.2	644.2	644.2	644.2	644.2
	SURLI = SURLI (Pervious)
1991-1996	**JAN**	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SURLI = SURLI (Impervious)
1991-1996	**JAN**	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	217.1	218.3	224.1	282.9	285.4	297.6
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.7	80.0	80.0	80.7
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	131.6	131.7	133.4	171.4	171.6	175.2
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	362.7	363.0	368.1	472.5	473.2	483.7
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	324.2	325.3	335.4	422.3	424.8	445.9
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	261.1	263.0	273.1	340.2	344.2	365.3
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.6	450.5	465.8	584.3	588.4	620.5
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	257.3	259.0	269.3	335.2	338.7	360.3
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	174.9	175.2	177.8	227.8	228.4	234.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	388.1	389.2	398.0	505.6	507.8	526.2
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	308.2	308.6	311.5	401.5	402.3	408.3
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.5	68.6	68.9	89.2	89.4	90.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,003.8	3,013.9	3,087.0	3,912.9	3,934.1	4,087.7
	Runoff = SURO+IFWO (pervious areas)
1991-1996	**JAN**	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	57.0	75.9	0.3	1.6	6.6	0.3	1.6	6.6	0.2	1.6	6.4	0.2	1.6	6.4
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	16.4	21.8	0.1	0.3	1.7	0.1	0.3	1.7	0.1	0.2	1.1	0.1	0.2	1.1
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	19.9	33.7	0.1	0.3	1.8	0.1	0.3	1.9	0.0	0.2	1.8	0.0	0.2	1.8
1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	67.0	102.0	0.3	1.6	7.4	0.3	1.6	7.4	0.2	1.1	7.1	0.2	1.1	7.1
1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	84.1	113.2	0.7	2.7	9.7	0.7	2.7	9.7	0.5	2.2	10.2	0.5	2.2	10.2
1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	74.3	93.3	0.6	2.6	8.3	0.6	2.6	8.4	0.4	2.5	8.6	0.4	2.5	8.6
1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	112.7	149.9	0.4	2.8	10.7	0.4	2.8	10.9	0.2	2.4	11.5	0.2	2.4	11.5
1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	75.4	88.9	0.3	1.9	7.8	0.3	1.9	7.9	0.2	1.8	7.6	0.2	1.8	7.6
1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	35.3	47.0	0.3	1.3	3.8	0.3	1.3	3.8	0.2	1.0	3.2	0.2	1.0	3.2
1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	92.9	114.9	0.2	2.7	9.0	0.2	2.7	9.1	0.1	1.3	6.7	0.1	1.3	6.7
1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	70.8	94.1	0.3	1.4	6.2	0.3	1.4	6.1	0.1	0.6	3.5	0.1	0.6	3.5
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	15.7	20.9	0.1	0.3	1.4	0.1	0.3	1.3	0.0	0.2	0.9	0.0	0.2	0.9
	ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	721.6	955.7	3.6	19.4	74.3	3.6	19.5	74.8	2.3	15.0	68.6	2.3	15.0	68.6
	Runoff = SURO (impervious areas)
1991-1996	**JAN**	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	252.6	253.8	259.6	318.4	320.9	333.1
1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	71.4	71.7	89.9	90.0	90.7
1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0	153.3	153.4	155.2	193.2	193.4	197.0
1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0	423.3	423.7	428.7	533.1	533.8	544.4
1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0	379.1	380.2	390.3	477.3	479.7	500.8
1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	305.5	307.4	317.4	384.6	388.6	409.6
1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0	524.3	526.2	541.5	660.0	664.0	696.1
1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	301.6	303.3	313.6	379.5	383.0	404.6
1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0	204.8	205.1	207.8	257.7	258.3	263.9
1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0	453.0	454.1	462.8	570.4	572.7	591.0
1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0	359.3	359.7	362.5	452.6	453.3	459.4
1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0	79.9	79.9	80.2	100.6	100.8	101.4
	ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0	3,508.1	3,518.2	3,591.4	4,417.2	4,438.5	4,592.0
	(IMPEV)
1991-1996	**JAN**	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0
1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	15.0	15.0	15.0	15.0	15.0
1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	18.0	18.0	18.0
1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0	17.4	17.4	17.4	17.4	17.4	17.4
1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	21.0	21.0	21.0	21.0	21.0
1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	17.0	17.0	17.0	17.0	17.0
1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5	12.5	12.5	12.5	12.5	12.5
1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0	15.8	15.8	15.8	15.8	15.8	15.8
1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.1	11.1	11.1	11.1	11.1
1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9
	ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0	139.9	139.9	139.9	139.9	139.9	139.9
	(TAET)
1991-1996	**JAN**	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9
1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.2	2.3	2.3
1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4	7.5	7.3	7.5	7.6	7.3	7.5	7.6
1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.3	25.0	23.3	24.3	24.4	23.3	24.3	24.4	23.9	24.6	24.7	23.9	24.6	24.7
1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	52.4	50.5	44.6	47.5	45.8	44.6	47.5	45.8	46.9	49.0	48.0	46.9	49.0	48.0
1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	64.3	60.2	51.3	53.0	50.7	51.3	53.0	50.7	56.4	57.7	56.1	56.4	57.7	56.1
1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	77.0	71.5	61.1	63.1	61.3	61.1	63.1	61.3	66.5	68.0	66.5	66.5	68.0	66.5
1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	73.1	66.6	55.6	58.8	56.1	55.6	58.8	56.1	61.3	63.7	61.5	61.3	63.7	61.5
1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	48.5	44.9	38.4	38.4	36.3	38.4	38.4	36.3	43.6	43.7	41.7	43.6	43.7	41.7
1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	37.4	36.0	30.7	31.4	31.8	30.7	31.4	31.8	33.0	33.5	33.5	33.0	33.5	33.5
1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.7	14.6	13.5	13.8	14.3	13.5	13.8	14.3	38.6	36.6	32.0	38.6	36.6	32.0
1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1	4.5	4.2	4.3	4.5	4.2	4.3	4.5
	ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	409.5	385.9	333.6	345.8	336.8	333.6	345.8	336.8	385.9	392.7	380.3	385.9	392.7	380.3
	(IFWO)
1991-1996	**JAN**	0.2	1.3	4.2	0.3	1.5	4.8	0.6	2.1	6.1	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	30.6	38.2	36.1	0.3	1.5	6.3	0.3	1.5	6.3	0.2	1.1	3.9	0.2	1.1	3.9
1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.7	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	9.4	13.4	13.5	0.1	0.3	1.6	0.1	0.3	1.6	0.0	0.2	1.0	0.0	0.2	1.0
1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.4	0.1	0.5	1.9	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	9.5	12.9	14.9	0.0	0.3	1.8	0.0	0.3	1.8	0.0	0.2	1.2	0.0	0.2	1.2
1991-1996	APR	0.2	1.0	5.5	0.2	1.3	6.3	0.4	2.1	7.9	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	32.5	41.5	45.1	0.3	1.5	7.1	0.3	1.5	7.1	0.2	0.9	5.1	0.2	0.9	5.1
1991-1996	MAY	0.4	1.9	6.9	0.6	2.4	7.7	0.9	3.5	9.1	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	41.1	43.6	41.0	0.7	2.6	8.9	0.7	2.6	8.8	0.4	1.7	6.2	0.4	1.7	6.2
1991-1996	JUN	0.4	2.1	4.9	0.6	2.6	5.4	0.9	3.5	6.4	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	36.9	36.8	31.8	0.5	2.6	6.7	0.5	2.6	6.5	0.4	1.8	4.4	0.4	1.8	4.4
1991-1996	JUL	0.2	2.0	5.6	0.3	2.5	6.4	0.6	3.6	7.8	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	40.8	39.3	32.8	0.3	2.7	9.2	0.3	2.7	9.1	0.2	1.7	5.4	0.2	1.7	5.4
1991-1996	AUG	0.2	1.3	3.5	0.3	1.7	4.0	0.5	2.5	4.9	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	29.6	29.1	25.4	0.2	1.8	5.9	0.2	1.8	5.8	0.1	1.1	3.4	0.1	1.1	3.4
1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.6	0.5	1.7	3.1	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	15.8	16.2	14.7	0.3	1.3	3.7	0.3	1.3	3.6	0.2	0.9	2.2	0.2	0.9	2.2
1991-1996	OCT	0.1	1.1	3.4	0.1	1.6	3.9	0.3	2.6	5.0	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	38.5	46.3	40.7	0.2	2.5	5.5	0.2	2.5	5.4	0.1	0.9	3.2	0.1	0.9	3.2
1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.3	0.2	1.2	4.2	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	39.4	49.6	44.1	0.2	1.3	6.0	0.2	1.3	5.9	0.1	0.5	2.5	0.1	0.5	2.5
1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.4	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	9.4	14.1	15.7	0.1	0.3	1.3	0.1	0.3	1.3	0.0	0.1	0.8	0.0	0.1	0.8
	ANNUAL	2.1	12.8	42.1	2.9	16.5	48.1	5.1	24.1	59.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	333.4	381.1	355.9	3.2	18.6	64.1	3.2	18.6	63.2	1.8	11.1	39.2	1.8	11.1	39.2
	(AGWO)
1991-1996	**JAN**	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	41.7	29.9	18.3	17.1	14.8	18.3	17.1	14.8	17.2	16.2	13.5	17.2	16.2	13.5
1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	37.0	26.3	16.2	15.3	13.3	16.2	15.3	13.3	15.2	14.4	12.2	15.2	14.4	12.2
1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	38.4	27.5	16.6	15.6	13.8	16.6	15.6	13.7	15.5	14.8	12.7	15.5	14.8	12.7
1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	39.1	27.9	16.5	15.6	13.9	16.5	15.6	13.8	15.5	14.8	12.9	15.5	14.8	12.9
1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	46.2	32.6	19.3	18.3	16.2	19.3	18.3	16.1	18.2	17.4	15.2	18.2	17.4	15.2
1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	45.1	31.7	19.2	17.9	15.6	19.2	17.9	15.5	18.2	17.2	14.7	18.2	17.2	14.7
1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	47.1	33.0	20.6	18.9	16.3	20.6	18.9	16.2	19.6	18.2	15.3	19.6	18.2	15.3
1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	48.2	33.9	21.3	19.2	16.6	21.3	19.2	16.5	20.3	18.5	15.5	20.3	18.5	15.5
1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	44.4	31.4	19.6	17.7	15.1	19.6	17.7	15.1	18.7	17.0	14.1	18.7	17.0	14.1
1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	47.3	34.0	21.1	19.0	16.1	21.1	19.0	16.0	20.0	18.2	14.6	20.0	18.2	14.6
1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	50.0	36.1	22.1	20.1	17.0	22.1	20.1	17.0	17.1	15.8	12.9	17.1	15.8	12.9
1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	50.2	36.2	21.9	20.2	17.2	21.9	20.2	17.2	20.5	19.0	15.6	20.5	19.0	15.6
	ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	534.6	380.6	232.6	214.9	185.7	232.6	214.9	185.4	216.0	201.4	169.4	216.0	201.4	169.4
	(AGWI)
1991-1996	**JAN**	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	46.5	31.6	22.8	22.6	19.7	22.8	22.6	19.7	20.6	21.1	18.3	20.6	21.1	18.3
1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	18.0	12.4	6.1	6.1	6.3	6.1	6.1	6.3	5.5	5.7	5.9	5.5	5.7	5.9
1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	32.6	24.5	11.4	11.0	10.8	11.4	11.0	10.8	10.9	10.6	10.4	10.9	10.6	10.4
1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	86.1	59.5	33.7	32.3	29.4	33.7	32.3	29.3	32.1	31.1	28.8	32.1	31.1	28.8
1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	55.7	37.8	26.5	23.6	18.5	26.5	23.6	18.4	25.6	23.2	18.0	25.6	23.2	18.0
1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	42.3	28.8	19.9	17.0	13.5	19.9	17.0	13.5	19.4	16.8	12.9	19.4	16.8	12.9
1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	61.2	42.1	29.5	25.1	21.4	29.5	25.1	21.3	28.6	24.3	19.3	28.6	24.3	19.3
1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	35.7	27.5	15.5	13.2	11.4	15.5	13.2	11.3	15.3	13.0	9.9	15.3	13.0	9.9
1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	30.9	24.1	13.4	11.7	9.4	13.4	11.7	9.4	12.5	11.1	8.2	12.5	11.1	8.2
1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	75.8	56.6	33.8	31.2	25.2	33.8	31.1	25.1	30.6	28.1	20.5	30.6	28.1	20.5
1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	70.7	50.3	31.0	30.2	26.2	31.0	30.2	26.2	20.3	19.7	16.6	20.3	19.7	16.6
1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	21.4	15.5	7.7	8.1	7.5	7.7	8.1	7.5	7.3	7.6	7.2	7.3	7.6	7.2
	ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	576.8	410.7	251.5	231.9	199.2	251.5	231.9	198.8	228.7	212.3	176.0	228.7	212.3	176.0
	(IGWI)
1991-1996	**JAN**	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	6.9	4.7	3.4	3.4	2.9	3.4	3.4	2.9	3.1	3.1	2.7	3.1	3.1	2.7
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	2.7	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.9
1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	4.9	3.7	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	12.9	8.9	5.0	4.8	4.4	5.0	4.8	4.4	4.8	4.6	4.3	4.8	4.6	4.3
1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	8.3	5.6	4.0	3.5	2.8	4.0	3.5	2.8	3.8	3.5	2.7	3.8	3.5	2.7
1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	6.3	4.3	3.0	2.5	2.0	3.0	2.5	2.0	2.9	2.5	1.9	2.9	2.5	1.9
1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	9.1	6.3	4.4	3.8	3.2	4.4	3.7	3.2	4.3	3.6	2.9	4.3	3.6	2.9
1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	5.3	4.1	2.3	2.0	1.7	2.3	2.0	1.7	2.3	1.9	1.5	2.3	1.9	1.5
1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	4.6	3.6	2.0	1.7	1.4	2.0	1.7	1.4	1.9	1.7	1.2	1.9	1.7	1.2
1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	11.3	8.5	5.1	4.7	3.8	5.1	4.7	3.8	4.6	4.2	3.1	4.6	4.2	3.1
1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	10.6	7.5	4.6	4.5	3.9	4.6	4.5	3.9	3.0	2.9	2.5	3.0	2.9	2.5
1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	3.2	2.3	1.2	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	86.2	61.4	37.6	34.7	29.8	37.6	34.7	29.7	34.2	31.7	26.3	34.2	31.7	26.3

AVERAGES:

Adjusted URF Values

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001		5003	6201	6202	6203	6301	6302	6303						
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501		5503	6701	6702	6703	6801	6802	6803						
	Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	Total Moisture Supply = SUPY (Pervious)																																		
Year	Month																																		
1991-1996	**JAN**	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	46.4	46.4	46.4	46.4	46.4	46.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.3	14.3
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	629.9	629.9	629.9	629.9	629.9	629.9
	Total Moisture Supply = SUPY (Impervious)																																		
1991-1996	**JAN**	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0	37.7	37.7	37.7	37.7	37.7	37.7
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0	644.2	644.2	644.2	644.2	644.2	644.2
	SURLI = SURLI (Pervious)																																		
1991-1996	**JAN**	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SURLI = SURLI (Impervious)																																		
1991-1996	**JAN**	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	217.1	218.3	224.1	282.9	285.4	297.6
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.7	80.0	80.0	80.7
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	131.6	131.7	133.4	171.4	171.6	175.2
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	362.7	363.0	368.1	472.5	473.2	483.7
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	324.2	325.3	335.4	422.3	424.8	445.9
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	261.1	263.0	273.1	340.2	344.2	365.3
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.6	450.5	465.8	584.3	588.4	620.5
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	257.3	259.0	269.3	335.2	338.7	360.3
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	174.9	175.2	177.8	227.8	228.4	234.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	388.1	389.2	398.0	505.6	507.8	526.2
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	308.2	308.6	311.5	401.5	402.3	408.3
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.5	68.6	68.9	89.2	89.4	90.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,003.8	3,013.9	3,087.0	3,912.9	3,934.1	4,087.7
	Runoff = SURO+IFWO (pervious areas)																																		
1991-1996	**JAN**	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	18.4	24.5	0.3	1.6	6.6	0.3	1.6	6.6	0.2	1.6	6.4	0.2	1.6	6.4
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	5.3	7.0	0.1	0.3	1.7	0.1	0.3	1.7	0.1	0.2	1.1	0.1	0.2	1.1
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	7.0	11.9	0.1	0.3	1.8	0.1	0.3	1.9	0.0	0.2	1.8	0.0	0.2	1.8
1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	23.4	35.5	0.3	1.6	7.4	0.3	1.6	7.4	0.2	1.1	7.1	0.2	1.1	7.1
1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	30.4	40.9	0.7	2.7	9.7	0.7	2.7	9.7	0.5	2.2	10.2	0.5	2.2	10.2
1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	27.6	34.6	0.6	2.6	8.3	0.6	2.6	8.4	0.4	2.5	8.6	0.4	2.5	8.6
1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	39.9	53.1	0.4	2.8	10.7	0.4	2.8	10.9	0.2	2.4	11.5	0.2	2.4	11.5
1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	28.1	33.1	0.3	1.9	7.8	0.3	1.9	7.9	0.2	1.8	7.6	0.2	1.8	7.6
1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	13.3	17.7	0.3	1.3	3.8	0.3	1.3	3.8	0.2	1.0	3.2	0.2	1.0	3.2
1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	32.6	40.3	0.2	2.7	9.0	0.2	2.7	9.1	0.1	1.3	6.7	0.1	1.3	6.7
1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	24.3	32.3	0.3	1.4	6.2	0.3	1.4	6.1	0.1	0.6	3.5	0.1	0.6	3.5
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	5.5	7.3	0.1	0.3	1.4	0.1	0.3	1.3	0.0	0.2	0.9	0.0	0.2	0.9
	ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	255.7	338.7	3.6	19.4	74.3	3.6	19.5	74.8	2.3	15.0	68.6	2.3	15.0	68.6
	Runoff = SURO (impervious areas)																																		
1991-1996	**JAN**	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	37.4	37.4	37.4	37.4	37.4	37.4
1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	10.9	10.9	10.9	10.9	10.9
1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	26.9	26.9	26.9
1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0	73.1	73.1	73.1	73.6	73.6	73.6
1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0	69.2	69.2	69.3	69.8	69.9	70.0
1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	57.8	57.8	57.9	58.4	58.4	58.6
1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0	93.1	93.1	93.2	93.9	93.9	94.0
1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	58.1	58.1	58.2	58.7	58.8	58.9
1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0	39.8	39.8	39.8	40.3	40.3	40.3
1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0	78.7	78.7	78.8	79.3	79.3	79.4
1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0	60.5	60.5	60.5	60.9	60.9	60.9
1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0	13.7	13.7	13.7	13.8	13.8	13.8
	ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0	619.5	619.6	620.1	624.4	624.5	625.2
	(IMPEV)																																		
1991-1996	**JAN**	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.8	0.8	0.8
1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.1	2.1	2.0
1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.2	2.6	2.6	2.5
1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.2	2.6	2.6	2.5
1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.7	3.6	3.0	3.0	2.8
1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.1	2.6	2.6	2.5
1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.0	2.0	1.9
1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.2	2.2	2.1
1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.5	1.5	1.5
1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.4	0.4
	ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0	24.7	24.6	24.1	19.8	19.7	19.0
	(TAET)																																		
1991-1996	**JAN**	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	0.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9
1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	0.8	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.2	2.3	2.3
1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4	7.5	7.3	7.5	7.6	7.3	7.5	7.6
1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.8	8.7	23.3	24.3	24.4	23.3	24.3	24.4	23.9	24.6	24.7	23.9	24.6	24.7
1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.9	18.2	44.6	47.5	45.8	44.6	47.5	45.8	46.9	49.0	48.0	46.9	49.0	48.0
1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	23.8	22.3	51.3	53.0	50.7	51.3	53.0	50.7	56.4	57.7	56.1	56.4	57.7	56.1
1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	27.3	25.3	61.1	63.1	61.3	61.1	63.1	61.3	66.5	68.0	66.5	66.5	68.0	66.5
1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	27.2	24.8	55.6	58.8	56.1	55.6	58.8	56.1	61.3	63.7	61.5	61.3	63.7	61.5
1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	18.3	16.9	38.4	38.4	36.3	38.4	38.4	36.3	43.6	43.7	41.7	43.6	43.7	41.7
1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	13.1	12.6	30.7	31.4	31.8	30.7	31.4	31.8	33.0	33.5	33.5	33.0	33.5	33.5
1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.1	5.0	13.5	13.8	14.3	13.5	13.8	14.3	38.6	36.6	32.0	38.6	36.6	32.0
1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	1.7	3.9	4.1	4.5	3.9	4.1	4.5	4.2	4.3	4.5	4.2	4.3	4.5
	ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	145.1	136.8	333.6	345.8	336.8	333.6	345.8	336.8	385.9	392.7	380.3	385.9	392.7	380.3
	(IFWO)																																		
1991-1996	**JAN**	0.2	1.3	4.1	0.3	1.5	4.6	0.5	1.9	5.4	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	9.9	12.3	11.6	0.3	1.5	6.3	0.3	1.5	6.3	0.2	1.1	3.9	0.2	1.1	3.9
1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.5	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	3.0	4.3	4.3	0.1	0.3	1.6	0.1	0.3	1.6	0.0	0.2	1.0	0.0	0.2	1.0
1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.3	0.0	0.4	1.7	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	3.3	4.6	5.3	0.0	0.3	1.8	0.0	0.3	1.8	0.0	0.2	1.2	0.0	0.2	1.2
1991-1996	APR	0.2	1.0	5.4	0.2	1.3	6.0	0.3	1.9	7.1	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	11.3	14.5	15.7	0.3	1.5	7.1	0.3	1.5	7.1	0.2	0.9	5.1	0.2	0.9	5.1
1991-1996	MAY	0.4	1.8	6.8	0.5	2.3	7.4	0.8	3.2	8.2	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	14.8	15.7	14.8	0.7	2.6	8.9	0.7	2.6	8.8	0.4	1.7	6.2	0.4	1.7	6.2
1991-1996	JUN	0.4	2.0	4.8	0.5	2.5	5.2	0.8	3.2	5.8	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	13.7	13.6	11.8	0.5	2.6	6.7	0.5	2.6	6.5	0.4	1.8	4.4	0.4	1.8	4.4
1991-1996	JUL	0.2	2.0	5.5	0.3	2.4	6.1	0.5	3.2	7.0	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	14.5	13.9	11.6	0.3	2.7	9.2	0.3	2.7	9.1	0.2	1.7	5.4	0.2	1.7	5.4
1991-1996	AUG	0.2	1.3	3.4	0.2	1.6	3.8	0.5	2.3	4.4	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	11.0	10.8	9.5	0.2	1.8	5.9	0.2	1.8	5.8	0.1	1.1	3.4	0.1	1.1	3.4
1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.5	0.4	1.5	2.8	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	5.9	6.1	5.5	0.3	1.3	3.7	0.3	1.3	3.6	0.2	0.9	2.2	0.2	0.9	2.2
1991-1996	OCT	0.1	1.1	3.4	0.1	1.5	3.8	0.3	2.3	4.5	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	13.5	16.2	14.3	0.2	2.5	5.5	0.2	2.5	5.4	0.1	0.9	3.2	0.1	0.9	3.2
1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.2	0.2	1.1	3.8	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	13.5	17.0	15.2	0.2	1.3	6.0	0.2	1.3	5.9	0.1	0.5	2.5	0.1	0.5	2.5
1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.2	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	3.3	4.9	5.5	0.1	0.3	1.3	0.1	0.3	1.3	0.0	0.1	0.8	0.0	0.1	0.8
	ANNUAL	2.0	12.7	41.6	2.8	15.7	46.0	4.6	21.7	53.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	118.1	135.1	126.1	3.2	18.6	64.1	3.2	18.6	63.2	1.8	11.1	39.2	1.8	11.1	39.2
	(AGWO)																																		
1991-1996	**JAN**	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	13.4	9.6	18.3	17.1	14.8	18.3	17.1	14.8	17.2	16.2	13.5	17.2	16.2	13.5
1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	11.9	8.5	16.2	15.3	13.3	16.2	15.3	13.3	15.2	14.4	12.2	15.2	14.4	12.2
1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	13.6	9.7	16.6	15.6	13.8	16.6	15.6	13.7	15.5	14.8	12.7	15.5	14.8	12.7
1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	13.6	9.7	16.5	15.6	13.9	16.5	15.6	13.8	15.5	14.8	12.9	15.5	14.8	12.9
1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	16.7	11.8	19.3	18.3	16.2	19.3	18.3	16.1	18.2	17.4	15.2	18.2	17.4	15.2
1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	16.7	11.8	19.2	17.9	15.6	19.2	17.9	15.5	18.2	17.2	14.7	18.2	17.2	14.7
1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	16.7	11.7	20.6	18.9	16.3	20.6	18.9	16.2	19.6	18.2	15.3	19.6	18.2	15.3
1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	17.9	12.6	21.3	19.2	16.6	21.3	19.2	16.5	20.3	18.5	15.5	20.3	18.5	15.5
1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	16.7	11.8	19.6	17.7	15.1	19.6	17.7	15.1	18.7	17.0	14.1	18.7	17.0	14.1
1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	16.6	11.9	21.1	19.0	16.1	21.1	19.0	16.0	20.0	18.2	14.6	20.0	18.2	14.6
1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	17.2	12.4	22.1	20.1	17.0	22.1	20.1	17.0	17.1	15.8	12.9	17.1	15.8	12.9
1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	17.5	12.6	21.9	20.2	17.2	21.9	20.2	17.2	20.5	19.0	15.6	20.5	19.0	15.6
	ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	189.5	134.9	232.6	214.9	185.7	232.6	214.9	185.4	216.0	201.4	169.4	216.0	201.4	169.4
	(AGWI)																																		
1991-1996	**JAN**	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	15.0	10.2	22.8	22.6	19.7	22.8	22.6	19.7	20.6	21.1	18.3	20.6	21.1	18.3
1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	5.8	4.0	6.1	6.1	6.3	6.1	6.1	6.3	5.5	5.7	5.9	5.5	5.7	5.9
1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	11.5	8.6	11.4	11.0	10.8	11.4	11.0	10.8	10.9	10.6	10.4	10.9	10.6	10.4
1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	30.0	20.7	33.7	32.3	29.4	33.7	32.3	29.3	32.1	31.1	28.8	32.1	31.1	28.8
1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	20.1	13.6	26.5	23.6	18.5	26.5	23.6	18.4	25.6	23.2	18.0	25.6	23.2	18.0
1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	15.7	10.7	19.9	17.0	13.5	19.9	17.0	13.5	19.4	16.8	12.9	19.4	16.8	12.9
1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	21.7	14.9	29.5	25.1	21.4	29.5	25.1	21.3	28.6	24.3	19.3	28.6	24.3	19.3
1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	13.3	10.3	15.5	13.2	11.4	15.5	13.2	11.3	15.3	13.0	9.9	15.3	13.0	9.9
1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	11.6	9.1	13.4	11.7	9.4	13.4	11.7	9.4	12.5	11.1	8.2	12.5	11.1	8.2
1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	26.5	19.8	33.8	31.2	25.2	33.8	31.1	25.1	30.6	28.1	20.5	30.6	28.1	20.5
1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	24.3	17.3	31.0	30.2	26.2	31.0	30.2	26.2	20.3	19.7	16.6	20.3	19.7	16.6
1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	7.5	5.4	7.7	8.1	7.5	7.7	8.1	7.5	7.3	7.6	7.2	7.3	7.6	7.2
	ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	204.4	145.5	251.5	231.9	199.2	251.5	231.9	198.8	228.7	212.3	176.0	228.7	212.3	176.0
	(IGWI)																																		
1991-1996	**JAN**	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	2.2	1.5	3.4	3.4	2.9	3.4	3.4	2.9	3.1	3.1	2.7	3.1	3.1	2.7
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.9	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.9
1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.7	1.3	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	4.5	3.1	5.0	4.8	4.4	5.0	4.8	4.4	4.8	4.6	4.3	4.8	4.6	4.3
1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	3.0	2.0	4.0	3.5	2.8	4.0	3.5	2.8	3.8	3.5	2.7	3.8	3.5	2.7
1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	2.3	1.6	3.0	2.5	2.0	3.0	2.5	2.0	2.9	2.5	1.9	2.9	2.5	1.9
1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	3.2	2.2	4.4	3.8	3.2	4.4	3.7	3.2	4.3	3.6	2.9	4.3	3.6	2.9
1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	2.0	1.5	2.3	2.0	1.7	2.3	2.0	1.7	2.3	1.9	1.5	2.3	1.9	1.5
1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.7	1.4	2.0	1.7	1.4	2.0	1.7	1.4	1.9	1.7	1.2	1.9	1.7	1.2
1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	4.0	3.0	5.1	4.7	3.8	5.1	4.7	3.8	4.6	4.2	3.1	4.6	4.2	3.1
1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	3.6	2.6	4.6	4.5	3.9	4.6	4.5	3.9	3.0	2.9	2.5	3.0	2.9	2.5
1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	1.1	0.8	1.2	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	30.5	21.7	37.6	34.7	29.8	37.6	34.7	29.7	34.2	31.7	26.3	34.2	31.7	26.3

AVERAGES:

URF's as per Highland Creek Watershed Land Uses

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001		5003	6201	6202	6203	6301	6302	6303						
Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501		5503	6701	6702	6703	6801	6802	6803						
	Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	Total Moisture Supply = SUPY (Pervious)																																		
Year	Month																																		
1991-1996	**JAN**	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	46.4	46.4	46.4	46.4	46.4	46.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.3	14.3
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	629.9	629.9	629.9	629.9	629.9	629.9
	Total Moisture Supply = SUPY (Impervious)																																		
1991-1996	**JAN**	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0	37.7	37.7	37.7	37.7	37.7	37.7
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0	644.2	644.2	644.2	644.2	644.2	644.2
	SURLI = SURLI (Pervious)																																		
1991-1996	**JAN**	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	82.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	141.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	128.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	176.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	69.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	119.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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1991-1996	**JAN**	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	217.1	218.3	224.1	282.9	285.4	297.6
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.7	80.0	80.0	80.7
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	131.6	131.7	133.4	171.4	171.6	175.2
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	362.7	363.0	368.1	472.5	473.2	483.7
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	324.2	325.3	335.4	422.3	424.8	445.9
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	261.1	263.0	273.1	340.2	344.2	365.3
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	448.6	450.5	465.8	584.3	588.4	620.5
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	257.3	259.0	269.3	335.2	338.7	360.3
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	174.9	175.2	177.8	227.8	228.4	234.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	388.1	389.2	398.0	505.6	507.8	526.2
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	308.2	308.6	311.5	401.5	402.3	408.3
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.5	68.6	68.9	89.2	89.4	90.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,003.8	3,013.9	3,087.0	3,912.9	3,934.1	4,087.7
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1991-1996	**JAN**	39.9	39.9	39.9	41.6	41.6	41.6	44.5	44.5	44.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	122.2	122.2	122.2	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.1	11.1	11.1	11.6	11.6	11.6	12.4	12.4	12.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	34.3	34.3	34.3	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	28.1	28.1	28.1	29.1	29.1	29.1	30.9	30.9	30.9	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	78.7	78.7	78.7	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	76.5	76.5	76.5	79.3	79.3	79.3	84.3	84.3	84.3	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	217.1	217.1	217.1	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	73.2	73.2	73.2	75.7	75.7	75.7	80.3	80.3	80.3	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	200.5	200.5	200.5	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	61.6	61.6	61.6	63.6	63.6	63.6	67.3	67.3	67.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	164.3	164.3	164.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	97.9	97.9	97.9	101.4	101.4	101.4	107.7	107.7	107.7	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	273.4	273.4	273.4	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	62.0	62.0	62.0	64.0	64.0	64.0	67.7	67.7	67.7	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	164.8	164.8	164.8	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.6	42.6	42.6	44.0	44.0	44.0	46.5	46.5	46.5	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	112.0	112.0	112.0	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	82.6	82.6	82.6	85.5	85.5	85.5	90.9	90.9	90.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	233.0	233.0	233.0	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.9	46.9	46.9	48.5	48.5	48.5	51.5	51.5	51.5	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	181.6	181.6	181.6	62.4	62.4	62.4	62.4	62.4	62.4	46.4	46.4	46.4	46.4	46.4	46.4
1991-1996	DEC	14.5	14.5	14.5	15.0	15.0	15.0	15.9	15.9	15.9	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	40.8	40.8	40.8	14.2	14.2	14.2	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.3	14.3
	ANNUAL	636.8	636.8	636.8	659.3	659.3	659.3	699.9	699.9	699.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	1,822.6	1,822.6	1,822.6	645.9	645.9	645.9	645.9	645.9	645.9	629.9	629.9	629.9	629.9	629.9	629.9
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1991-1996	**JAN**	65.7	67.1	77.7	65.2	66.1	72.2	60.9	61.5	65.6	153.0	92.9	93.6	101.4	73.7	74.5	79.2	38.3	39.7	50.8	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0	254.8	256.0	261.8	320.6	323.1	335.3
1991-1996	FEB	18.9	18.9	19.2	18.7	18.7	19.0	17.5	17.5	17.7	43.6	26.6	26.6	26.9	21.2	21.2	21.6	11.1	11.3	11.8	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4	72.4	72.8	91.0	91.0	91.7
1991-1996	MAR	44.9	45.1	46.8	44.6	44.7	45.8	41.9	42.0	42.9	97.6	61.2	61.3	62.5	49.4	49.8	51.4	28.2	28.6	33.4	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0	159.3	159.4	161.1	199.1	199.3	203.0
1991-1996	APR	123.3	123.8	129.0	122.5	122.8	126.4	115.0	115.3	118.4	268.3	167.9	168.3	171.0	135.7	136.5	140.1	76.7	78.8	85.6	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0	438.4	438.7	443.7	548.2	548.9	559.4
1991-1996	MAY	115.5	116.8	133.7	114.9	115.8	126.0	108.1	109.0	116.3	244.5	154.8	155.3	166.6	125.9	126.5	145.0	73.7	74.8	113.8	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0	396.6	397.7	407.8	494.8	497.2	518.3
1991-1996	JUN	95.7	98.2	119.2	95.2	97.0	108.9	89.8	91.5	99.3	199.6	127.3	128.2	145.4	104.0	105.0	138.8	61.6	63.6	125.1	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0	322.1	324.0	334.0	401.2	405.2	426.2
1991-1996	JUL	156.0	158.5	181.3	155.2	157.0	171.0	145.9	147.6	158.4	335.2	210.7	211.7	229.2	170.5	171.8	201.6	97.7	99.1	143.5	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0	545.5	547.4	562.7	681.2	685.2	717.4
1991-1996	AUG	96.0	98.3	117.4	95.6	97.2	108.5	90.2	91.8	99.7	198.1	126.7	127.5	145.7	103.5	104.6	140.1	61.8	63.2	118.9	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0	318.7	320.4	330.7	396.6	400.1	421.7
1991-1996	SEP	65.6	65.9	68.8	65.3	65.4	67.5	61.6	61.8	63.7	135.1	86.6	86.7	88.3	70.9	71.1	73.1	42.5	42.7	45.6	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0	217.1	217.3	220.0	270.0	270.6	276.1
1991-1996	OCT	132.4	133.9	152.6	131.7	133.0	144.4	123.8	125.3	133.2	287.8	180.1	180.8	199.5	145.3	146.3	186.6	82.0	83.0	87.4	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0	469.8	470.9	479.6	587.2	589.5	607.8
1991-1996	NOV	102.5	103.1	106.6	101.9	102.1	104.4	95.6	95.8	97.6	226.1	140.8	141.2	143.0	113.5	114.1	117.0	63.0	65.0	69.5	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0	370.6	371.0	373.9	463.9	464.7	470.7
1991-1996	DEC	23.2	23.3	23.6	23.0	23.1	23.3	21.6	21.7	21.8	50.6	31.7	31.9	31.9	25.6	26.0	26.1	14.5	15.2	15.7	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0	82.7	82.8	83.1	103.5	103.7	104.2
	ANNUAL	1,039.6	1,052.7	1,176.0	1,034.0	1,043.0	1,117.3	971.9	980.7	1,034.7	2,239.4	1,407.3	1,413.1	1,511.4	1,139.1	1,147.5	1,320.6	651.1	664.9	901.0	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0	3,648.0	3,658.1	3,731.2	4,557.1	4,578.3	4,731.9
	Runoff = SURO+IFWO (pervious areas)																																		
1991-1996	**JAN**	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	57.0	75.9	0.3	1.6	6.6	0.3	1.6	6.6	0.2	1.6	6.4	0.2	1.6	6.4
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	16.4	21.8	0.1	0.3	1.7	0.1	0.3	1.7	0.1	0.2	1.1	0.1	0.2	1.1
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	19.9	33.7	0.1	0.3	1.8	0.1	0.3	1.9	0.0	0.2	1.8	0.0	0.2	1.8
1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	67.0	102.0	0.3	1.6	7.4	0.3	1.6	7.4	0.2	1.1	7.1	0.2	1.1	7.1
1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	84.1	113.2	0.7	2.7	9.7	0.7	2.7	9.7	0.5	2.2	10.2	0.5	2.2	10.2
1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	74.3	93.3	0.6	2.6	8.3	0.6	2.6	8.4	0.4	2.5	8.6	0.4	2.5	8.6
1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	112.7	149.9	0.4	2.8	10.7	0.4	2.8	10.9	0.2	2.4	11.5	0.2	2.4	11.5
1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	75.4	88.9	0.3	1.9	7.8	0.3	1.9	7.9	0.2	1.8	7.6	0.2	1.8	7.6
1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	35.3	47.0	0.3	1.3	3.8	0.3	1.3	3.8	0.2	1.0	3.2	0.2	1.0	3.2
1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	92.9	114.9	0.2	2.7	9.0	0.2	2.7	9.1	0.1	1.3	6.7	0.1	1.3	6.7
1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	70.8	94.1	0.3	1.4	6.2	0.3	1.4	6.1	0.1	0.6	3.5	0.1	0.6	3.5
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	15.7	20.9	0.1	0.3	1.4	0.1	0.3	1.3	0.0	0.2	0.9	0.0	0.2	0.9
	ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	721.6	955.7	3.6	19.4	74.3	3.6	19.5	74.8	2.3	15.0	68.6	2.3	15.0	68.6
	Runoff = SURO (impervious areas)																																		
1991-1996	**JAN**	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	252.6	253.8	259.6	318.4	320.9	333.1
1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	71.4	71.7	89.9	90.0	90.7
1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0	153.3	153.4	155.2	193.2	193.4	197.0
1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0	423.3	423.7	428.7	533.1	533.8	544.4
1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0	379.1	380.2	390.3	477.3	479.7	500.8
1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	305.5	307.4	317.4	384.6	388.6	409.6
1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0	524.3	526.2	541.5	660.0	664.0	696.1
1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	301.6	303.3	313.6	379.5	383.0	404.6
1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0	204.8	205.1	207.8	257.7	258.3	263.9
1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0	453.0	454.1	462.8	570.4	572.7	591.0
1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0	359.3	359.7	362.5	452.6	453.3	459.4
1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0	79.9	79.9	80.2	100.6	100.8	101.4
	ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0	3,508.1	3,518.2	3,591.4	4,417.2	4,438.5	4,592.0
	(IMPEV)																																		
1991-1996	**JAN**	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0
1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	15.0	15.0	15.0	15.0	15.0
1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	18.0	18.0	18.0
1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0	17.4	17.4	17.4	17.4	17.4	17.4
1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	21.0	21.0	21.0	21.0	21.0	21.0
1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	17.0	17.0	17.0	17.0	17.0	17.0
1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5	12.5	12.5	12.5	12.5	12.5
1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0	15.8	15.8	15.8	15.8	15.8	15.8
1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.1	11.1	11.1	11.1	11.1
1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9	2.9	2.9	2.9	2.9
	ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0	139.9	139.9	139.9	139.9	139.9	139.9
	(TAET)																																		
1991-1996	**JAN**	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9
1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.2	2.3	2.3
1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4	7.5	7.3	7.5	7.6	7.3	7.5	7.6
1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.3	25.0	23.3	24.3	24.4	23.3	24.3	24.4	23.9	24.6	24.7	23.9	24.6	24.7
1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	52.4	50.5	44.6	47.5	45.8	44.6	47.5	45.8	46.9	49.0	48.0	46.9	49.0	48.0
1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	64.3	60.2	51.3	53.0	50.7	51.3	53.0	50.7	56.4	57.7	56.1	56.4	57.7	56.1
1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	77.0	71.5	61.1	63.1	61.3	61.1	63.1	61.3	66.5	68.0	66.5	66.5	68.0	66.5
1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	73.1	66.6	55.6	58.8	56.1	55.6	58.8	56.1	61.3	63.7	61.5	61.3	63.7	61.5
1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	48.5	44.9	38.4	38.4	36.3	38.4	38.4	36.3	43.6	43.7	41.7	43.6	43.7	41.7
1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	37.4	36.0	30.7	31.4	31.8	30.7	31.4	31.8	33.0	33.5	33.5	33.0	33.5	33.5
1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.7	14.6	13.5	13.8	14.3	13.5	13.8	14.3	38.6	36.6	32.0	38.6	36.6	32.0
1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1	4.5	4.2	4.3	4.5	4.2	4.3	4.5
	ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	409.5	385.9	333.6	345.8	336.8	333.6	345.8	336.8	385.9	392.7	380.3	385.9	392.7	380.3
	(IFWO)																																		
1991-1996	**JAN**	0.2	1.3	4.2	0.3	1.5	4.8	0.6	2.1	6.1	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	30.6	38.2	36.1	0.3	1.5	6.3	0.3	1.5	6.3	0.2	1.1	3.9	0.2	1.1	3.9
1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.7	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	9.4	13.4	13.5	0.1	0.3	1.6	0.1	0.3	1.6	0.0	0.2	1.0	0.0	0.2	1.0
1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.4	0.1	0.5	1.9	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	9.5	12.9	14.9	0.0	0.3	1.8	0.0	0.3	1.8	0.0	0.2	1.2	0.0	0.2	1.2
1991-1996	APR	0.2	1.0	5.5	0.2	1.3	6.3	0.4	2.1	7.9	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	32.5	41.5	45.1	0.3	1.5	7.1	0.3	1.5	7.1	0.2	0.9	5.1	0.2	0.9	5.1
1991-1996	MAY	0.4	1.9	6.9	0.6	2.4	7.7	0.9	3.5	9.1	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	41.1	43.6	41.0	0.7	2.6	8.9	0.7	2.6	8.8	0.4	1.7	6.2	0.4	1.7	6.2
1991-1996	JUN	0.4	2.1	4.9	0.6	2.6	5.4	0.9	3.5	6.4	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	36.9	36.8	31.8	0.5	2.6	6.7	0.5	2.6	6.5	0.4	1.8	4.4	0.4	1.8	4.4
1991-1996	JUL	0.2	2.0	5.6	0.3	2.5	6.4	0.6	3.6	7.8	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	40.8	39.3	32.8	0.3	2.7	9.2	0.3	2.7	9.1	0.2	1.7	5.4	0.2	1.7	5.4
1991-1996	AUG	0.2	1.3	3.5	0.3	1.7	4.0	0.5	2.5	4.9	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	29.6	29.1	25.4	0.2	1.8	5.9	0.2	1.8	5.8	0.1	1.1	3.4	0.1	1.1	3.4
1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.6	0.5	1.7	3.1	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	15.8	16.2	14.7	0.3	1.3	3.7	0.3	1.3	3.6	0.2	0.9	2.2	0.2	0.9	2.2
1991-1996	OCT	0.1	1.1	3.4	0.1	1.6	3.9	0.3	2.6	5.0	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	38.5	46.3	40.7	0.2	2.5	5.5	0.2	2.5	5.4	0.1	0.9	3.2	0.1	0.9	3.2
1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.3	0.2	1.2	4.2	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	39.4	49.6	44.1	0.2	1.3	6.0	0.2	1.3	5.9	0.1	0.5	2.5	0.1	0.5	2.5
1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.4	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	9.4	14.1	15.7	0.1	0.3	1.3	0.1	0.3	1.3	0.0	0.1	0.8	0.0	0.1	0.8
	ANNUAL	2.1	12.8	42.1	2.9	16.5	48.1	5.1	24.1	59.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	333.4	381.1	355.9	3.2	18.6	64.1	3.2	18.6	63.2	1.8	11.1	39.2	1.8	11.1	39.2
	(AGWO)																																		
1991-1996	**JAN**	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	41.7	29.9	18.3	17.1	14.8	18.3	17.1	14.8	17.2	16.2	13.5	17.2	16.2	13.5
1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	37.0	26.3	16.2	15.3	13.3	16.2	15.3	13.3	15.2	14.4	12.2	15.2	14.4	12.2
1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	38.4	27.5	16.6	15.6	13.8	16.6	15.6	13.7	15.5	14.8	12.7	15.5	14.8	12.7
1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	39.1	27.9	16.5	15.6	13.9	16.5	15.6	13.8	15.5	14.8	12.9	15.5	14.8	12.9
1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	46.2	32.6	19.3	18.3	16.2	19.3	18.3	16.1	18.2	17.4	15.2	18.2	17.4	15.2
1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	45.1	31.7	19.2	17.9	15.6	19.2	17.9	15.5	18.2	17.2	14.7	18.2	17.2	14.7
1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	47.1	33.0	20.6	18.9	16.3	20.6	18.9	16.2	19.6	18.2	15.3	19.6	18.2	15.3
1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	48.2	33.9	21.3	19.2	16.6	21.3	19.2	16.5	20.3	18.5	15.5	20.3	18.5	15.5
1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	44.4	31.4	19.6	17.7	15.1	19.6	17.7	15.1	18.7	17.0	14.1	18.7	17.0	14.1
1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	47.3	34.0	21.1	19.0	16.1	21.1	19.0	16.0	20.0	18.2	14.6	20.0	18.2	14.6
1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	50.0	36.1	22.1	20.1	17.0	22.1	20.1	17.0	17.1	15.8	12.9	17.1	15.8	12.9
1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	50.2	36.2	21.9	20.2	17.2	21.9	20.2	17.2	20.5	19.0	15.6	20.5	19.0	15.6
	ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	534.6	380.6	232.6	214.9	185.7	232.6	214.9	185.4	216.0	201.4	169.4	216.0	201.4	169.4
	(AGWI)																																		
1991-1996	**JAN**	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	46.5	31.6	22.8	22.6	19.7	22.8	22.6	19.7	20.6	21.1	18.3	20.6	21.1	18.3
1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	18.0	12.4	6.1	6.1	6.3	6.1	6.1	6.3	5.5	5.7	5.9	5.5	5.7	5.9
1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	32.6	24.5	11.4	11.0	10.8	11.4	11.0	10.8	10.9	10.6	10.4	10.9	10.6	10.4
1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	86.1	59.5	33.7	32.3	29.4	33.7	32.3	29.3	32.1	31.1	28.8	32.1	31.1	28.8
1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	55.7	37.8	26.5	23.6	18.5	26.5	23.6	18.4	25.6	23.2	18.0	25.6	23.2	18.0
1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	42.3	28.8	19.9	17.0	13.5	19.9	17.0	13.5	19.4	16.8	12.9	19.4	16.8	12.9
1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	61.2	42.1	29.5	25.1	21.4	29.5	25.1	21.3	28.6	24.3	19.3	28.6	24.3	19.3
1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	35.7	27.5	15.5	13.2	11.4	15.5	13.2	11.3	15.3	13.0	9.9	15.3	13.0	9.9
1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	30.9	24.1	13.4	11.7	9.4	13.4	11.7	9.4	12.5	11.1	8.2	12.5	11.1	8.2
1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	75.8	56.6	33.8	31.2	25.2	33.8	31.1	25.1	30.6	28.1	20.5	30.6	28.1	20.5
1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	70.7	50.3	31.0	30.2	26.2	31.0	30.2	26.2	20.3	19.7	16.6	20.3	19.7	16.6
1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	21.4	15.5	7.7	8.1	7.5	7.7	8.1	7.5	7.3	7.6	7.2	7.3	7.6	7.2
	ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	576.8	410.7	251.5	231.9	199.2	251.5	231.9	198.8	228.7	212.3	176.0	228.7	212.3	176.0
	(IGWI)																																		
1991-1996	**JAN**	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	6.9	4.7	3.4	3.4	2.9	3.4	3.4	2.9	3.1	3.1	2.7	3.1	3.1	2.7
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	2.7	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.9
1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	4.9	3.7	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	12.9	8.9	5.0	4.8	4.4	5.0	4.8	4.4	4.8	4.6	4.3	4.8	4.6	4.3
1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	8.3	5.6	4.0	3.5	2.8	4.0	3.5	2.8	3.8	3.5	2.7	3.8	3.5	2.7
1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	6.3	4.3	3.0	2.5	2.0	3.0	2.5	2.0	2.9	2.5	1.9	2.9	2.5	1.9
1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	9.1	6.3	4.4	3.8	3.2	4.4	3.7	3.2	4.3	3.6	2.9	4.3	3.6	2.9
1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	5.3	4.1	2.3	2.0	1.7	2.3	2.0	1.7	2.3	1.9	1.5	2.3	1.9	1.5
1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	4.6	3.6	2.0	1.7	1.4	2.0	1.7	1.4	1.9	1.7	1.2	1.9	1.7	1.2
1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	11.3	8.5	5.1	4.7	3.8	5.1	4.7	3.8	4.6	4.2	3.1	4.6	4.2	3.1
1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	10.6	7.5	4.6	4.5	3.9	4.6	4.5	3.9	3.0	2.9	2.5	3.0	2.9	2.5
1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	3.2	2.3	1.2	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	86.2	61.4	37.6	34.7	29.8	37.6	34.7	29.7	34.2	31.7	26.3	34.2	31.7	26.3

AVERAGES:

Adjusted URFs for Lateral Inflow SURLI

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001		5003	6201	6202	6203	6301	6302	6303						
Sub-surf	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501		5503	6701	6702	6703	6801	6802	6803						
	Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
	Adjustment Factor = SURLI/(SURLI+SUPY) (Pervious)																																		
Year	Month																																		
1991-199	**JAN**	0.0124	0.0124	0.0124	0.0513	0.0513	0.0513	0.1141	0.1141	0.1141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6777	0.6777	0.6777	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	FEB	0.0125	0.0125	0.0125	0.0516	0.0516	0.0516	0.1148	0.1148	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6790	0.6790	0.6790	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	MAR	0.0109	0.0109	0.0109	0.0451	0.0451	0.0451	0.1012	0.1012	0.1012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6473	0.6473	0.6473	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	APR	0.0111	0.0111	0.0111	0.0458	0.0458	0.0458	0.1027	0.1027	0.1027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6514	0.6514	0.6514	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	MAY	0.0105	0.0105	0.0105	0.0435	0.0435	0.0435	0.0978	0.0978	0.0978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6388	0.6388	0.6388	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	JUN	0.0101	0.0101	0.0101	0.0418	0.0418	0.0418	0.0942	0.0942	0.0942	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6291	0.6291	0.6291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	JUL	0.0108	0.0108	0.0108	0.0448	0.0448	0.0448	0.1005	0.1005	0.1005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	AUG	0.0100	0.0100	0.0100	0.0415	0.0415	0.0415	0.0936	0.0936	0.0936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6274	0.6274	0.6274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	SEP	0.0098	0.0098	0.0098	0.0408	0.0408	0.0408	0.0921	0.0921	0.0921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6234	0.6234	0.6234	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	OCT	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6496	0.6496	0.6496	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	NOV	0.0108	0.0108	0.0108	0.0447	0.0447	0.0447	0.1004	0.1004	0.1004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6563	0.6563	0.6563	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-199	DEC	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6505	0.6505	0.6505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	ANNUAL	0.0108	0.0108	0.0108	0.0445	0.0445	0.0445	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Adjustment Factor = SURLI/(SURLI+SUPY) (Impervious)																																		
1991-199	**JAN**	0.4256	0.4380	0.5149	0.4219	0.4291	0.4773	0.3804	0.3864	0.4251	0.7536	0.5943	0.5974	0.6282	0.4884	0.4941	0.5241	0.0165	0.0507	0.2572	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8521	0.8527	0.8560	0.8824	0.8833	0.8876
1991-199	FEB	0.4164	0.4165	0.4266	0.4126	0.4124	0.4196	0.3705	0.3711	0.3783	0.7475	0.5865	0.5865	0.5901	0.4795	0.4802	0.4902	0.0063	0.0237	0.0709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8479	0.8479	0.8487	0.8790	0.8790	0.8800
1991-199	MAR	0.3817	0.3842	0.4065	0.3782	0.3793	0.3947	0.3385	0.3391	0.3537	0.7157	0.5464	0.5474	0.5559	0.4385	0.4422	0.4597	0.0145	0.0285	0.1681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8258	0.8259	0.8278	0.8606	0.8608	0.8633
1991-199	APR	0.3861	0.3889	0.4134	0.3824	0.3840	0.4014	0.3422	0.3439	0.3610	0.7179	0.5494	0.5504	0.5574	0.4423	0.4458	0.4599	0.0132	0.0392	0.1160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8274	0.8275	0.8295	0.8619	0.8621	0.8647
1991-199	MAY	0.3733	0.3803	0.4585	0.3696	0.3746	0.4252	0.3303	0.3356	0.3776	0.7039	0.5322	0.5337	0.5655	0.4248	0.4278	0.5007	0.0181	0.0317	0.3637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8174	0.8180	0.8224	0.8537	0.8544	0.8603
1991-199	JUN	0.3633	0.3792	0.4887	0.3598	0.3718	0.4404	0.3211	0.3341	0.3862	0.6947	0.5212	0.5244	0.5810	0.4141	0.4196	0.5610	0.0106	0.0417	0.5128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8108	0.8119	0.8175	0.8481	0.8496	0.8570
1991-199	JUL	0.3791	0.3889	0.4656	0.3759	0.3831	0.4334	0.3362	0.3438	0.3883	0.7110	0.5403	0.5425	0.5774	0.4317	0.4362	0.5194	0.0086	0.0225	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8224	0.8230	0.8278	0.8578	0.8586	0.8650
1991-199	AUG	0.3608	0.3754	0.4774	0.3577	0.3687	0.4343	0.3192	0.3312	0.3844	0.6901	0.5154	0.5186	0.5786	0.4072	0.4133	0.5618	0.0076	0.0284	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8074	0.8084	0.8144	0.8452	0.8466	0.8544
1991-199	SEP	0.3568	0.3595	0.3869	0.3538	0.3554	0.3749	0.3152	0.3169	0.3374	0.6877	0.5127	0.5134	0.5220	0.4050	0.4067	0.4230	0.0080	0.0132	0.0753	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8057	0.8059	0.8083	0.8438	0.8441	0.8472
1991-199	OCT	0.3832	0.3900	0.4651	0.3801	0.3859	0.4346	0.3403	0.3482	0.3872	0.7163	0.5468	0.5483	0.5908	0.4381	0.4418	0.5626	0.0047	0.0165	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8262	0.8266	0.8298	0.8610	0.8615	0.8657
1991-199	NOV	0.3914	0.3945	0.4146	0.3879	0.3890	0.4026	0.3473	0.3485	0.3607	0.7240	0.5568	0.5581	0.5636	0.4501	0.4533	0.4667	0.0089	0.0398	0.1016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8316	0.8318	0.8331	0.8655	0.8657	0.8674
1991-199	DEC	0.3859	0.3888	0.3968	0.3819	0.3840	0.3882	0.3420	0.3438	0.3467	0.7186	0.5503	0.5530	0.5541	0.4436	0.4530	0.4547	0.0148	0.0619	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8279	0.8280	0.8286	0.8624	0.8626	0.8634
	ANNUAL	0.3803	0.3880	0.4522	0.3769	0.3824	0.4234	0.3372	0.3431	0.3774	0.7123	0.5422	0.5441	0.5738	0.4345	0.4386	0.5122	0.0106	0.0311	0.2850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8234	0.8239	0.8273	0.8586	0.8593	0.8639
	Total Moisture Supply = SUPY (Pervious)																																		
1991-199	**JAN**	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-199	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-199	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-199	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-199	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-199	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-199	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-199	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-199	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-199	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-199	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	46.4	46.4	46.4	46.4	46.4	46.4
1991-199	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.3	14.3	14.3	14.3	14.3	14.3
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	629.9	629.9	629.9	629.9	629.9	629.9
	Total Moisture Supply = SUPY (Impervious)																																		
1991-199	**JAN**	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0	37.7	37.7	37.7	37.7	37.7	37.7
1991-199	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-199	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0	27.8	27.8	27.8	27.8	27.8	27.8
1991-199	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0	75.7	75.7	75.7	75.7	75.7	75.7
1991-199	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0	72.4	72.4	72.4	72.4	72.4	72.4
1991-199	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0	60.9	60.9	60.9	60.9	60.9	60.9
1991-199	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0	96.9	96.9	96.9	96.9	96.9	96.9
1991-199	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0	61.4	61.4	61.4	61.4	61.4	61.4
1991-199	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0	42.2	42.2	42.2	42.2	42.2	42.2
1991-199	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0	81.6	81.6	81.6	81.6	81.6	81.6
1991-199	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0	62.4	62.4	62.4	62.4	62.4	62.4
1991-199	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0	644.2	644.2	644.2	644.2	644.2	644.2
	SURLI = SURLI (Pervious)																																		
1991-199	**JAN**	0.5	0.5	0.5	2.0	2.0	2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	MAR	0.3	0.3	0.3	1.3	1.3	1.3	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	APR	0.8	0.8	0.8	3.5	3.5	3.5	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.3	49.3	49.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	MAY	0.8	0.8	0.8	3.2	3.2	3.2	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	46.3	46.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	JUN	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3	38.3	38.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	JUL	1.0	1.0	1.0	4.3	4.3	4.3	9.7	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	62.5	62.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	AUG	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	38.5	38.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	SEP	0.4	0.4	0.4	1.7	1.7	1.7	3.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	26.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	OCT	0.9	0.9	0.9	3.7	3.7	3.7	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	NOV	0.5	0.5	0.5	2.1	2.1	2.1	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	41.0	41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-199	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.8	6.8	6.8	28.1	28.1	28.1	63.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.0	417.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SURLI = SURLI (Impervious)																																		
1991-199	**JAN**	16.1	16.5	19.4	15.9	16.2	18.0	14.3	14.6	16.0	28.4	22.4	22.5	23.7	18.4	18.6	19.8	0.6	1.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.1	32.1	32.3	33.3	33.3	33.5
1991-199	FEB	4.6	4.6	4.7	4.5	4.5	4.6	4.1	4.1	4.2	8.2	6.5	6.5	6.5	5.3	5.3	5.4	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	9.3	9.7	9.7	9.7
1991-199	MAR	10.6	10.7	11.3	10.5	10.5	11.0	9.4	9.4	9.8	19.9	15.2	15.2	15.4	12.2	12.3	12.8	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	22.9	23.0	23.9	23.9	24.0
1991-199	APR	29.2	29.4	31.3	28.9	29.1	30.4	25.9	26.0	27.3	54.3	41.6	41.6	42.2	33.5	33.7	34.8	1.0	3.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.6	62.6	62.8	65.2	65.2	65.4
1991-199	MAY	27.0	27.5	33.2	26.8	27.1	30.8	23.9	24.3	27.3	51.0	38.5	38.6	40.9	30.8	31.0	36.3	1.3	2.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.2	59.2	59.5	61.8	61.9	62.3
1991-199	JUN	22.1	23.1	29.8	21.9	22.7	26.8	19.6	20.4	23.5	42.3	31.8	32.0	35.4	25.2	25.6	34.2	0.6	2.5	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.4	49.5	49.8	51.7	51.8	52.2
1991-199	JUL	36.7	37.7	45.1	36.4	37.1	42.0	32.6	33.3	37.6	68.9	52.3	52.6	55.9	41.8	42.3	50.3	0.8	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79.7	79.7	80.2	83.1	83.2	83.8
1991-199	AUG	22.1	23.0	29.3	22.0	22.6	26.7	19.6	20.3	23.6	42.4	31.6	31.8	35.5	25.0	25.4	34.5	0.5	1.7	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.6	49.6	50.0	51.9	52.0	52.4
1991-199	SEP	15.1	15.2	16.3	14.9	15.0	15.8	13.3	13.4	14.2	29.0	21.6	21.7	22.0	17.1	17.2	17.8	0.3	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	34.0	34.1	35.6	35.6	35.7
1991-199	OCT	31.3	31.8	38.0	31.0	31.5	35.5	27.8	28.4	31.6	58.5	44.6	44.8	48.2	35.8	36.1	45.9	0.4	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5	67.5	67.7	70.3	70.3	70.7
1991-199	NOV	24.4	24.6	25.9	24.2	24.3	25.1	21.7	21.7	22.5	45.2	34.7	34.8	35.2	28.1	28.3	29.1	0.6	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.9	51.9	52.0	54.0	54.0	54.1
1991-199	DEC	5.5	5.5	5.7	5.4	5.5	5.5	4.9	4.9	4.9	10.2	7.8	7.9	7.9	6.3	6.5	6.5	0.2	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	11.8	11.8	12.3	12.3	12.3
	ANNUAL	245.0	250.0	291.3	242.8	246.3	272.8	217.2	221.0	243.1	458.9	349.3	350.5	369.6	279.9	282.6	330.0	6.9	20.0	183.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	530.4	530.8	533.0	553.1	553.6	556.5
	Runoff = SURO+IFWO (pervious areas)																																		
1991-199	**JAN**	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	18.4	24.5	0.3	1.6	6.6	0.3	1.6	6.6	0.2	1.6	6.4	0.2	1.6	6.4
1991-199	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	5.3	7.0	0.1	0.3	1.7	0.1	0.3	1.7	0.1	0.2	1.1	0.1	0.2	1.1
1991-199	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	7.0	11.9	0.1	0.3	1.8	0.1	0.3	1.9	0.0	0.2	1.8	0.0	0.2	1.8
1991-199	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	23.4	35.5	0.3	1.6	7.4	0.3	1.6	7.4	0.2	1.1	7.1	0.2	1.1	7.1
1991-199	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	30.4	40.9	0.7	2.7	9.7	0.7	2.7	9.7	0.5	2.2	10.2	0.5	2.2	10.2
1991-199	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	27.6	34.6	0.6	2.6	8.3	0.6	2.6	8.4	0.4	2.5	8.6	0.4	2.5	8.6
1991-199	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	39.9	53.1	0.4	2.8	10.7	0.4	2.8	10.9	0.2	2.4	11.5	0.2	2.4	11.5
1991-199	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	28.1	33.1	0.3	1.9	7.8	0.3	1.9	7.9	0.2	1.8	7.6	0.2	1.8	7.6
1991-199	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	13.3	17.7	0.3	1.3	3.8	0.3	1.3	3.8	0.2	1.0	3.2	0.2	1.0	3.2
1991-199	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	32.6	40.3	0.2	2.7	9.0	0.2	2.7	9.1	0.1	1.3	6.7	0.1	1.3	6.7
1991-199	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	24.3	32.3	0.3	1.4	6.2	0.3	1.4	6.1	0.1	0.6	3.5	0.1	0.6	3.5
1991-199	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	5.5	7.3	0.1	0.3	1.4	0.1	0.3	1.3	0.0	0.2	0.9	0.0	0.2	0.9
	ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	255.7	338.7	3.6	19.4	74.3	3.6	19.5	74.8	2.3	15.0	68.6	2.3	15.0	68.6
	Runoff = SURO (impervious areas)																																		
1991-199	**JAN**	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	37.4	37.4	37.4	37.4	37.4	37.4
1991-199	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	10.9	10.9	10.9	10.9	10.9
1991-199	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	26.7	26.9	26.9	26.9
1991-199	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0	73.1	73.1	73.1	73.6	73.6	73.6
1991-199	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0	69.2	69.2	69.3	69.8	69.9	70.0
1991-199	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	57.8	57.8	57.9	58.4	58.4	58.6
1991-199	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0	93.1	93.1	93.2	93.9	93.9	94.0
1991-199	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0	58.1	58.1	58.2	58.7	58.8	58.9
1991-199	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0	39.8	39.8	39.8	40.3	40.3	40.3
1991-199	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0	78.7	78.7	78.8	79.3	79.3	79.4
1991-199	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0	60.5	60.5	60.5	60.9	60.9	60.9
1991-199	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0	13.7	13.7	13.7	13.8	13.8	13.8
	ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0	619.5	619.6	620.1	624.4	624.5	625.2
	(IMPEV)																																		
1991-199	**JAN**	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
1991-199	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2
1991-199	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.8	0.8	0.8
1991-199	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.1	2.1	2.0
1991-199	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.2	2.6	2.6	2.5
1991-199	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.2	2.6	2.6	2.5
1991-199	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	3.7	3.6	3.0	3.0	2.8
1991-199	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.1	2.6	2.6	2.5
1991-199	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4	2.0	2.0	1.9
1991-199	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.2	2.2	2.1
1991-199	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.5	1.5	1.5
1991-199	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.4	0.4
	ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0	24.7	24.6	24.1	19.8	19.7	19.0
	(IFWO)																																		
1991-199	**JAN**	0.2	1.3	4.1	0.3	1.5	4.6	0.5	1.9	5.4	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	9.9	12.3	11.6	0.3	1.5	6.3	0.3	1.5	6.3	0.2	1.1	3.9	0.2	1.1	3.9
1991-199	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.5	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	3.0	4.3	4.3	0.1	0.3	1.6	0.1	0.3	1.6	0.0	0.2	1.0	0.0	0.2	1.0
1991-199	MAR	0.0	0.2	1.2	0.0	0.3	1.3	0.0	0.4	1.7	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	3.3	4.6	5.3	0.0	0.3	1.8	0.0	0.3	1.8	0.0	0.2	1.2	0.0	0.2	1.2
1991-199	APR	0.2	1.0	5.4	0.2	1.3	6.0	0.3	1.9	7.1	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	11.3	14.5	15.7	0.3	1.5	7.1	0.3	1.5	7.1	0.2	0.9	5.1	0.2	0.9	5.1
1991-199	MAY	0.4	1.8	6.8	0.5	2.3	7.4	0.8	3.2	8.2	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	14.8	15.7	14.8	0.7	2.6	8.9	0.7	2.6	8.8	0.4	1.7	6.2	0.4	1.7	6.2
1991-199	JUN	0.4	2.0	4.8	0.5	2.5	5.2	0.8	3.2	5.8	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	13.7	13.6	11.8	0.5	2.6	6.7	0.5	2.6	6.5	0.4	1.8	4.4	0.4	1.8	4.4
1991-199	JUL	0.2	2.0	5.5	0.3	2.4	6.1	0.5	3.2	7.0	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	14.5	13.9	11.6	0.3	2.7	9.2	0.3	2.7	9.1	0.2	1.7	5.4	0.2	1.7	5.4
1991-199	AUG	0.2	1.3	3.4	0.2	1.6	3.8	0.5	2.3	4.4	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	11.0	10.8	9.5	0.2	1.8	5.9	0.2	1.8	5.8	0.1	1.1	3.4	0.1	1.1	3.4
1991-199	SEP	0.2	1.0	2.3	0.3	1.2	2.5	0.4	1.5	2.8	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	5.9	6.1	5.5	0.3	1.3	3.7	0.3	1.3	3.6	0.2	0.9	2.2	0.2	0.9	2.2
1991-199	OCT	0.1	1.1	3.4	0.1	1.5	3.8	0.3	2.3	4.5	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	13.5	16.2	14.3	0.2	2.5	5.5	0.2	2.5	5.4	0.1	0.9	3.2	0.1	0.9	3.2
1991-199	NOV	0.1	0.6	2.9	0.1	0.8	3.2	0.2	1.1	3.8	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	13.5	17.0	15.2	0.2	1.3	6.0	0.2	1.3	5.9	0.1	0.5	2.5	0.1	0.5	2.5
1991-199	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.2	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	3.3	4.9	5.5	0.1	0.3	1.3	0.1	0.3	1.3	0.0	0.1	0.8	0.0	0.1	0.8
	ANNUAL	2.0	12.7	41.6	2.8	15.7	46.0	4.6	21.7	53.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	118.1	135.1	126.1	3.2	18.6	64.1	3.2	18.6	63.2	1.8	11.1	39.2	1.8	11.1	39.2
	(TAET)																																		
1991-199	**JAN**	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	0.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9
1991-199	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	0.8	2.2	2.2	2.3	2.2	2.2	2.3	2.2	2.3	2.3	2.2	2.3	2.3
1991-199	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4	7.5	7.3	7.5	7.6	7.3	7.5	7.6
1991-199	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.8	8.7	23.3	24.3	24.4	23.3	24.3	24.4	23.9	24.6	24.7	23.9	24.6	24.7
1991-199	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.9	18.2	44.6	47.5	45.8	44.6	47.5	45.8	46.9	49.0	48.0	46.9	49.0	48.0
1991-199	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	23.8	22.3	51.3	53.0	50.7	51.3	53.0	50.7	56.4	57.7	56.1	56.4	57.7	56.1
1991-199	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	27.3	25.3	61.1	63.1	61.3	61.1	63.1	61.3	66.5	68.0	66.5	66.5	68.0	66.5
1991-199	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	27.2	24.8	55.6	58.8	56.1	55.6	58.8	56.1	61.3	63.7	61.5	61.3	63.7	61.5
1991-199	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	18.3	16.9	38.4	38.4	36.3	38.4	38.4	36.3	43.6	43.7	41.7	43.6	43.7	41.7
1991-199	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	13.1	12.6	30.7	31.4	31.8	30.7	31.4	31.8	33.0	33.5	33.5	33.0	33.5	33.5
1991-199	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.1	5.0	13.5	13.8	14.3	13.5	13.8	14.3	38.6	36.6	32.0	38.6	36.6	32.0
1991-199	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	1.7	3.9	4.1	4.5	3.9	4.1	4.5	4.2	4.3	4.5	4.2	4.3	4.5
	ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	145.1	136.8	333.6	345.8	336.8	333.6	345.8	336.8	385.9	392.7	380.3	385.9	392.7	380.3
	(AGWO)																																		
1991-199	**JAN**	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	13.4	9.6	18.3	17.1	14.8	18.3	17.1	14.8	17.2	16.2	13.5	17.2	16.2	13.5
1991-199	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	11.9	8.5	16.2	15.3	13.3	16.2	15.3	13.3	15.2	14.4	12.2	15.2	14.4	12.2
1991-199	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	13.6	9.7	16.6	15.6	13.8	16.6	15.6	13.7	15.5	14.8	12.7	15.5	14.8	12.7
1991-199	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	13.6	9.7	16.5	15.6	13.9	16.5	15.6	13.8	15.5	14.8	12.9	15.5	14.8	12.9
1991-199	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	16.7	11.8	19.3	18.3	16.2	19.3	18.3	16.1	18.2	17.4	15.2	18.2	17.4	15.2
1991-199	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	16.7	11.8	19.2	17.9	15.6	19.2	17.9	15.5	18.2	17.2	14.7	18.2	17.2	14.7
1991-199	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	16.7	11.7	20.6	18.9	16.3	20.6	18.9	16.2	19.6	18.2	15.3	19.6	18.2	15.3
1991-199	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	17.9	12.6	21.3	19.2	16.6	21.3	19.2	16.5	20.3	18.5	15.5	20.3	18.5	15.5
1991-199	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	16.7	11.8	19.6	17.7	15.1	19.6	17.7	15.1	18.7	17.0	14.1	18.7	17.0	14.1
1991-199	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	16.6	11.9	21.1	19.0	16.1	21.1	19.0	16.0	20.0	18.2	14.6	20.0	18.2	14.6
1991-199	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	17.2	12.4	22.1	20.1	17.0	22.1	20.1	17.0	17.1	15.8	12.9	17.1	15.8	12.9
1991-199	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	17.5	12.6	21.9	20.2	17.2	21.9	20.2	17.2	20.5	19.0	15.6	20.5	19.0	15.6
	ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	189.5	134.9	232.6	214.9	185.7	232.6	214.9	185.4	216.0	201.4	169.4	216.0	201.4	169.4
	(AGWI)																																		
1991-199	**JAN**	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	15.0	10.2	22.8	22.6	19.7	22.8	22.6	19.7	20.6	21.1	18.3	20.6	21.1	18.3
1991-199	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	5.8	4.0	6.1	6.1	6.3	6.1	6.1	6.3	5.5	5.7	5.9	5.5	5.7	5.9
1991-199	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	11.5	8.6	11.4	11.0	10.8	11.4	11.0	10.8	10.9	10.6	10.4	10.9	10.6	10.4
1991-199	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	30.0	20.7	33.7	32.3	29.4	33.7	32.3	29.3	32.1	31.1	28.8	32.1	31.1	28.8
1991-199	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	20.1	13.6	26.5	23.6	18.5	26.5	23.6	18.4	25.6	23.2	18.0	25.6	23.2	18.0
1991-199	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	15.7	10.7	19.9	17.0	13.5	19.9	17.0	13.5	19.4	16.8	12.9	19.4	16.8	12.9
1991-199	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	21.7	14.9	29.5	25.1	21.4	29.5	25.1	21.3	28.6	24.3	19.3	28.6	24.3	19.3
1991-199	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	13.3	10.3	15.5	13.2	11.4	15.5	13.2	11.3	15.3	13.0	9.9	15.3	13.0	9.9
1991-199	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	11.6	9.1	13.4	11.7	9.4	13.4	11.7	9.4	12.5	11.1	8.2	12.5	11.1	8.2
1991-199	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	26.5	19.8	33.8	31.2	25.2	33.8	31.1	25.1	30.6	28.1	20.5	30.6	28.1	20.5
1991-199	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	24.3	17.3	31.0	30.2	26.2	31.0	30.2	26.2	20.3	19.7	16.6	20.3	19.7	16.6
1991-199	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	7.5	5.4	7.7	8.1	7.5	7.7	8.1	7.5	7.3	7.6	7.2	7.3	7.6	7.2
	ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	204.4	145.5	251.5	231.9	199.2	251.5	231.9	198.8	228.7	212.3	176.0	228.7	212.3	176.0
	(IGWI)																																		
1991-199	**JAN**	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	2.2	1.5	3.4	3.4	2.9	3.4	3.4	2.9	3.1	3.1	2.7	3.1	3.1	2.7
1991-199	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.9	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.9
1991-199	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.7	1.3	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
1991-199	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	4.5	3.1	5.0	4.8	4.4	5.0	4.8	4.4	4.8	4.6	4.3	4.8	4.6	4.3
1991-199	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	3.0	2.0	4.0	3.5	2.8	4.0	3.5	2.8	3.8	3.5	2.7	3.8	3.5	2.7
1991-199	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	2.3	1.6	3.0	2.5	2.0	3.0	2.5	2.0	2.9	2.5	1.9	2.9	2.5	1.9
1991-199	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	3.2	2.2	4.4	3.8	3.2	4.4	3.7	3.2	4.3	3.6	2.9	4.3	3.6	2.9
1991-199	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	2.0	1.5	2.3	2.0	1.7	2.3	2.0	1.7	2.3	1.9	1.5	2.3	1.9	1.5
1991-199	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.7	1.4	2.0	1.7	1.4	2.0	1.7	1.4	1.9	1.7	1.2	1.9	1.7	1.2
1991-199	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	4.0	3.0	5.1	4.7	3.8	5.1	4.7	3.8	4.6	4.2	3.1	4.6	4.2	3.1
1991-199	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	3.6	2.6	4.6	4.5	3.9	4.6	4.5	3.9	3.0	2.9	2.5	3.0	2.9	2.5
1991-199	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	1.1	0.8	1.2	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	30.5	21.7	37.6	34.7	29.8	37.6	34.7	29.7	34.2	31.7	26.3	34.2	31.7	26.3

URF volumes (m^3) based on percentage of pervious and impervious land use

		Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
		Pervious Composition (%)	0.70	0.70	0.70	0.50	0.50	0.50	0.35	0.35	0.35	0.04	0.63	0.63	0.63	0.90	0.90	0.90	0.97	0.97	0.97
URF		**Impervious Composition (%)**	0.09	0.09	0.09	0.13	0.13	0.13	0.17	0.17	0.17	0.19	0.11	0.11	0.11	0.05	0.05	0.05	0.03	0.03	0.03
AREA :	**100000**	**Pervious Composition (m^2)**	70000	70000	70000	50000	50000	50000	35000	35000	35000	4000	63000	63000	63000	90000	90000	90000	97000	97000	97000
10 ha	**m^2**	**Impervious Composition (m^2)**	9000	9000	9000	13000	13000	13000	17000	17000	17000	19000	11000	11000	11000	5000	5000	5000	3000	3000	3000
		Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)

		THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
	Pervious Composition (%)	0.3	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0	0.2	0.2	0.2	0.3	0.3	0.3
	Impervious Composition (%)	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.07	0.07	0.05	0.05	0.05
	Pervious Composition (m^2)	30000	30000	30000	100000	100000	100000	100000	100000	100000	20000	20000	20000	30000	30000	30000
	Impervious Composition (m^2)	70000	70000	70000	0	0	0	0	0	0	7000	7000	7000	5000	5000	5000
	Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)

Total Moisture Supply = SUPY (Pervious)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	2759.9	2759.9	2759.9	1971.3	1971.3	1971.3	1379.9	1379.9	1379.9	157.7	2483.9	2483.9	2483.9	3543.3	3543.3	3543.3	3818.8	3818.8	3818.8
1991-1996	FEB	770.5	770.5	770.5	550.4	550.4	550.4	385.2	385.2	385.2	44.0	693.4	693.4	693.4	991.2	991.2	991.2	1068.3	1068.3	1068.3
1991-1996	MAR	1942.6	1942.6	1942.6	1387.6	1387.6	1387.6	971.3	971.3	971.3	111.0	1748.3	1748.3	1748.3	2497.7	2497.7	2497.7	2692.0	2692.0	2692.0
1991-1996	APR	5297.2	5297.2	5297.2	3783.7	3783.7	3783.7	2648.6	2648.6	2648.6	302.7	4767.4	4767.4	4767.4	6810.6	6810.6	6810.6	7340.4	7340.4	7340.4
1991-1996	MAY	5068.3	5068.3	5068.3	3620.2	3620.2	3620.2	2534.2	2534.2	2534.2	289.6	4561.5	4561.5	4561.5	6516.4	6516.4	6516.4	7023.3	7023.3	7023.3
1991-1996	JUN	4266.2	4266.2	4266.2	3047.3	3047.3	3047.3	2133.1	2133.1	2133.1	243.8	3839.6	3839.6	3839.6	5485.2	5485.2	5485.2	5911.8	5911.8	5911.8
1991-1996	JUL	6781.2	6781.2	6781.2	4843.7	4843.7	4843.7	3390.6	3390.6	3390.6	387.5	6103.0	6103.0	6103.0	8718.6	8718.6	8718.6	9396.7	9396.7	9396.7
1991-1996	AUG	4296.6	4296.6	4296.6	3069.0	3069.0	3069.0	2148.3	2148.3	2148.3	245.5	3866.9	3866.9	3866.9	5524.2	5524.2	5524.2	5953.9	5953.9	5953.9
1991-1996	SEP	2952.7	2952.7	2952.7	2109.1	2109.1	2109.1	1476.4	1476.4	1476.4	168.7	2657.5	2657.5	2657.5	3796.4	3796.4	3796.4	4091.7	4091.7	4091.7
1991-1996	OCT	5715.2	5715.2	5715.2	4082.3	4082.3	4082.3	2857.6	2857.6	2857.6	326.6	5143.7	5143.7	5143.7	7348.1	7348.1	7348.1	7919.6	7919.6	7919.6
1991-1996	NOV	3244.6	3244.6	3244.6	2317.6	2317.6	2317.6	1622.3	1622.3	1622.3	185.4	2920.2	2920.2	2920.2	5616.2	5616.2	5616.2	6053.0	6053.0	6053.0
1991-1996	DEC	1001.3	1001.3	1001.3	715.2	715.2	715.2	500.6	500.6	500.6	57.2	901.1	901.1	901.1	1282.0	1282.0	1282.0	1381.7	1381.7	1381.7
	ANNUAL	44096.3	44096.3	44096.3	31497.3	31497.3	31497.3	22048.1	22048.1	22048.1	2519.8	39686.6	39686.6	39686.6	58129.8	58129.8	58129.8	62651.0	62651.0	62651.0

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	1181.4	1181.4	1181.4	3936.0	3936.0	3936.0	3936.0	3936.0	3936.0	788.5	788.5	788.5	1182.8	1182.8	1182.8
1991-1996	FEB	330.4	330.4	330.4	1101.4	1101.4	1101.4	1101.4	1101.4	1101.4	220.1	220.1	220.1	330.2	330.2	330.2
1991-1996	MAR	832.6	832.6	832.6	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3	555.0	555.0	555.0	832.5	832.5	832.5
1991-1996	APR	2270.2	2270.2	2270.2	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4	1513.5	1513.5	1513.5	2270.2	2270.2	2270.2
1991-1996	MAY	2172.1	2172.1	2172.1	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5	1448.1	1448.1	1448.1	2172.1	2172.1	2172.1
1991-1996	JUN	1828.4	1828.4	1828.4	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6	1218.9	1218.9	1218.9	1828.4	1828.4	1828.4
1991-1996	JUL	2906.2	2906.2	2906.2	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4	1937.5	1937.5	1937.5	2906.2	2906.2	2906.2
1991-1996	AUG	1841.4	1841.4	1841.4	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0	1227.6	1227.6	1227.6	1841.4	1841.4	1841.4
1991-1996	SEP	1265.5	1265.5	1265.5	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2	843.6	843.6	843.6	1265.5	1265.5	1265.5
1991-1996	OCT	2449.4	2449.4	2449.4	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5	1632.9	1632.9	1632.9	2449.4	2449.4	2449.4
1991-1996	NOV	1872.0	1872.0	1872.0	6240.4	6240.4	6240.4	6240.4	6240.4	6240.4	927.0	927.0	927.0	1390.6	1390.6	1390.6
1991-1996	DEC	427.3	427.3	427.3	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4	286.1	286.1	286.1	429.1	429.1	429.1
	ANNUAL	19376.8	19376.8	19376.8	64588.0	64588.0	64588.0	64588.0	64588.0	64588.0	12598.9	12598.9	12598.9	18898.4	18898.4	18898.4

Total Moisture Supply = SUPY (Impervious)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	339.4	339.4	339.4	490.3	490.3	490.3	641.1	641.1	641.1	716.2	414.7	414.7	414.7	188.5	188.5	188.5	113.1	113.1	113.1
1991-1996	FEB	99.1	99.1	99.1	143.1	143.1	143.1	187.1	187.1	187.1	209.2	121.1	121.1	121.1	55.0	55.0	55.0	33.0	33.0	33.0
1991-1996	MAR	249.8	249.8	249.8	360.8	360.8	360.8	471.8	471.8	471.8	527.3	305.3	305.3	305.3	138.8	138.8	138.8	83.3	83.3	83.3
1991-1996	APR	681.1	681.1	681.1	983.8	983.8	983.8	1286.5	1286.5	1286.5	1437.8	832.4	832.4	832.4	378.4	378.4	378.4	227.0	227.0	227.0
1991-1996	MAY	651.6	651.6	651.6	941.3	941.3	941.3	1230.9	1230.9	1230.9	1375.7	796.5	796.5	796.5	362.0	362.0	362.0	217.2	217.2	217.2
1991-1996	JUN	548.5	548.5	548.5	792.3	792.3	792.3	1036.1	1036.1	1036.1	1158.0	670.4	670.4	670.4	304.7	304.7	304.7	182.8	182.8	182.8
1991-1996	JUL	871.9	871.9	871.9	1259.4	1259.4	1259.4	1646.9	1646.9	1646.9	1840.6	1065.6	1065.6	1065.6	484.4	484.4	484.4	290.6	290.6	290.6
1991-1996	AUG	552.4	552.4	552.4	797.9	797.9	797.9	1043.5	1043.5	1043.5	1166.2	675.2	675.2	675.2	306.9	306.9	306.9	184.1	184.1	184.1
1991-1996	SEP	379.6	379.6	379.6	548.4	548.4	548.4	717.1	717.1	717.1	801.5	464.0	464.0	464.0	210.9	210.9	210.9	126.5	126.5	126.5
1991-1996	OCT	734.8	734.8	734.8	1061.4	1061.4	1061.4	1388.0	1388.0	1388.0	1551.3	898.1	898.1	898.1	408.2	408.2	408.2	244.9	244.9	244.9
1991-1996	NOV	561.6	561.6	561.6	811.2	811.2	811.2	1060.8	1060.8	1060.8	1185.7	686.4	686.4	686.4	312.0	312.0	312.0	187.2	187.2	187.2
1991-1996	DEC	128.2	128.2	128.2	185.2	185.2	185.2	242.2	242.2	242.2	270.6	156.7	156.7	156.7	71.2	71.2	71.2	42.7	42.7	42.7
	ANNUAL	5798.0	5798.0	5798.0	8374.9	8374.9	8374.9	10951.8	10951.8	10951.8	12240.0	7086.3	7086.3	7086.3	3221.1	3221.1	3221.1	1932.6	1932.6	1932.6

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	2638.8	2638.8	2638.8	0.0	0.0	0.0	0.0	0.0	0.0	263.9	263.9	263.9	188.4	188.4	188.4
1991-1996	FEB	770.6	770.6	770.6	0.0	0.0	0.0	0.0	0.0	0.0	77.1	77.1	77.1	55.0	55.0	55.0
1991-1996	MAR	1942.7	1942.7	1942.7	0.0	0.0	0.0	0.0	0.0	0.0	194.3	194.3	194.3	138.8	138.8	138.8
1991-1996	APR	5297.2	5297.2	5297.2	0.0	0.0	0.0	0.0	0.0	0.0	529.7	529.7	529.7	378.4	378.4	378.4
1991-1996	MAY	5068.3	5068.3	5068.3	0.0	0.0	0.0	0.0	0.0	0.0	506.8	506.8	506.8	362.0	362.0	362.0
1991-1996	JUN	4266.2	4266.2	4266.2	0.0	0.0	0.0	0.0	0.0	0.0	426.6	426.6	426.6	304.7	304.7	304.7
1991-1996	JUL	6781.2	6781.2	6781.2	0.0	0.0	0.0	0.0	0.0	0.0	678.1	678.1	678.1	484.4	484.4	484.4
1991-1996	AUG	4296.6	4296.6	4296.6	0.0	0.0	0.0	0.0	0.0	0.0	429.7	429.7	429.7	306.9	306.9	306.9
1991-1996	SEP	2952.7	2952.7	2952.7	0.0	0.0	0.0	0.0	0.0	0.0	295.3	295.3	295.3	210.9	210.9	210.9
1991-1996	OCT	5715.2	5715.2	5715.2	0.0	0.0	0.0	0.0	0.0	0.0	571.5	571.5	571.5	408.2	408.2	408.2
1991-1996	NOV	4368.2	4368.2	4368.2	0.0	0.0	0.0	0.0	0.0	0.0	436.8	436.8	436.8	312.0	312.0	312.0
1991-1996	DEC	997.1	997.1	997.1	0.0	0.0	0.0	0.0	0.0	0.0	99.7	99.7	99.7	71.2	71.2	71.2
	ANNUAL	45094.7	45094.7	45094.7	0.0	0.0	0.0	0.0	0.0	0.0	4509.5	4509.5	4509.5	3221.0	3221.0	3221.0

Runoff = SURO+IFWO (pervious areas)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	18.1	103.5	400.2	18.8	86.3	317.0	21.5	78.1	262.2	6.4	14.1	84.7	361.5	16.7	100.2	476.1	6.0	60.7	393.0
1991-1996	FEB	4.5	16.8	74.3	4.3	14.1	62.1	4.2	13.5	55.1	0.9	3.6	14.5	75.7	3.3	15.2	106.4	0.6	7.1	61.7
1991-1996	MAR	3.2	15.8	99.4	2.7	14.8	83.1	2.6	16.0	74.5	0.9	2.7	12.9	95.2	3.8	17.8	130.7	2.9	10.2	105.5
1991-1996	APR	16.5	76.8	432.7	14.4	70.2	352.8	13.6	73.1	301.9	4.2	14.0	62.9	406.6	19.3	89.3	576.5	8.5	48.8	483.4
1991-1996	MAY	33.7	144.8	641.4	29.8	127.7	509.0	30.0	126.4	417.6	8.6	27.8	117.4	577.5	39.0	165.9	803.3	12.7	97.2	749.3
1991-1996	JUN	30.6	167.6	548.3	29.0	147.8	432.1	31.6	141.5	353.1	10.0	24.8	134.6	499.9	35.3	189.2	696.9	15.5	130.6	651.5
1991-1996	JUL	18.4	164.0	614.9	18.0	145.4	503.1	20.8	140.1	438.0	9.8	14.9	131.1	593.3	21.3	183.8	816.1	10.1	92.5	564.4
1991-1996	AUG	12.8	113.6	433.1	13.3	104.5	353.3	18.3	106.6	303.9	7.0	10.0	87.2	425.4	14.3	121.1	582.2	5.6	56.5	411.0
1991-1996	SEP	13.6	72.9	190.3	14.1	61.7	152.7	16.4	56.0	131.5	3.9	10.8	63.2	186.3	15.4	91.2	270.5	5.9	52.0	197.2
1991-1996	OCT	8.0	92.7	417.6	8.4	94.8	347.1	11.2	106.4	304.1	5.2	6.4	70.4	400.9	9.1	99.2	560.2	2.3	12.0	135.6
1991-1996	NOV	6.8	46.4	234.9	6.5	42.3	189.3	6.8	43.2	161.3	2.6	5.3	37.9	211.0	12.5	76.2	416.6	4.0	36.7	297.5
1991-1996	DEC	2.4	13.1	61.9	2.4	11.7	51.4	2.9	11.8	45.9	0.8	1.9	11.7	56.3	3.1	19.6	88.8	1.1	9.8	63.6
	ANNUAL	168.5	1027.9	4148.9	161.8	921.1	3353.1	179.9	912.2	2849.8	60.2	136.3	828.4	3889.5	192.9	1168.7	5524.1	75.3	614.1	4113.6

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	365.8	551.4	734.0	34.7	157.2	655.7	34.7	157.3	656.7	4.9	31.8	127.7	7.3	47.7	191.6
1991-1996	FEB	98.4	158.0	209.8	7.5	27.8	168.4	7.5	27.8	167.9	1.1	4.4	23.0	1.7	6.6	34.5
1991-1996	MAR	116.2	210.7	356.5	5.7	32.3	184.6	5.7	32.3	185.2	0.9	4.4	36.2	1.3	6.5	54.3
1991-1996	APR	432.0	701.1	1066.5	33.3	159.8	740.0	33.3	159.8	741.1	4.5	21.1	141.6	6.8	31.7	212.4
1991-1996	MAY	650.8	911.7	1226.2	70.8	267.9	966.6	70.9	268.2	974.9	9.6	43.1	203.4	14.5	64.7	305.1
1991-1996	JUN	629.4	826.7	1038.4	56.9	262.9	827.4	57.0	263.6	836.4	8.5	50.1	172.5	12.8	75.1	258.8
1991-1996	JUL	842.0	1197.8	1593.9	36.3	280.1	1075.0	36.3	281.5	1087.7	4.8	48.9	229.8	7.2	73.4	344.7
1991-1996	AUG	656.1	842.3	993.8	26.5	187.0	776.3	26.5	187.8	790.6	3.5	35.0	152.7	5.3	52.5	229.0
1991-1996	SEP	274.1	398.5	531.1	28.2	132.7	381.2	28.2	132.4	376.7	3.6	19.6	63.9	5.3	29.4	95.9
1991-1996	OCT	693.1	976.9	1207.7	24.5	267.5	899.7	24.5	268.5	909.3	2.1	25.9	133.0	3.1	38.8	199.5
1991-1996	NOV	477.8	729.8	970.3	27.1	135.5	615.3	27.1	135.5	614.5	1.7	12.8	69.1	2.6	19.2	103.6
1991-1996	DEC	103.0	164.8	219.4	7.0	34.1	135.3	7.0	34.1	134.7	0.6	3.8	18.2	0.9	5.7	27.4
	ANNUAL	5329.2	7671.5	10160.6	358.5	1944.7	7425.5	358.6	1948.7	7475.5	45.9	300.9	1371.2	68.9	451.4	2056.8

Runoff = SURO (impervious areas)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	328.0	328.3	329.8	473.7	473.9	475.3	617.9	618.1	619.6	705.9	404.8	404.9	405.7	182.8	182.9	183.2	106.6	106.8	108.2
1991-1996	FEB	93.7	93.7	93.8	135.3	135.3	135.4	176.2	176.2	176.3	204.3	116.4	116.4	116.5	52.4	52.4	52.4	30.0	30.0	30.2
1991-1996	MAR	216.8	216.9	218.1	312.9	312.9	314.1	405.1	405.2	406.7	495.2	275.6	275.7	276.3	122.1	122.2	122.7	65.7	66.0	68.5
1991-1996	APR	597.8	598.2	601.6	862.8	863.1	866.6	1118.0	1118.5	1122.8	1357.1	757.8	757.9	759.1	336.4	336.6	337.7	182.4	183.6	187.1
1991-1996	MAY	552.9	554.0	566.3	797.8	798.9	810.5	1031.6	1033.1	1045.6	1277.2	706.4	706.7	712.8	311.7	311.9	318.3	165.6	166.4	183.8
1991-1996	JUN	453.2	455.6	472.0	653.9	656.5	671.3	844.2	847.9	862.6	1061.6	582.9	583.4	593.8	256.0	256.5	268.2	133.5	135.0	158.5
1991-1996	JUL	753.2	755.1	769.8	1087.2	1089.1	1103.0	1407.3	1410.1	1426.1	1724.0	958.3	958.8	966.9	424.1	424.5	433.4	227.5	228.4	247.6
1991-1996	AUG	454.2	456.5	472.1	655.4	657.9	672.4	845.9	849.4	864.8	1065.7	584.2	584.8	596.1	256.3	256.8	269.5	133.3	134.4	157.7
1991-1996	SEP	308.7	309.0	312.1	445.5	445.7	448.8	574.5	574.9	579.1	728.8	398.4	398.4	399.6	174.5	174.6	175.6	90.1	90.3	92.6
1991-1996	OCT	641.8	642.8	654.1	926.4	927.6	938.2	1200.1	1202.3	1213.4	1460.9	814.6	814.8	822.7	361.2	361.5	371.6	194.9	195.5	198.0
1991-1996	NOV	499.6	499.9	501.9	721.1	721.2	723.2	935.1	935.3	937.7	1126.3	631.2	631.4	632.0	280.9	281.1	281.8	153.5	154.6	156.7
1991-1996	DEC	112.3	112.3	112.6	162.0	162.1	162.3	209.9	210.0	210.1	255.2	142.4	142.5	142.6	63.2	63.3	63.4	34.2	34.6	34.9
	ANNUAL	5018.0	5027.7	5108.5	7242.1	7252.0	7326.6	9375.9	9390.0	9471.5	11475.6	6382.1	6384.9	6430.6	2825.6	2828.5	2879.9	1517.5	1526.1	1632.6

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	2484.4	2484.4	2484.4	0.0	0.0	0.0	0.0	0.0	0.0	261.6	261.6	261.7	187.1	187.2	187.2
1991-1996	FEB	699.1	699.1	699.1	0.0	0.0	0.0	0.0	0.0	0.0	76.0	76.0	76.0	54.4	54.4	54.4
1991-1996	MAR	1528.1	1528.1	1528.1	0.0	0.0	0.0	0.0	0.0	0.0	187.0	187.0	187.1	134.6	134.6	134.7
1991-1996	APR	4242.7	4242.7	4242.7	0.0	0.0	0.0	0.0	0.0	0.0	511.5	511.6	511.8	368.0	368.0	368.2
1991-1996	MAY	3842.7	3842.7	3842.7	0.0	0.0	0.0	0.0	0.0	0.0	484.5	484.5	485.1	349.2	349.3	349.8
1991-1996	JUN	3102.3	3102.3	3102.3	0.0	0.0	0.0	0.0	0.0	0.0	404.6	404.7	405.4	292.1	292.2	292.8
1991-1996	JUL	5295.4	5295.4	5295.4	0.0	0.0	0.0	0.0	0.0	0.0	651.7	651.8	652.5	469.3	469.4	470.0
1991-1996	AUG	3101.7	3101.7	3101.7	0.0	0.0	0.0	0.0	0.0	0.0	406.6	406.8	407.5	293.7	293.8	294.5
1991-1996	SEP	2095.3	2095.3	2095.3	0.0	0.0	0.0	0.0	0.0	0.0	278.6	278.6	278.8	201.3	201.4	201.6
1991-1996	OCT	4542.4	4542.4	4542.4	0.0	0.0	0.0	0.0	0.0	0.0	551.1	551.2	551.5	396.6	396.6	397.0
1991-1996	NOV	3575.3	3575.3	3575.3	0.0	0.0	0.0	0.0	0.0	0.0	423.5	423.5	423.6	304.4	304.4	304.5
1991-1996	DEC	795.4	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0	96.2	96.2	96.2	69.2	69.2	69.2
	ANNUAL	35304.8	35304.8	35304.8	0.0	0.0	0.0	0.0	0.0	0.0	4336.6	4337.1	4340.4	3122.2	3122.6	3125.8

(IMPEV)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	8.2	8.1	7.0	12.0	11.8	10.8	16.8	16.6	15.6	7.5	7.1	7.1	6.5	4.1	4.0	3.8	4.7	4.5	3.6
1991-1996	FEB	8.5	8.5	8.4	12.4	12.4	12.3	17.4	17.4	17.2	7.8	7.4	7.4	7.3	4.2	4.2	4.1	4.8	4.8	4.5
1991-1996	MAR	33.4	33.3	32.1	48.6	48.5	47.3	67.6	67.5	66.0	32.4	30.0	29.9	29.3	16.9	16.8	16.2	17.8	17.5	15.0
1991-1996	APR	82.7	82.3	79.0	120.1	119.8	116.4	167.3	166.9	162.5	80.2	74.2	74.0	72.8	41.7	41.5	40.4	44.3	43.1	39.7
1991-1996	MAY	101.4	100.2	87.6	147.3	146.1	134.3	204.6	203.0	190.1	101.1	92.5	92.2	85.9	51.7	51.4	44.9	52.9	52.2	34.3
1991-1996	JUN	99.6	97.1	80.0	144.7	142.0	126.5	200.6	196.8	181.4	100.9	91.6	90.9	80.1	50.9	50.5	38.2	51.6	50.0	25.4
1991-1996	JUL	117.2	115.3	100.8	170.1	168.1	154.4	236.6	233.9	218.0	115.1	106.0	105.5	97.5	59.6	59.1	50.4	62.4	61.5	42.5
1991-1996	AUG	97.6	95.4	79.8	141.6	139.2	124.8	196.3	192.9	177.5	99.9	90.4	89.8	78.6	50.3	49.8	37.2	50.5	49.4	26.3
1991-1996	SEP	72.5	72.2	69.1	105.2	105.0	101.8	145.8	145.5	141.1	74.3	67.1	67.1	65.9	37.3	37.2	36.1	37.3	37.1	34.7
1991-1996	OCT	87.8	86.8	76.2	127.5	126.3	116.3	177.4	175.3	164.8	85.3	78.9	78.6	71.2	44.4	44.2	34.6	47.2	46.7	44.3
1991-1996	NOV	60.9	60.6	58.6	88.4	88.3	86.3	123.3	123.1	120.8	58.3	54.2	54.0	53.4	30.6	30.4	29.6	33.0	32.0	30.0
1991-1996	DEC	16.2	16.1	15.9	23.6	23.5	23.3	32.8	32.7	32.6	15.7	14.5	14.4	14.4	8.2	8.0	8.0	8.7	8.3	8.0
	ANNUAL	780.0	770.3	689.6	1132.9	1123.0	1048.3	1576.0	1561.9	1480.4	764.5	704.3	701.4	655.8	395.5	392.6	341.1	415.1	406.5	300.0

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	111.7	111.7	111.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.6	1.6	0.9	0.9	0.9
1991-1996	FEB	113.6	113.6	113.6	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.0	1.0	1.0
1991-1996	MAR	420.5	420.5	420.5	0.0	0.0	0.0	0.0	0.0	0.0	7.3	7.3	7.2	4.2	4.2	4.1
1991-1996	APR	1047.2	1047.2	1047.2	0.0	0.0	0.0	0.0	0.0	0.0	18.1	18.1	17.9	10.3	10.3	10.1
1991-1996	MAY	1257.9	1257.9	1257.9	0.0	0.0	0.0	0.0	0.0	0.0	23.0	22.9	22.3	13.1	13.1	12.6
1991-1996	JUN	1217.0	1217.0	1217.0	0.0	0.0	0.0	0.0	0.0	0.0	23.0	22.9	22.2	13.2	13.1	12.4
1991-1996	JUL	1467.6	1467.6	1467.6	0.0	0.0	0.0	0.0	0.0	0.0	26.1	26.0	25.3	14.9	14.8	14.2
1991-1996	AUG	1187.4	1187.4	1187.4	0.0	0.0	0.0	0.0	0.0	0.0	22.9	22.8	22.0	13.1	13.0	12.3
1991-1996	SEP	876.9	876.9	876.9	0.0	0.0	0.0	0.0	0.0	0.0	17.0	17.0	16.8	9.8	9.8	9.6
1991-1996	OCT	1107.4	1107.4	1107.4	0.0	0.0	0.0	0.0	0.0	0.0	19.2	19.2	18.9	11.0	11.0	10.6
1991-1996	NOV	778.1	778.1	778.1	0.0	0.0	0.0	0.0	0.0	0.0	13.1	13.1	13.0	7.5	7.5	7.4
1991-1996	DEC	205.5	205.5	205.5	0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.5	3.5	2.0	2.0	2.0
	ANNUAL	9790.6	9790.6	9790.6	0.0	0.0	0.0	0.0	0.0	0.0	172.9	172.4	169.0	98.9	98.4	95.2

(TAET)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	125.5	126.4	129.0	86.2	86.9	88.8	56.5	57.0	58.2	7.3	114.4	115.1	117.6	163.7	164.7	168.3	188.3	188.3	188.4
1991-1996	FEB	154.8	159.0	160.3	106.5	109.6	110.1	69.9	71.9	72.0	9.2	141.0	144.8	146.4	201.4	206.6	208.7	235.4	235.8	236.1
1991-1996	MAR	504.3	516.7	523.8	348.8	358.0	361.6	231.0	237.6	238.6	29.8	458.5	469.5	476.0	654.9	670.7	680.0	741.9	742.9	743.9
1991-1996	APR	1659.6	1705.8	1719.4	1148.2	1179.0	1186.1	760.3	779.1	781.9	98.5	1508.4	1550.9	1556.3	2154.1	2215.0	2223.3	2475.6	2482.9	2485.3
1991-1996	MAY	3257.6	3398.7	3386.9	2267.0	2360.0	2344.4	1516.2	1569.7	1554.0	195.8	2955.3	3085.2	3027.3	4220.7	4407.1	4325.2	5148.4	5186.3	5179.8
1991-1996	JUN	3921.8	4009.2	3953.9	2737.3	2790.0	2745.6	1841.6	1864.6	1829.9	230.8	3554.9	3637.4	3536.8	5077.6	5196.3	5053.4	6698.4	6723.6	6662.1
1991-1996	JUL	4623.7	4724.5	4703.7	3221.7	3286.4	3259.0	2157.6	2196.3	2163.9	272.1	4192.9	4287.7	4196.7	5989.6	6125.5	5996.5	7762.6	7796.2	7665.1
1991-1996	AUG	4262.3	4426.7	4362.3	2986.0	3090.6	3033.6	2021.5	2075.6	2026.7	254.6	3859.3	4012.3	3882.1	5513.1	5732.2	5547.5	7334.1	7379.1	7199.4
1991-1996	SEP	3033.7	3037.2	2939.6	2118.8	2114.1	2040.9	1425.1	1414.0	1359.6	174.9	2748.9	2755.6	2633.9	3927.0	3936.7	3763.8	5421.9	5399.6	5063.9
1991-1996	OCT	2289.8	2326.0	2339.8	1590.1	1612.2	1620.5	1059.5	1071.7	1075.7	134.1	2078.8	2113.3	2114.1	2969.7	3019.0	3020.9	3765.9	3765.9	3674.4
1991-1996	NOV	2710.1	2578.6	2286.7	1952.8	1860.7	1632.2	1385.3	1318.4	1133.9	146.4	2432.7	2314.6	2049.3	1246.4	1259.1	1287.3	1423.6	1424.5	1423.8
1991-1996	DEC	293.7	300.3	315.0	203.2	208.4	219.1	134.8	139.0	145.8	17.3	267.0	272.7	286.6	381.5	389.7	409.4	476.9	477.3	477.3
	ANNUAL	26829.7	27301.3	26813.0	18745.0	19033.6	18620.3	12626.3	12761.3	12407.7	1570.9	24312.2	24758.9	24023.0	32499.5	33322.7	32684.4	41672.9	41802.4	40999.4

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	18.5	18.5	18.3	176.2	178.6	184.6	176.2	178.6	184.7	36.3	36.5	37.3	54.5	54.8	56.0
1991-1996	FEB	22.5	22.6	22.6	215.4	224.8	227.3	215.4	224.8	227.3	44.8	45.9	46.5	67.2	68.9	69.7
1991-1996	MAR	81.1	81.1	80.8	714.4	745.0	754.2	714.4	745.0	754.2	145.6	149.0	151.1	218.3	223.5	226.6
1991-1996	APR	264.9	264.8	261.8	2331.4	2431.4	2436.1	2331.4	2431.4	2436.0	478.8	492.3	493.9	718.3	738.4	740.8
1991-1996	MAY	571.7	567.3	546.7	4460.4	4747.0	4581.1	4460.4	4747.0	4580.8	938.1	979.1	960.2	1407.2	1468.7	1440.3
1991-1996	JUN	736.2	714.9	669.3	5130.5	5298.1	5069.8	5130.5	5298.1	5069.3	1128.5	1154.2	1121.5	1692.7	1731.3	1682.3
1991-1996	JUL	834.0	818.7	759.7	6112.5	6305.3	6134.5	6112.5	6305.2	6133.9	1330.9	1360.5	1330.5	1996.4	2040.8	1995.7
1991-1996	AUG	837.9	816.7	744.8	5562.2	5880.0	5611.3	5562.2	5879.9	5610.6	1225.1	1273.1	1230.1	1837.6	1909.6	1845.2
1991-1996	SEP	578.5	547.7	507.4	3842.1	3843.4	3628.3	3842.1	3843.3	3627.8	872.6	874.4	834.7	1308.9	1311.6	1252.0
1991-1996	OCT	395.5	393.2	378.2	3068.5	3143.0	3178.8	3068.5	3142.9	3178.3	659.9	670.6	670.1	989.9	1005.9	1005.2
1991-1996	NOV	152.3	152.0	150.4	1349.8	1376.6	1427.6	1349.8	1376.6	1427.6	772.2	732.1	640.3	1158.3	1098.1	960.4
1991-1996	DEC	51.7	51.6	50.5	393.8	411.9	447.9	393.8	411.9	447.8	84.8	86.6	90.9	127.2	129.9	136.3
	ANNUAL	4445.6	4353.7	4103.2	33357.0	34584.9	33681.3	33357.1	34584.7	33678.1	7717.5	7854.4	7606.9	11576.3	11781.6	11410.4

(IFWO)

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	15.2	87.8	289.8	16.0	73.4	228.9	18.7	66.3	188.1	4.5	12.0	76.6	288.7	13.4	92.7	445.1	4.2	54.7	353.8
1991-1996	FEB	3.7	16.0	70.6	3.7	13.6	58.6	3.9	12.9	51.6	0.8	3.0	13.9	73.1	2.6	14.3	103.4	0.4	6.3	59.2
1991-1996	MAR	2.1	13.0	81.5	1.8	12.9	67.1	1.7	14.5	58.4	0.7	1.8	10.7	83.3	2.5	14.9	119.7	1.7	7.8	88.6
1991-1996	APR	12.5	67.8	377.6	11.2	63.1	301.4	11.2	66.1	247.8	3.5	10.4	56.2	377.6	14.3	80.0	549.4	5.5	39.6	453.6
1991-1996	MAY	29.9	129.4	475.6	26.7	113.3	367.7	27.1	110.3	288.7	6.6	25.0	110.5	475.8	35.3	158.8	703.9	8.7	90.1	625.2
1991-1996	JUN	27.9	143.1	336.4	26.9	122.9	259.1	29.2	112.0	204.0	7.1	22.6	125.3	346.4	32.3	181.3	519.9	13.6	122.7	459.0
1991-1996	JUL	15.9	139.2	387.6	15.8	120.8	305.2	18.9	112.4	246.1	6.9	12.8	120.6	436.8	18.3	174.2	657.7	7.6	85.8	424.4
1991-1996	AUG	11.2	92.0	240.8	12.0	82.4	190.8	16.5	80.0	155.1	4.5	9.0	79.0	265.9	12.8	114.2	398.2	4.2	51.1	238.5
1991-1996	SEP	12.6	69.5	160.5	13.2	58.8	124.3	15.6	52.8	99.0	3.4	9.9	61.4	171.4	14.2	88.9	258.2	4.8	50.4	186.9
1991-1996	OCT	6.0	77.4	235.2	6.5	77.4	187.8	9.2	81.6	157.5	3.5	4.7	63.7	237.7	6.7	91.9	351.0	1.1	7.9	118.3
1991-1996	NOV	4.8	41.3	200.8	4.8	38.4	159.9	5.7	39.2	133.3	2.1	3.7	34.3	192.9	7.8	68.3	394.2	2.3	28.9	276.4
1991-1996	DEC	1.5	11.2	57.2	1.6	10.0	47.7	2.2	10.2	42.8	0.6	1.2	9.4	53.3	2.0	16.3	85.1	0.5	7.0	59.4
	ANNUAL	143.2	887.6	2913.9	140.3	786.8	2299.1	159.8	758.1	1873.7	44.3	116.1	761.5	3002.9	162.0	1095.9	4585.8	54.5	552.1	3343.2

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	295.7	369.6	349.4	30.1	149.0	633.7	30.0	148.9	629.8	3.8	22.5	77.5	5.7	33.7	116.3
1991-1996	FEB	90.6	129.4	129.8	6.7	26.6	164.5	6.7	26.6	163.8	0.9	4.1	20.2	1.4	6.2	30.3
1991-1996	MAR	100.1	136.7	157.7	4.0	29.4	176.0	4.0	29.4	175.4	0.6	3.3	23.0	0.8	5.0	34.6
1991-1996	APR	340.3	434.0	472.0	27.0	149.0	713.1	27.0	148.9	710.0	3.3	17.5	102.9	5.0	26.2	154.3
1991-1996	MAY	444.9	472.2	444.2	66.3	260.4	888.7	66.3	260.1	878.8	7.9	33.1	123.1	11.8	49.7	184.6
1991-1996	JUN	410.0	408.9	354.1	54.2	256.4	665.1	54.2	255.9	653.4	7.1	35.3	87.6	10.7	52.9	131.4
1991-1996	JUL	433.9	418.3	348.7	31.8	269.9	923.7	31.8	269.0	905.8	4.1	34.7	108.4	6.1	52.1	162.7
1991-1996	AUG	330.9	325.5	284.2	25.0	180.6	594.5	25.0	180.2	582.6	2.8	22.7	68.2	4.2	34.0	102.4
1991-1996	SEP	178.3	182.8	165.8	26.6	130.2	368.4	26.6	129.8	360.3	3.1	17.2	43.0	4.7	25.8	64.5
1991-1996	OCT	404.3	486.9	427.9	20.6	254.3	553.7	20.6	252.8	542.4	1.5	17.7	63.7	2.2	26.5	95.6
1991-1996	NOV	405.8	511.4	454.9	19.2	127.4	595.4	19.2	127.3	591.0	1.2	10.5	50.3	1.8	15.8	75.5
1991-1996	DEC	98.8	148.4	164.7	5.7	30.8	131.3	5.7	30.8	130.6	0.4	2.9	15.5	0.6	4.4	23.2
	ANNUAL	3544.2	4052.1	3784.1	317.0	1863.9	6408.0	317.0	1859.7	6323.6	36.6	221.5	783.5	54.9	332.2	1175.3

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Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4
1991-1996	FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4
1991-1996	MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8
1991-1996	APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2
1991-1996	MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0
1991-1996	JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8
1991-1996	JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8
1991-1996	AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6
1991-1996	SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2
1991-1996	OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5
1991-1996	NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3
1991-1996	DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8
	ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	519.6	403.5	289.4	1827.8	1711.8	1478.3	1827.8	1711.6	1475.4	343.9	323.4	270.8	515.9	485.1	406.3
1991-1996	FEB	459.1	355.9	253.7	1621.0	1528.0	1330.2	1621.0	1527.8	1327.7	303.3	288.2	244.3	454.9	432.3	366.4
1991-1996	MAR	520.6	406.8	291.3	1655.5	1563.8	1376.3	1655.5	1563.7	1374.0	309.7	295.2	253.9	464.5	442.8	380.8
1991-1996	APR	519.6	409.0	291.5	1650.6	1561.5	1386.1	1650.5	1561.3	1384.1	309.9	296.0	258.2	464.9	444.1	387.3
1991-1996	MAY	634.2	500.8	353.7	1932.2	1826.3	1616.5	1932.2	1826.1	1614.3	364.3	348.0	304.6	546.5	521.9	456.9
1991-1996	JUN	638.5	502.0	353.1	1921.2	1789.2	1555.4	1921.2	1789.0	1553.0	364.0	343.1	294.4	546.0	514.6	441.6
1991-1996	JUL	644.8	500.9	350.8	2062.3	1889.2	1627.6	2062.3	1889.0	1624.3	392.4	363.5	307.0	588.6	545.2	460.5
1991-1996	AUG	698.0	538.3	378.6	2125.9	1921.1	1656.7	2125.9	1920.8	1652.7	405.9	370.3	309.7	608.9	555.5	464.6
1991-1996	SEP	651.4	501.3	355.0	1958.2	1766.8	1515.0	1958.2	1766.5	1510.9	374.3	340.7	281.7	561.4	511.0	422.6
1991-1996	OCT	642.2	496.9	357.2	2107.7	1903.8	1607.8	2107.7	1903.4	1603.4	399.5	363.2	292.5	599.3	544.8	438.8
1991-1996	NOV	660.1	515.2	371.7	2208.8	2012.9	1704.6	2208.8	2012.6	1700.6	342.4	315.0	258.0	513.6	472.5	387.0
1991-1996	DEC	672.0	525.9	379.4	2185.5	2016.8	1720.5	2185.5	2016.5	1716.9	410.5	380.6	312.6	615.8	570.9	468.9
	ANNUAL	7295.6	5684.2	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3	18537.1	4320.2	4027.2	3387.8	6480.2	6040.8	5081.7

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Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd
1991-1996	**JAN**	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4
1991-1996	FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9
1991-1996	MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0
1991-1996	APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4
1991-1996	MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9
1991-1996	JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8
1991-1996	JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6
1991-1996	AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4
1991-1996	SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0
1991-1996	OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6
1991-1996	NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0
1991-1996	DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5
	ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6

Year	Month	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	89.3	67.2	45.7	340.4	337.2	293.8	340.4	337.1	293.6	61.7	62.9	54.7	92.5	94.4	82.1
1991-1996	FEB	32.0	25.9	17.8	91.2	90.5	93.8	91.2	90.5	93.8	16.3	16.9	17.7	24.5	25.4	26.6
1991-1996	MAR	59.9	51.6	38.7	170.4	164.1	160.8	170.4	164.1	160.7	32.6	31.7	31.1	48.9	47.5	46.7
1991-1996	APR	167.4	134.6	92.9	504.0	482.9	438.6	504.0	482.9	438.4	95.9	93.0	86.0	143.9	139.4	129.0
1991-1996	MAY	117.2	90.1	61.2	396.6	352.3	275.9	396.6	352.3	275.3	76.6	69.4	53.8	115.0	104.1	80.7
1991-1996	JUN	92.4	70.3	47.9	297.8	253.8	202.2	297.8	253.8	201.2	57.9	50.3	38.5	86.9	75.5	57.8
1991-1996	JUL	135.3	97.2	66.9	441.4	375.1	319.3	441.4	375.0	318.0	85.3	72.5	57.7	128.0	108.7	86.5
1991-1996	AUG	77.0	59.6	46.0	232.3	197.0	170.6	232.3	197.0	169.4	45.7	38.8	29.6	68.5	58.2	44.4
1991-1996	SEP	68.1	52.2	40.8	200.3	174.8	140.4	200.3	174.9	140.2	37.5	33.2	24.6	56.2	49.8	36.9
1991-1996	OCT	146.0	119.0	88.9	505.3	465.5	376.7	505.3	465.4	375.6	91.5	83.9	61.4	137.2	125.8	92.0
1991-1996	NOV	139.7	108.9	77.4	463.2	451.1	391.9	463.2	451.1	391.8	60.6	58.9	49.5	90.9	88.4	74.3
1991-1996	DEC	41.3	33.5	24.3	115.8	121.4	112.7	115.8	121.4	112.7	21.9	22.9	21.5	32.9	34.3	32.3
	ANNUAL	1173.5	916.4	652.4	3758.6	3465.6	2976.8	3758.6	3465.2	2970.9	683.6	634.3	526.1	1025.3	951.5	789.1

AVERAGES:

Remaining impervious URF's

		Code	SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
	Surface	DSN	1013	1014	1015	1114	1115
	Sub-surface	DSN	1513	1514	1515	1614	1615
		Year	(mm)	(mm)	(mm)	(mm)	(mm)
		Total Moisture Supply = SUPY (Impervious)					
AVERAGES:	Year	Month					
	1991-1996	**JAN**	37.7	37.7	37.7	37.7	37.7
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2
		ANNUAL	**644.2**	**644.2**	**644.2**	**644.2**	**644.2**
		SURO (Impervious)					
AVERAGES:							
	1991-1996	**JAN**	35.5	35.9	35.5	35.2	35.3
	1991-1996	FEB	10.0	10.1	10.0	10.0	10.0
	1991-1996	MAR	21.9	23.4	21.9	21.0	21.4
	1991-1996	APR	60.6	64.9	60.6	57.6	59.0
	1991-1996	MAY	54.9	60.1	54.9	50.8	52.7
	1991-1996	JUN	44.3	49.0	44.3	40.9	42.5
	1991-1996	JUL	75.7	82.3	75.7	70.5	73.0
	1991-1996	AUG	44.3	50.1	44.3	39.8	41.9
	1991-1996	SEP	29.9	33.4	29.9	27.2	28.5
	1991-1996	OCT	64.9	69.5	64.9	61.7	63.2
	1991-1996	NOV	51.1	53.7	51.1	49.2	50.2
	1991-1996	DEC	11.4	12.1	11.4	11.0	11.1
		ANNUAL	504.4	544.5	504.4	474.8	488.7
		IMPEV					
AVERAGES:							
	1991-1996	**JAN**	1.6	1.6	1.6	1.6	1.6
	1991-1996	FEB	1.6	1.2	1.6	2.0	1.8
	1991-1996	MAR	6.0	4.4	6.0	6.8	6.4
	1991-1996	APR	15.0	10.8	15.0	17.9	16.5
	1991-1996	MAY	18.0	12.4	18.0	22.3	20.3
	1991-1996	JUN	17.4	12.2	17.4	21.3	19.5
	1991-1996	JUL	21.0	14.5	21.0	25.8	23.5
	1991-1996	AUG	17.0	11.3	17.0	21.4	19.4
	1991-1996	SEP	12.5	8.8	12.5	15.3	14.0
	1991-1996	OCT	15.8	11.6	15.8	18.9	17.4
	1991-1996	NOV	11.1	8.6	11.1	12.5	11.8
	1991-1996	DEC	2.9	2.3	2.9	3.6	3.3
		ANNUAL	**139.9**	**99.7**	**139.9**	**169.4**	**155.5**

Remaining impervious URF volumes (m^3) based on land use composition

		Code		RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
		Sidewalk Composition (%)		0.01	0.01	0.01	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sloped Roof Composition (%)		0.13	0.13	0.13	0.24	0.24	0.24	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Driveway Composition (%)		0.07	0.07	0.07	0.10	0.10	0.10	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Flat Roof Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30	0.30	0.25	0.25	0.25
		Ind Park Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.15	0.15	0.15	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43	0.4	0.4	0.4
URF AREA	**100000**	**Sidewalk Composition (%)**		1000	1000	1000	3000	3000	3000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ha	**m^2**	**Sloped Roof Composition (%)**		13000	13000	13000	24000	24000	24000	32000	32000	32000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Driveway Composition (%)		7000	7000	7000	10000	10000	10000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Flat Roof Composition (%)		0	0	0	0	0	0	0	0	0	17000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30000	30000	30000	25000	25000	25000
		Ind Park Composition (%)		0	0	0	0	0	0	0	0	0	60000	15000	15000	15000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	43000	43000	43000	40000	40000	40000
		Year	Month	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	791.82	791.82	791.82	1395.09	1395.09	1395.09	1809.84	1809.84	1809.84	2902.64	980.11	980.11	980.11	188.48	188.48	188.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2751.86	2751.86	2751.86	2450.28	2450.28	2450.28
1991-1996	FEB	231.18	231.18	231.18	407.31	407.31	407.31	528.40	528.40	528.40	847.64	286.22	286.22	286.22	55.04	55.04	55.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	803.61	803.61	803.61	715.54	715.54	715.54
1991-1996	MAR	582.81	582.81	582.81	1026.86	1026.86	1026.86	1332.14	1332.14	1332.14	2136.94	721.57	721.57	721.57	138.76	138.76	138.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2025.93	2025.93	2025.93	1803.91	1803.91	1803.91
1991-1996	APR	1589.15	1589.15	1589.15	2799.93	2799.93	2799.93	3632.34	3632.34	3632.34	5826.89	1967.52	1967.52	1967.52	378.37	378.37	378.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5524.19	5524.19	5524.19	4918.80	4918.80	4918.80
1991-1996	MAY	1520.50	1520.50	1520.50	2678.98	2678.98	2678.98	3475.43	3475.43	3475.43	5575.17	1882.53	1882.53	1882.53	362.02	362.02	362.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5285.55	5285.55	5285.55	4706.31	4706.31	4706.31
1991-1996	JUN	1279.87	1279.87	1279.87	2255.01	2255.01	2255.01	2925.42	2925.42	2925.42	4692.87	1584.60	1584.60	1584.60	304.73	304.73	304.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4449.08	4449.08	4449.08	3961.51	3961.51	3961.51
1991-1996	JUL	2034.35	2034.35	2034.35	3584.33	3584.33	3584.33	4649.94	4649.94	4649.94	7459.27	2518.72	2518.72	2518.72	484.37	484.37	484.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7071.78	7071.78	7071.78	6296.79	6296.79	6296.79
1991-1996	AUG	1288.98	1288.98	1288.98	2271.06	2271.06	2271.06	2946.24	2946.24	2946.24	4726.26	1595.88	1595.88	1595.88	306.90	306.90	306.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4480.74	4480.74	4480.74	3989.70	3989.70	3989.70
1991-1996	SEP	885.82	885.82	885.82	1560.73	1560.73	1560.73	2024.74	2024.74	2024.74	3248.01	1096.73	1096.73	1096.73	210.91	210.91	210.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3079.29	3079.29	3079.29	2741.83	2741.83	2741.83
1991-1996	OCT	1714.55	1714.55	1714.55	3020.88	3020.88	3020.88	3918.98	3918.98	3918.98	6286.69	2122.78	2122.78	2122.78	408.23	408.23	408.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5960.11	5960.11	5960.11	5306.95	5306.95	5306.95
1991-1996	NOV	1310.42	1310.42	1310.42	2308.83	2308.83	2308.83	2995.24	2995.24	2995.24	4805.01	1622.47	1622.47	1622.47	312.01	312.01	312.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4555.39	4555.39	4555.39	4056.17	4056.17	4056.17
1991-1996	DEC	299.13	299.13	299.13	527.03	527.03	527.03	683.72	683.72	683.72	1096.80	370.35	370.35	370.35	71.22	71.22	71.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1039.82	1039.82	1039.82	925.87	925.87	925.87
	ANNUAL	13528.57	13528.57	13528.57	23836.05	23836.05	23836.05	30922.43	30922.43	30922.43	49604.20	16749.47	16749.47	16749.47	3221.05	3221.05	3221.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47027.35	47027.35	47027.35	41873.67	41873.67	41873.67

Total SURO = SURO(Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	750.232	750.232	750.232	1322.233	1322.233	1322.233	1715.643	1715.643	1715.643	2716.825	916.495	916.495	916.495	176.601	176.601	176.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2573.382	2573.382	2573.382	2291.653	2291.653	2291.653
1991-1996	FEB	211.652	211.652	211.652	373.073	373.073	373.073	484.115	484.115	484.115	768.986	259.658	259.658	259.658	49.934	49.934	49.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	729.039	729.039	729.039	649.144	649.144	649.144
1991-1996	MAR	479.452	479.452	479.452	846.480	846.480	846.480	1099.503	1099.503	1099.503	1641.574	552.181	552.181	552.181	107.040	107.040	107.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1550.709	1550.709	1550.709	1381.458	1381.458	1381.458
1991-1996	APR	1328.709	1328.709	1328.709	2345.791	2345.791	2345.791	3046.925	3046.925	3046.925	4519.835	1518.673	1518.673	1518.673	295.071	295.071	295.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4265.229	4265.229	4265.229	3800.250	3800.250	3800.250
1991-1996	MAY	1220.443	1220.443	1220.443	2156.010	2156.010	2156.010	2801.492	2801.492	2801.492	4027.777	1350.077	1350.077	1350.077	263.633	263.633	263.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3792.275	3792.275	3792.275	3379.923	3379.923	3379.923
1991-1996	JUN	991.050	991.050	991.050	1751.231	1751.231	1751.231	2275.891	2275.891	2275.891	3243.016	1086.530	1086.530	1086.530	212.373	212.373	212.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3052.074	3052.074	3052.074	2720.372	2720.372	2720.372
1991-1996	JUL	1675.041	1675.041	1675.041	2958.539	2958.539	2958.539	3843.851	3843.851	3843.851	5580.032	1871.217	1871.217	1871.217	365.058	365.058	365.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5255.980	5255.980	5255.980	4684.198	4684.198	4684.198
1991-1996	AUG	1005.931	1005.931	1005.931	1778.709	1778.709	1778.709	2312.531	2312.531	2312.531	3188.516	1065.623	1065.623	1065.623	209.359	209.359	209.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2993.794	2993.794	2993.794	2669.294	2669.294	2669.294
1991-1996	SEP	673.820	673.820	673.820	1191.022	1191.022	1191.022	1548.123	1548.123	1548.123	2169.670	725.898	725.898	725.898	142.298	142.298	142.298	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2039.229	2039.229	2039.229	1817.938	1817.938	1817.938
1991-1996	OCT	1423.208	1423.208	1423.208	2512.644	2512.644	2512.644	3263.664	3263.664	3263.664	4838.390	1625.759	1625.759	1625.759	315.857	315.857	315.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4565.972	4565.972	4565.972	4068.191	4068.191	4068.191
1991-1996	NOV	1106.527	1106.527	1106.527	1952.470	1952.470	1952.470	2535.203	2535.203	2535.203	3846.431	1294.006	1294.006	1294.006	250.773	250.773	250.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3633.976	3633.976	3633.976	3237.291	3237.291	3237.291
1991-1996	DEC	247.647	247.647	247.647	437.078	437.078	437.078	567.611	567.611	567.611	855.413	287.962	287.962	287.962	55.731	55.731	55.731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	808.655	808.655	808.655	720.322	720.322	720.322
	ANNUAL	11113.712	11113.712	11113.712	19625.279	19625.279	19625.279	25494.549	25494.549	25494.549	37396.463	12554.077	12554.077	12554.077	2443.726	2443.726	2443.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	35260.312	35260.312	35260.312	31420.032	31420.032	31420.032

Total IMPEV = IMPEV(Impervious)

AVERAGES:

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	32.94	32.94	32.94	57.99	57.99	57.99	75.20	75.20	75.20	122.82	41.47	41.47	41.47	7.98	7.98	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116.44	116.44	116.44	103.68	103.68	103.68
1991-1996	FEB	28.30	28.30	28.30	49.37	49.37	49.37	63.65	63.65	63.65	140.66	48.37	48.37	48.37	8.95	8.95	8.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	135.67	135.67	135.67	120.52	120.52	120.52
1991-1996	MAR	105.43	105.43	105.43	184.01	184.01	184.01	237.33	237.33	237.33	501.09	170.89	170.89	170.89	32.18	32.18	32.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	479.53	479.53	479.53	426.43	426.43	426.43
1991-1996	APR	259.73	259.73	259.73	453.04	453.04	453.04	584.11	584.11	584.11	1295.11	444.81	444.81	444.81	82.53	82.53	82.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1247.62	1247.62	1247.62	1108.45	1108.45	1108.45
1991-1996	MAY	305.44	305.44	305.44	532.09	532.09	532.09	685.49	685.49	685.49	1595.65	549.62	549.62	549.62	101.34	101.34	101.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1541.34	1541.34	1541.34	1368.90	1368.90	1368.90
1991-1996	JUN	298.09	298.09	298.09	519.57	519.57	519.57	669.57	669.57	669.57	1531.47	526.95	526.95	526.95	97.38	97.38	97.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1477.85	1477.85	1477.85	1312.69	1312.69	1312.69
1991-1996	JUL	356.03	356.03	356.03	620.19	620.19	620.19	798.96	798.96	798.96	1846.75	635.66	635.66	635.66	117.38	117.38	117.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1782.70	1782.70	1782.70	1583.40	1583.40	1583.40
1991-1996	AUG	282.69	282.69	282.69	491.88	491.88	491.88	633.23	633.23	633.23	1524.93	525.54	525.54	525.54	96.79	96.79	96.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1473.76	1473.76	1473.76	1308.79	1308.79	1308.79
1991-1996	SEP	214.94	214.94	214.94	374.65	374.65	374.65	482.83	482.83	482.83	1101.41	378.91	378.91	378.91	70.05	70.05	70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1062.68	1062.68	1062.68	943.94	943.94	943.94
1991-1996	OCT	277.14	277.14	277.14	483.66	483.66	483.66	623.79	623.79	623.79	1367.89	469.42	469.42	469.42	87.24	87.24	87.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1316.73	1316.73	1316.73	1169.98	1169.98	1169.98
1991-1996	NOV	201.28	201.28	201.28	351.94	351.94	351.94	454.43	454.43	454.43	923.01	315.25	315.25	315.25	59.18	59.18	59.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	884.53	884.53	884.53	786.43	786.43	786.43
1991-1996	DEC	52.99	52.99	52.99	92.64	92.64	92.64	119.60	119.60	119.60	257.33	88.64	88.64	88.64	16.34	16.34	16.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	248.59	248.59	248.59	220.78	220.78	220.78
	ANNUAL	2415.00	2415.00	2415.00	4211.01	4211.01	4211.01	5428.19	5428.19	5428.19	12208.11	4195.52	4195.52	4195.52	777.35	777.35	777.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11767.41	11767.41	11767.41	10453.97	10453.97	10453.97

Total URF volume (m3) for a single Ha

10Ha

Total Moisture Supply = SUPY (Pervious)+ SUPY (Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab
1991-1996	**JAN**	3891.09	3891.09	3891.09	3856.69	3856.69	3856.69	3830.89	3830.89	3830.89	3776.59	3878.65	3878.65	3878.65	3920.22	3920.22	3920.22	3931.93
1991-1996	FEB	1100.74	1100.74	1100.74	1100.77	1100.77	1100.77	1100.79	1100.79	1100.79	1100.83	1100.75	1100.75	1100.75	1101.25	1101.25	1101.25	1101.29
1991-1996	MAR	2775.18	2775.18	2775.18	2775.21	2775.21	2775.21	2775.22	2775.22	2775.22	2775.25	2775.19	2775.19	2775.19	2775.25	2775.25	2775.25	2775.25
1991-1996	APR	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.38	7567.37	7567.37	7567.37	7567.38	7567.38	7567.38	7567.38
1991-1996	MAY	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48
1991-1996	JUN	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63
1991-1996	JUL	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37
1991-1996	AUG	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00
1991-1996	SEP	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20
1991-1996	OCT	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53
1991-1996	NOV	5116.65	5116.65	5116.65	5437.62	5437.62	5437.62	5678.35	5678.35	5678.35	6176.06	5229.07	5229.07	5229.07	6240.18	6240.18	6240.18	6240.17
1991-1996	DEC	1428.59	1428.59	1428.59	1427.40	1427.40	1427.40	1426.51	1426.51	1426.51	1424.66	1428.18	1428.18	1428.18	1424.42	1424.42	1424.42	1424.42
	ANNUAL	63422.84	63422.84	63422.84	63708.27	63708.27	63708.27	63922.35	63922.35	63922.35	64363.98	63522.42	63522.42	63522.42	64571.92	64571.92	64571.92	64583.65
(m3) for a single Ha		**6342.28**	**6342.28**	**6342.28**	**6370.83**	**6370.83**	**6370.83**	**6392.23**	**6392.23**	**6392.23**	**6436.4**	**6352.24**	**6352.24**	**6352.24**	**6457.19**	**6457.19**	**6457.19**	**6458.37**

	Code	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	3931.93	3931.93	3820.15	3820.15	3820.15	3935.97	3935.97	3935.97	3935.97	3935.97	3935.97	3804.26	3804.26	3804.26	3821.51	3821.51	3821.51
1991-1996	FEB	1101.29	1101.29	1100.95	1100.95	1100.95	1101.35	1101.35	1101.35	1101.35	1101.35	1101.35	1100.81	1100.81	1100.81	1100.79	1100.79	1100.79
1991-1996	MAR	2775.25	2775.25	2775.23	2775.23	2775.23	2775.32	2775.32	2775.32	2775.32	2775.32	2775.32	2775.23	2775.23	2775.23	2775.23	2775.23	2775.23
1991-1996	APR	7567.38	7567.38	7567.38	7567.38	7567.38	7567.40	7567.40	7567.40	7567.40	7567.40	7567.40	7567.38	7567.38	7567.38	7567.38	7567.38	7567.38
1991-1996	MAY	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48
1991-1996	JUN	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63
1991-1996	JUL	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37
1991-1996	AUG	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00
1991-1996	SEP	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20
1991-1996	OCT	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53
1991-1996	NOV	6240.17	6240.17	6240.19	6240.19	6240.19	6240.35	6240.35	6240.35	6240.35	6240.35	6240.35	5919.25	5919.25	5919.25	5758.75	5758.75	5758.75
1991-1996	DEC	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1425.61	1425.61	1425.61	1426.21	1426.21	1426.21
	ANNUAL	64583.65	64583.65	64471.54	64471.54	64471.54	64588.02	64588.02	64588.02	64588.02	64588.02	64588.02	64135.76	64135.76	64135.76	63993.09	63993.09	63993.09
(m3) for a single Ha		**6458.37**	**6458.37**	**6447.15**	**6447.15**	**6447.15**	**6458.8**	**6458.8**	**6458.8**	**6458.8**	**6458.8**	**6458.8**	**6413.58**	**6413.58**	**6413.58**	**6399.31**	**6399.31**	**6399.31**

Total Runoff = SURO+IFWO (Pervious)+ SURO(Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab
1991-1996	**JAN**	1096.34	1182.04	1480.18	1814.77	1882.44	2114.51	2355.07	2411.85	2597.47	3429.14	1335.41	1406.16	1683.62	376.16	459.715	835.898	112.628
1991-1996	FEB	309.82	322.125	379.783	512.703	522.5	570.528	664.487	673.807	715.553	974.117	379.684	390.646	451.86	105.632	117.546	208.767	30.5617
1991-1996	MAR	699.45	712.149	796.912	1162.06	1174.23	1243.68	1507.26	1520.73	1580.64	2137.61	830.565	840.747	923.608	232.938	247.071	360.465	68.6407
1991-1996	APR	1943.07	2003.76	2362.97	3223.07	3279.11	3565.11	4178.54	4238.49	4471.7	5881.19	2290.41	2339.5	2684.37	650.71	720.961	1209.29	190.946
1991-1996	MAY	1807.03	1919.23	2428.14	2983.58	3082.64	3475.44	3863.06	3961.01	4264.68	5313.62	2084.26	2174.1	2640.42	614.312	741.475	1385.28	178.378
1991-1996	JUN	1474.87	1614.26	2011.35	2434.13	2555.54	2854.66	3151.73	3265.22	3491.55	4314.59	1694.17	1804.54	2180.21	503.648	658.067	1177.54	149.005
1991-1996	JUL	2446.72	2594.17	3059.74	4063.73	4193.02	4564.61	5271.95	5393.98	5707.97	7313.85	2844.37	2961.09	3431.47	810.385	973.423	1614.47	237.578
1991-1996	AUG	1472.91	1575.96	1911.19	2447.45	2541.08	2804.44	3176.75	3268.52	3481.29	4261.23	1659.84	1737.59	2087.04	479.916	587.282	1061.05	138.897
1991-1996	SEP	996.141	1055.77	1176.15	1650.59	1698.49	1792.58	2139.02	2178.97	2258.78	2902.37	1135.06	1187.52	1311.8	332.189	408.06	588.338	95.9627
1991-1996	OCT	2072.99	2158.75	2494.92	3447.36	3535.11	3798	4474.9	4572.32	4781.24	6304.49	2446.71	2511.01	2849.3	686.143	776.56	1247.59	197.225
1991-1996	NOV	1612.89	1652.75	1843.27	2680.01	2715.99	2864.94	3477.1	3513.77	3634.2	4975.27	1930.57	1963.3	2137.07	544.098	607.98	949.138	157.555
1991-1996	DEC	362.347	373.068	422.099	601.471	610.845	650.731	780.454	789.418	823.66	1111.38	432.313	442.159	486.813	122.021	138.626	207.891	35.301
	ANNUAL	16300.3	17169.3	20371.1	27029.1	27798.4	30305	35050.3	35796.7	37815.8	48932.2	19072.5	19767.5	22874.2	5462.27	6440.88	10847.8	1592.78
(m3) for a single Ha		**1630.03**	**1716.93**	**2037.11**	**2702.91**	**2779.84**	**3030.5**	**3505.03**	**3579.67**	**3781.58**	**4893.22**	**1907.25**	**1976.75**	**2287.42**	**546.227**	**644.088**	**1084.78**	**159.278**

	Code	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	167.516	501.139	2850.23	3035.78	3218.44	34.7	157.167	655.733	34.7167	157.317	656.7	2839.85	2866.83	2962.78	2486.09	2526.55	2670.45
1991-1996	FEB	37.114	91.8535	797.453	857.065	908.881	7.45	27.7667	168.367	7.45	27.7667	167.883	806.143	809.377	828.012	705.268	710.118	738.068
1991-1996	MAR	76.2122	173.93	1644.24	1738.75	1884.55	5.7	32.3	184.633	5.7	32.2833	185.167	1738.6	1742.08	1774.02	1517.42	1522.62	1570.49
1991-1996	APR	232.439	670.473	4674.73	4943.75	5309.19	33.3	159.783	740.033	33.3	159.817	741.083	4781.3	4797.9	4918.56	4175.03	4199.92	4380.81
1991-1996	MAY	263.513	933.115	4493.57	4754.39	5068.98	70.8333	267.85	966.6	70.8833	268.217	974.917	4286.39	4319.92	4480.74	3743.61	3793.88	4034.8
1991-1996	JUN	265.662	810.007	3731.74	3928.99	4140.75	56.9167	262.933	827.383	56.95	263.55	836.35	3465.23	3506.91	3630	3025.29	3087.75	3272.02
1991-1996	JUL	320.85	812.001	6137.38	6493.18	6889.33	36.2833	280.133	1074.98	36.2833	281.483	1087.72	5912.51	5956.74	6138.28	5160.69	5226.98	5498.89
1991-1996	AUG	190.836	568.671	3757.77	3944	4095.54	26.4667	186.95	776.317	26.4667	187.8	790.567	3403.97	3435.58	3553.94	2968.28	3015.62	3192.78
1991-1996	SEP	142.325	289.752	2369.44	2493.8	2626.47	28.1667	132.7	381.15	28.15	132.4	376.7	2321.4	2337.43	2382.02	2024.62	2048.65	2115.42
1991-1996	OCT	207.534	333.592	5235.46	5519.33	5750.15	24.5333	267.5	899.717	24.5333	268.483	909.283	5119.18	5143.01	5250.54	4467.88	4503.61	4664.7
1991-1996	NOV	191.245	454.226	4053.08	4305.06	4545.56	27.0833	135.517	615.267	27.0833	135.5	614.483	4059.17	4070.29	4126.65	3544.27	3560.95	3645.43
1991-1996	DEC	44.4216	98.5192	898.452	960.223	1014.82	7.03333	34.0667	135.3	7.03333	34.0833	134.667	905.495	908.676	923.142	790.472	795.241	816.934
	ANNUAL	2140.2	5746.24	40634	42976.3	45465.4	358.467	1944.67	7425.48	358.55	1948.7	7475.52	39642.8	39898.3	40971.9	34611.1	34994	36602.6
(m3) for a single Ha		**214.02**	**574.624**	**4063.4**	**4297.63**	**4546.54**	**35.8467**	**194.467**	**742.548**	**35.855**	**194.87**	**747.552**	**3964.28**	**3989.83**	**4097.19**	**3461.11**	**3499.4**	**3660.26**

Total Evapo = IMPEV(Impervious)+ TAET(Pervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab
1991-1996	**JAN**	166.70	167.39	168.94	156.18	156.72	157.65	148.44	148.85	149.00	137.59	162.95	163.66	165.58	175.71	176.74	180.04	193.02
1991-1996	FEB	191.68	195.87	197.02	168.29	171.36	171.72	150.98	152.89	152.87	157.64	196.78	200.52	202.06	214.55	219.73	221.78	240.19
1991-1996	MAR	643.17	655.40	661.33	581.35	590.52	592.88	535.90	542.44	541.94	563.34	659.36	670.25	676.21	703.92	719.59	728.39	759.61
1991-1996	APR	2002.03	2047.80	2058.11	1721.37	1751.83	1755.56	1511.69	1530.04	1528.50	1473.74	2027.36	2069.66	2073.96	2278.36	2339.00	2346.25	2519.91
1991-1996	MAY	3664.43	3804.37	3779.94	2946.36	3038.15	3010.77	2406.27	2458.15	2429.66	1892.58	3597.40	3726.96	3662.76	4373.75	4559.87	4471.44	5201.35
1991-1996	JUN	4319.49	4404.43	4332.01	3401.61	3451.57	3391.59	2711.83	2730.95	2680.92	1863.15	4173.43	4255.25	4143.88	5225.88	5344.12	5188.98	6749.95
1991-1996	JUL	5096.93	5195.83	5160.53	4011.96	4074.70	4033.64	3193.08	3229.13	3180.83	2233.98	4934.60	5028.85	4929.85	6166.51	6302.02	6164.30	7824.96
1991-1996	AUG	4642.63	4804.77	4724.76	3619.53	3721.70	3650.21	2851.09	2901.66	2837.44	1879.43	4475.26	4627.66	4486.27	5660.15	5878.77	5681.43	7384.56
1991-1996	SEP	3321.14	3324.33	3223.67	2598.70	2593.70	2517.32	2053.79	2042.32	1983.49	1350.63	3194.98	3201.54	3078.71	4034.27	4043.95	3870.04	5459.19
1991-1996	OCT	2654.80	2689.95	2693.10	2201.24	2222.15	2220.50	1860.72	1870.76	1864.27	1587.28	2627.09	2661.28	2654.70	3101.40	3150.43	3142.77	3813.13
1991-1996	NOV	2972.28	2840.45	2546.57	2393.20	2300.92	2070.46	1963.04	1895.92	1709.14	1127.72	2802.17	2683.91	2417.93	1336.17	1348.68	1376.12	1456.65
1991-1996	DEC	362.95	369.43	383.95	319.46	324.52	335.09	287.24	291.34	297.96	290.34	370.19	375.82	389.59	405.97	414.02	433.77	485.61
	ANNUAL	30024.72	30486.65	29917.62	24088.85	24367.63	23879.63	19630.44	19751.39	19316.34	14543.45	29212.04	29655.84	28874.32	33672.34	34492.61	33802.93	42088.05
(m3) for a single Ha		**3002.47**	**3048.67**	**2991.76**	**2408.89**	**2436.76**	**2387.96**	**1963.04**	**1975.14**	**1931.63**	**1454.35**	**2921.2**	**2965.58**	**2887.43**	**3367.23**	**3449.26**	**3380.29**	**4208.8**

	Code	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	192.85	191.91	130.19	130.18	129.99	176.15	178.55	184.62	176.18	178.58	184.65	154.39	154.63	155.37	159.07	159.43	160.56
1991-1996	FEB	240.55	240.62	136.17	136.23	136.25	215.43	224.83	227.27	215.43	224.83	227.27	182.16	183.34	183.85	188.65	190.42	191.18
1991-1996	MAR	760.43	758.88	501.61	501.60	501.31	714.37	744.95	754.20	714.37	744.95	754.17	632.40	635.85	637.83	648.94	654.12	657.12
1991-1996	APR	2526.01	2524.93	1312.10	1311.99	1308.97	2331.42	2431.42	2436.10	2331.42	2431.42	2435.98	1744.54	1757.93	1759.34	1837.04	1857.15	1859.37
1991-1996	MAY	5238.52	5214.15	1829.63	1825.16	1804.58	4460.38	4747.03	4581.05	4460.38	4747.00	4580.75	2502.44	2543.35	2523.88	2789.25	2850.65	2821.76
1991-1996	JUN	6773.57	6687.50	1953.18	1931.86	1886.26	5130.48	5298.12	5069.75	5130.48	5298.10	5069.28	2629.34	2654.93	2621.57	3018.60	3057.05	3007.39
1991-1996	JUL	7857.68	7707.51	2301.51	2286.26	2227.30	6112.45	6305.25	6134.48	6112.45	6305.18	6133.90	3139.66	3169.19	3138.42	3594.66	3639.00	3593.25
1991-1996	AUG	7428.58	7225.71	2025.33	2004.11	1932.28	5562.20	5879.98	5611.30	5562.20	5879.92	5610.58	2721.70	2769.60	2725.92	3159.53	3231.43	3166.32
1991-1996	SEP	5436.65	5098.63	1455.38	1424.53	1384.22	3842.08	3843.35	3628.27	3842.07	3843.33	3627.82	1952.32	1954.12	1914.17	2262.63	2265.34	2205.52
1991-1996	OCT	3812.55	3718.71	1502.89	1500.64	1485.63	3068.48	3142.95	3178.82	3068.48	3142.92	3178.32	1995.87	2006.55	2005.70	2170.82	2186.87	2185.78
1991-1996	NOV	1456.53	1453.76	930.37	930.09	928.45	1349.77	1376.57	1427.63	1349.77	1376.57	1427.60	1669.85	1629.70	1537.77	1952.23	1892.02	1754.17
1991-1996	DEC	485.55	485.31	257.13	257.03	255.96	393.82	411.92	447.85	393.82	411.92	447.82	336.89	338.69	342.99	349.95	352.65	359.11
	ANNUAL	42208.94	41299.41	14236.19	14144.23	13893.73	33357.03	34584.92	33681.33	33357.05	34584.72	33678.13	19657.84	19794.20	19543.40	22129.13	22333.93	21959.59
(m3) for a single Ha		**4220.89**	**4129.94**	**1423.62**	**1414.42**	**1389.37**	**3335.7**	**3458.49**	**3368.13**	**3335.71**	**3458.47**	**3367.81**	**1965.78**	**1979.42**	**1954.34**	**2212.91**	**2233.39**	**2195.96**

(AGWO)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab
1991-1996	**JAN**	1,210.90	1,143.41	976.54	880.91	829.76	702.30	636.24	593.22	494.19	64.67	1,083.60	1,024.91	876.83	1,550.33	1,467.42	1,261.11	1,337.10
1991-1996	FEB	1,068.44	1,019.04	880.60	779.41	739.03	632.99	564.72	528.58	444.86	57.64	955.51	913.69	790.63	1,368.05	1,307.96	1,137.32	1,177.43
1991-1996	MAR	1,093.13	1,045.07	915.23	801.78	761.73	661.45	585.59	549.62	468.92	59.04	975.78	935.53	820.39	1,395.78	1,338.86	1,179.39	1,206.44
1991-1996	APR	1,093.45	1,047.27	929.61	800.83	763.31	670.68	583.25	550.62	474.24	59.21	976.43	937.46	833.48	1,395.96	1,341.15	1,197.39	1,229.59
1991-1996	MAY	1,286.24	1,231.61	1,096.38	943.36	900.24	791.45	688.24	652.24	560.52	69.59	1,147.93	1,101.72	982.37	1,639.91	1,575.69	1,410.80	1,473.54
1991-1996	JUN	1,285.71	1,214.96	1,059.04	943.90	888.51	765.39	689.45	644.12	543.27	68.61	1,147.11	1,086.65	950.91	1,638.63	1,553.97	1,366.11	1,492.46
1991-1996	JUL	1,384.38	1,287.13	1,104.42	1,012.58	937.81	796.74	735.28	675.78	563.52	72.70	1,236.57	1,152.75	996.92	1,766.48	1,648.55	1,433.76	1,618.12
1991-1996	AUG	1,432.52	1,313.10	1,119.00	1,049.36	959.65	810.59	763.44	695.34	576.81	74.07	1,279.04	1,174.98	1,010.54	1,827.12	1,680.32	1,454.40	1,667.25
1991-1996	SEP	1,321.14	1,208.95	1,020.18	969.14	884.14	739.93	707.76	641.29	527.42	68.14	1,179.37	1,081.73	920.78	1,684.76	1,547.00	1,326.02	1,535.36
1991-1996	OCT	1,409.24	1,287.59	1,061.16	1,030.74	938.95	768.26	748.83	677.07	545.86	72.64	1,258.89	1,152.86	954.69	1,798.37	1,648.59	1,374.63	1,568.12
1991-1996	NOV	1,208.38	1,116.15	933.37	884.44	813.83	675.36	643.45	586.73	480.20	63.00	1,078.81	999.20	838.81	1,869.48	1,726.79	1,442.66	1,587.49
1991-1996	DEC	1,448.70	1,348.63	1,131.56	1,060.36	984.92	819.43	771.53	711.19	583.37	76.12	1,293.45	1,206.45	1,013.43	1,846.62	1,724.42	1,455.50	1,565.18
	ANNUAL	#######	#######	#######	#######	#######	8,839.05	8,126.41	7,514.08	6,270.15	805.43	#######	#######	#######	#######	#######	#######	#######
(m3) for a single Ha		**1524.4**	**1426.47**	**1222.86**	**1116.22**	**1040.71**	**883.905**	**812.641**	**751.408**	**627.015**	**80.5434**	**1361.25**	**1276.79**	**1098.98**	**1978.15**	**1856.07**	**1603.91**	**1745.81**

	Code	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	1,282.47	1,114.43	519.64	403.48	289.40	1,827.80	1,711.82	1,478.32	1,827.80	1,711.62	1,475.35	343.93	323.37	270.85	515.90	485.05	406.27
1991-1996	FEB	1,142.27	1,009.43	459.07	355.86	253.67	1,621.00	1,527.98	1,330.15	1,621.00	1,527.83	1,327.73	303.26	288.21	244.26	454.90	432.32	366.40
1991-1996	MAR	1,175.33	1,053.82	520.59	406.78	291.27	1,655.50	1,563.80	1,376.25	1,655.50	1,563.65	1,373.95	309.69	295.21	253.87	464.54	442.82	380.81
1991-1996	APR	1,202.95	1,102.19	519.60	409.01	291.55	1,650.55	1,561.52	1,386.12	1,650.53	1,561.33	1,384.10	309.90	296.04	258.22	464.86	444.06	387.34
1991-1996	MAY	1,451.41	1,347.01	634.20	500.84	353.68	1,932.17	1,826.27	1,616.47	1,932.17	1,826.08	1,614.25	364.31	347.96	304.61	546.46	521.95	456.92
1991-1996	JUN	1,458.15	1,327.78	638.53	502.02	353.15	1,921.23	1,789.17	1,555.37	1,921.23	1,788.98	1,552.97	364.03	343.05	294.42	546.04	514.58	441.63
1991-1996	JUL	1,556.77	1,388.81	644.81	500.88	350.82	2,062.30	1,889.18	1,627.62	2,062.30	1,888.95	1,624.32	392.43	363.48	306.97	588.64	545.22	460.46
1991-1996	AUG	1,579.29	1,383.62	698.00	538.27	378.64	2,125.88	1,921.07	1,656.70	2,125.87	1,920.80	1,652.72	405.91	370.34	309.73	608.87	555.51	464.60
1991-1996	SEP	1,454.06	1,247.23	651.35	501.31	355.00	1,958.17	1,766.78	1,514.97	1,958.15	1,766.50	1,510.87	374.28	340.70	281.70	561.42	511.05	422.56
1991-1996	OCT	1,469.00	1,224.51	642.23	496.94	357.20	2,107.68	1,903.75	1,607.82	2,107.68	1,903.42	1,603.35	399.52	363.20	292.53	599.29	544.81	438.79
1991-1996	NOV	1,491.63	1,250.27	660.13	515.24	371.75	2,208.80	2,012.92	1,704.55	2,208.80	2,012.60	1,700.57	342.38	315.02	258.00	513.57	472.54	387.01
1991-1996	DEC	1,482.29	1,262.84	672.02	525.91	379.36	2,185.53	2,016.80	1,720.50	2,185.53	2,016.53	1,716.88	410.51	380.59	312.62	615.77	570.89	468.94
	ANNUAL	#######	#######	7,295.55	5,684.19	4,046.26	#######	#######	#######	#######	#######	#######	4,320.16	4,027.17	3,387.80	6,480.24	6,040.76	5,081.70
(m3) for a single Ha		**1674.56**	**1471.2**	**729.555**	**568.419**	**404.626**	**2325.66**	**2149.11**	**1857.48**	**2325.66**	**2148.83**	**1853.71**	**432.016**	**402.717**	**338.78**	**648.024**	**604.076**	**508.17**

(IGWI)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab
1991-1996	**JAN**	217.583	222.445	196.556	160.449	160.314	140.327	119.162	113.72	97.4101	12.586	194.429	199.952	177.03	283.125	289.215	257.625	248.789
1991-1996	FEB	58.1776	59.7213	63.6152	43.5219	43.3559	46.1062	31.9824	31.7242	32.6743	3.38933	51.408	53.487	56.5005	71.97	75.51	80.19	59.2347
1991-1996	MAR	114.863	111.598	110.79	83.9185	81.4358	79.9636	60.4924	59.1922	56.6546	6.33667	102.638	99.9285	99.4455	146.175	142.905	142.65	140.1
1991-1996	APR	338.274	328.364	307.378	247.056	240.433	220.53	178.804	174.072	154.801	18.5913	302.148	293.412	275.331	430.695	419.07	393.99	409.518
1991-1996	MAY	270.687	245.832	193.653	198.05	179.119	138.947	143.885	129.044	97.7249	13.88	241.668	220.374	174.395	344.745	314.97	251.085	330.996
1991-1996	JUN	204.2	178.977	137.019	149.359	129.684	99.3095	108.268	92.5958	70.7837	10.0693	182.585	160.755	127.46	260.835	229.92	184.26	256.484
1991-1996	JUL	300.433	257.249	211.237	218.034	186.877	153.324	156.103	134.348	109.045	14.496	268.758	230.675	194.208	383.97	329.91	280.725	349.184
1991-1996	AUG	160.66	138.576	110.741	117.677	102.31	81.1674	86.477	75.4473	58.5643	7.75667	143.84	123.806	98.931	205.5	177.105	143.64	182.538
1991-1996	SEP	132.732	117.76	89.9432	98.5862	86.197	66.0385	73.1854	62.6357	47.8281	6.636	118.052	105.2	80.3985	168.66	150.345	115.485	140.311
1991-1996	OCT	323.372	297.434	225.331	237.387	217.9	164.95	173.267	157.39	119.426	16.7733	288.267	265.577	197.642	411.78	379.62	283.995	277.129
1991-1996	NOV	214.193	208.319	177.505	156.758	152.284	128.028	113.726	109.795	91.3396	11.7807	190.974	186.155	158.067	383.805	377.085	332.52	311.92
1991-1996	DEC	77.3411	80.7102	77.0987	56.4728	58.7476	55.733	41.5104	42.2071	39.6248	4.57133	69.132	72.1455	68.3655	98.25	103.29	96.66	89.0622
	ANNUAL	2412.79	2247.31	1901.21	1768.1	1639.63	1375.45	1288.25	1183.71	977.459	126.867	2153.9	2011.46	1707.77	3189.51	2988.95	2562.83	2795.27
(m3) for a single Ha		**241.279**	**224.731**	**190.121**	**176.81**	**163.963**	**137.545**	**128.825**	**118.371**	**97.7459**	**12.6867**	**215.39**	**201.146**	**170.777**	**318.951**	**298.895**	**256.283**	**279.527**

	Code	OVLbc	OVLcd	THCab	THCbc	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd	IPRab	IPRbc	IPRcd	IPEab	IPEbc	IPEcd
1991-1996	**JAN**	261.464	240.398	89.264	67.1732	45.7029	340.417	337.15	293.817	340.417	337.133	293.633	61.6933	62.93	54.7033	92.54	94.395	82.055
1991-1996	FEB	63.5027	69.9208	31.986	25.8799	17.7887	91.2	90.45	93.8167	91.2	90.45	93.8	16.31	16.9467	17.7167	24.465	25.42	26.575
1991-1996	MAR	139.518	144.029	59.9409	51.622	38.6949	170.433	164.05	160.8	170.433	164.05	160.733	32.5767	31.6833	31.1267	48.865	47.525	46.69
1991-1996	APR	412.638	413.398	167.419	134.627	92.917	503.95	482.933	438.617	503.95	482.867	438.433	95.9033	92.9567	85.9933	143.855	139.435	128.99
1991-1996	MAY	321.151	270.937	117.223	90.1389	61.1647	396.583	352.283	275.867	396.583	352.267	275.3	76.6433	69.4	53.7833	114.965	104.1	80.675
1991-1996	JUN	239.121	194.76	92.3511	70.2873	47.9306	297.75	253.817	202.233	297.75	253.8	201.217	57.93	50.3467	38.52	86.895	75.52	57.78
1991-1996	JUL	302.365	245.62	135.32	97.1587	66.9283	441.433	375.083	319.3	441.433	374.967	317.983	85.32	72.48	57.6633	127.98	108.72	86.495
1991-1996	AUG	164.852	120.409	76.9694	59.6178	45.9674	232.333	197.017	170.617	232.333	196.967	169.433	45.6533	38.7833	29.5867	68.48	58.175	44.38
1991-1996	SEP	129.139	82.0297	68.1307	52.1774	40.7617	200.3	174.833	140.383	200.3	174.85	140.217	37.4633	33.18	24.58	56.195	49.77	36.87
1991-1996	OCT	243.696	175.586	145.959	119.017	88.8725	505.25	465.517	376.65	505.25	465.417	375.633	91.4967	83.8667	61.3533	137.245	125.8	92.03
1991-1996	NOV	309.576	291.016	139.722	108.898	77.447	463.167	451.083	391.933	463.167	451.067	391.783	60.6167	58.9033	49.5367	90.925	88.355	74.305
1991-1996	DEC	93.4595	89.4825	41.3418	33.4569	24.2543	115.8	121.417	112.733	115.8	121.4	112.717	21.9433	22.8567	21.5233	32.915	34.285	32.285
	ANNUAL	2680.48	2337.59	1173.46	916.358	652.418	3758.62	3465.63	2976.77	3758.62	3465.23	2970.88	683.55	634.333	526.087	1025.33	951.5	789.13
(m3) for a single Ha		**268.048**	**233.759**	**117.346**	**91.6358**	**65.2418**	**375.862**	**346.563**	**297.677**	**375.862**	**346.523**	**297.088**	**68.355**	**63.4333**	**52.6087**	**102.533**	**95.15**	**78.913**

Annual Water Balance for each Subcatchment

LAND USE IN HA

Land use	uci	Code	DSN Surface	DSN -subsurf	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	3.60	40.85	15.99	5.25	17.31	18.63	45.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	2.20	29.35	1.81	1.35	2.21	2.45	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	1.16					9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.84					5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	1.05					0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.75					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	1.97	1.13				29.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	18.88			1.72		2.19	6.00	19.50	0.00	21.80	4.90	0.00	4.00
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	13.57			0.22		1.16	3.90	16.10	0.00	49.60	9.70	0.00	18.30
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00			0.00		0.00	1.50	7.30	0.00	47.60	12.00	0.00	30.90
Utility/Transport/Parks	2	OPL0ab	4001	4501	8.50	9.60	0.60	9.40	20.61			3.17	3.13	22.44	17.70	18.10	7.80	6.30	1.10	3.40	1.10
Utility/Transport/Parks	2	OPL0bc	4002	4502	1.10	3.60	0.20	5.90	14.81			0.40	0.41	11.93	11.50	15.00	11.30	14.40	2.20	9.40	5.00
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.50	3.20	0.20	3.30	0.00			0.00	0.00	0.00	4.30	6.80	6.10	13.80	2.70	8.30	8.40
Valley Segment	2	OVL0ab	4101	4601	7.40	0.60	0.00	2.40	43.73	3.12	3.72				0.00	1.40	0.00	0.90	0.40	0.00	0.00
Valley Segment	2	OVL0bc	4102	4602	1.00	0.20	0.00	1.50	31.42	0.35	0.96				0.00	1.10	0.00	2.00	0.90	0.00	0.00
Valley Segment	2	OVL0cd	4103	4603	0.40	0.20	0.00	0.80	0.00	0.00	0.00				0.00	0.50	0.00	1.90	1.10	0.00	0.00
Roads	2	THC0ab	5001	5501	0.60	5.00	1.40	2.80	27.62	5.93	2.47	12.48	11.02	48.94	6.90	2.40	2.30	3.90	0.10	0.90	0.30
Roads	2	THC0bc			0.10	1.90	0.40	1.80							4.50	2.00	3.40	8.80	0.30	2.50	1.50
Roads and ROW	2	THC0cd	5003	5503	0	1.7	0.4	1							1.70	0.90	1.80	8.50	0.30	2.20	2.60
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	5.30	103.73	44.65	1.93				11.80	19.50	7.00	10.50	4.00	1.80	2.00
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	3.30	74.53	5.06	0.50				7.70	16.10	10.10	23.80	7.80	5.10	9.30
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	1.90	0.00	0.00	0.00				2.90	7.30	5.50	22.90	9.70	4.50	15.70
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00			3.53				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00			0.91				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00			0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	24.60							2.90	14.60	5.70	7.50	0.00	7.40	0.00
Industrial/Prestige		IPRbc			0.00	0.00	0.00	15.50							1.90	12.10	8.20	17.00	0.00	20.40	0.00
Industrial/Prestige		IPRcd			0.00	0.00	0.00	8.70							0.70	5.50	4.40	16.30	0.00	17.90	0.00
Prestige Business Park		IPEab			52.20	46.70	14.30	26.40							10.80	22.10	4.10	21.30	0.60	1.00	0.10
Prestige Business Park		IPEbc			7.00	17.70	4.50	16.60							7.00	18.20	6.00	48.30	1.20	2.70	0.60
Prestige Business Park		IPEcd			3.10	15.60	4.40	9.40							2.60	8.30	3.20	46.40	1.50	2.40	1.10
		Sum URF AREAS			81.9	106.0	26.4	147.7	424.9	78.0	20.6	37.5	35.6	200.9	106.3	214.8	86.9	393.5	60.5	89.9	100.9
		Sum URF AREAS			80.6	99.2	26.2	147.9	424.9	78.0	20.6	37.5	35.6	200.9	106.3	214.7	87.0	393.7	60.7	89.8	101.1

Land use	Code	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	RLD5ab	0.00	0.00	0.28	2.00	0.00	38.57	0.00	0.00	0.00	0.00	1.46	0.00	0.00	3.14	2.63	2.20	0.00
Res Low Density	RLD5bc	0.00	0.00	0.59	6.00	0.00	42.70	0.00	0.00	0.00	0.00	2.18	0.00	0.00	10.00	7.05	21.06	0.00
Res Low Density	RLD5cd	0.00	0.00	0.58	6.30	0.00	25.93	0.00	0.00	0.00	0.00	1.69	0.00	0.00	9.12	6.91	20.32	0.00
Res Med Denisty	RMD5ab	0.00	0.00	0.00	0.00	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Res Med Denisty	RMD5bc	0.00	0.00	0.00	0.00	0.00	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00
Res Med Denisty	RMD5cd	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
Res High Density	RHD5ab	0.00	0.00	0.00	0.00	0.00	21.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	RHD5bc	0.00	0.00	0.00	0.00	0.00	23.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Res High Density	RHD5cd	0.00	0.00	0.00	0.00	0.00	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Commercial	CSM1bc	0.00	0.00	0.00	0.00	0.00	9.55	0.00	0.00	0.00	0.00	0.29	0.00	0.00	1.36	0.08	0.18	0.00
Institutional	EIS1ab	3.40	2.50	0.00	0.00	0.00	4.02	0.00	0.00	0.00	0.00	0.76	7.20	17.90	0.51	0.00	0.00	1.70
Institutional	EIS1bc	16.40	11.00	0.00	0.00	0.00	4.45	0.00	0.00	0.00	0.00	1.13	14.80	70.60	1.63	0.00	0.00	9.30
Institutional	EIS1cd	19.20	21.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.88	44.30	91.50	1.48	0.00	0.00	8.70
Utility/Transport/Parks	OPL0ab	1.90	0.50	0.00	0.20	5.40	17.24	1.60	0.80	3.50	5.10	0.59	2.20	0.10	0.04	0.14	1.39	0.00
Utility/Transport/Parks	OPL0bc	9.30	2.40	0.00	0.60	12.90	19.09	7.90	1.60	9.60	16.00	0.88	4.60	0.50	0.13	0.38	13.30	0.00
Utility/Transport/Parks	OPL0cd	10.80	4.60	0.00	0.70	17.70	11.59	17.60	2.50	9.10	15.20	0.69	13.70	0.70	0.12	0.37	12.83	0.00
Valley Segment	OVL0ab	0.20	0.20	10.56	0.00	0.00	9.15	0.20	0.90	1.10	0.20	5.90	0.90	0.40	10.97	12.49	1.03	0.10
Valley Segment	OVL0bc	0.80	0.90	22.23	0.00	0.00	10.13	1.10	1.80	3.00	0.70	8.82	1.80	1.40	34.97	33.51	9.83	0.40
Valley Segment	OVL0cd	1.00	1.80	22.11	0.00	0.00	6.15	2.30	2.70	2.90	0.70	6.85	5.30	1.80	31.88	32.84	9.48	0.40
Roads	THC0ab	0.80	0.50		0.90	0.40		0.10		0.10	0.40		0.70	0.40				0.50
Roads	THC0bc	3.80	2.40		2.60	1.00		0.40		0.30	1.20		1.50	1.40				3.10
Roads and ROW	THC0cd	4.40	4.50	2.22	2.70	1.30	44.33	1.00	0.00	0.30	1.10	3.95	4.40	1.90	10.88	10.19	13.04	2.90
Agricultural Tilled	AGT0ab	3.10	1.50	29.89	3.90	0.00	36.16	0.00	0.00	0.00	0.00	6.31	0.00	4.00	41.88	42.24	9.95	0.00
Agricultural Tilled	AGT0bc	15.10	6.60	62.92	11.60	0.00	40.04	0.00	0.00	0.00	0.00	9.43	0.00	15.80	133.55	113.28	95.04	0.00
Agricultural Tilled	AGT0cd	17.60	12.50	62.58	12.30	0.00	24.31	0.00	0.00	0.00	0.00	7.33	0.00	20.50	121.78	111.03	91.73	0.00
Agricultural Pasture/forest	AGPab	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	AGPbc	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00		0.00			0.00		0.00	0.00		0.00	0.00				0.00
Industrial/Prestige	IPRab	0.00	0.00		0.00	5.60		1.40	5.10	6.60	3.50		12.80	1.30				0.20
Industrial/Prestige	IPRbc	0.00	0.00		0.00	13.40		7.20	10.40	18.00	11.00		26.50	4.90				1.00
Industrial/Prestige	IPRcd	0.00	0.00		0.00	18.30		16.10	15.80	17.10	10.40		79.20	6.40				0.90
Prestige Business Park	IPEab	2.10	2.70		1.60	4.80		2.40	2.90	4.60	8.50		10.00	1.30				3.50
Prestige Business Park	IPEbc	10.20	11.80		4.60	11.50		12.40	5.90	12.50	26.80		20.60	5.20				19.80
Prestige Business Park	IPEcd	11.90	22.50		4.90	15.80		27.50	8.90	11.90	25.40		61.60	6.80				18.60
	Sum URF AREAS	132.0	109.9	214.0	60.9	108.1	439.7	99.2	59.3	100.6	126.2	59.1	312.1	254.8	413.9	373.2	301.4	71.1
	Sum URF AREAS	132.1	109.9	214.0	60.9	108.2	439.7	99.1	59.3	100.7	126.0	59.1	312.3	255.0	413.9	373.2	301.4	71.0

LAND USE IN %

Land use	uci	Code	DSN Surface	DSN -subsurf	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20
Res Low Density	3	RLD5ab	1013	1513	0.00	0.00	0.00	0.02	0.10	0.20	0.25	0.46	0.52	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.00	0.00	0.01	0.07	0.02	0.07	0.06	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05	0.00	0.01	0.06	0.09	0.00	0.06	0.08	0.00	0.04
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.01	0.04	0.07	0.00	0.13	0.16	0.00	0.18
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.12	0.20	0.00	0.31
Utility/Transport/Parks	2	OPL0ab	4001	4501	0.10	0.09	0.02	0.06	0.05	0.00	0.00	0.08	0.09	0.11	0.17	0.08	0.09	0.02	0.02	0.04	0.01
Utility/Transport/Parks	2	OPL0bc	4002	4502	0.01	0.03	0.01	0.04	0.03	0.00	0.00	0.01	0.01	0.06	0.11	0.07	0.13	0.04	0.04	0.10	0.05
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.01	0.03	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03	0.07	0.04	0.04	0.09	0.08
Valley Segment	2	OVL0ab	4101	4601	0.09	0.01	0.00	0.02	0.10	0.04	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00
Valley Segment	2	OVL0bc	4102	4602	0.01	0.00	0.00	0.01	0.07	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00
Valley Segment	2	OVL0cd	4103	4603	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Roads	2	THC0ab	5001	5501	0.01	0.05	0.05	0.02	0.07	0.08	0.12	0.33	0.31	0.24	0.06	0.01	0.03	0.01	0.00	0.01	0.00
Roads	3	THC0bc			0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.04	0.02	0.00	0.03	0.01
Roads and ROW	2	THC0cd	5003	5503	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.02	0.00	0.02	0.03
Agricultural Tilled	2	AGT0ab	6201	6701	0.00	0.00	0.00	0.04	0.24	0.57	0.09	0.00	0.00	0.00	0.11	0.09	0.08	0.03	0.07	0.02	0.02
Agricultural Tilled	2	AGT0bc	6202	6702	0.00	0.00	0.00	0.02	0.18	0.06	0.02	0.00	0.00	0.00	0.07	0.07	0.12	0.06	0.13	0.06	0.09
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.06	0.06	0.16	0.05	0.16
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial/Prestige		IPRab			0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.07	0.02	0.00	0.08	0.00
Industrial/Prestige		IPRbc			0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.09	0.04	0.00	0.23	0.00
Industrial/Prestige		IPRcd			0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.04	0.00	0.20	0.00
Prestige Business Park		IPEab			0.64	0.44	0.54	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.05	0.05	0.01	0.01	0.00
Prestige Business Park		IPEbc			0.09	0.17	0.17	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.08	0.07	0.12	0.02	0.03	0.01
Prestige Business Park		IPEcd			0.04	0.15	0.17	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.04	0.12	0.02	0.03	0.01
		Sum URF AREAS			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Land use	Code	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	RLD5ab	0.00	0.00	0.00	0.03	0.00	0.09	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.01	0.00
Res Low Density	RLD5bc	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.02	0.02	0.07	0.00
Res Low Density	RLD5cd	0.00	0.00	0.00	0.10	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.02	0.02	0.07	0.00
Res Med Denisty	RMD5ab	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	RMD5bc	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	RMD5cd	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	RHD5ab	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	RHD5bc	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	RHD5cd	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	CSM1bc	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	EIS1ab	0.03	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.00	0.00	0.00	0.02
Institutional	EIS1bc	0.12	0.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.05	0.28	0.00	0.00	0.00	0.13
Institutional	EIS1cd	0.15	0.19	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.14	0.36	0.00	0.00	0.00	0.12
Utility/Transport/Parks	OPL0ab	0.01	0.00	0.00	0.00	0.05	0.04	0.02	0.01	0.03	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Utility/Transport/Parks	OPL0bc	0.07	0.02	0.00	0.01	0.12	0.04	0.08	0.03	0.10	0.13	0.01	0.01	0.00	0.00	0.00	0.04	0.00
Utility/Transport/Parks	OPL0cd	0.08	0.04	0.00	0.01	0.16	0.03	0.18	0.04	0.09	0.12	0.01	0.04	0.00	0.00	0.00	0.04	0.00
Valley Segment	OVL0ab	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.10	0.00	0.00	0.03	0.03	0.00	0.00
Valley Segment	OVL0bc	0.01	0.01	0.10	0.00	0.00	0.02	0.01	0.03	0.03	0.01	0.15	0.01	0.01	0.08	0.09	0.03	0.01
Valley Segment	OVL0cd	0.01	0.02	0.10	0.00	0.00	0.01	0.02	0.05	0.03	0.01	0.12	0.02	0.01	0.08	0.09	0.03	0.01
Roads	THC0ab	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Roads	THC0bc	0.03	0.02	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.04
Roads and ROW	THC0cd	0.03	0.04	0.01	0.04	0.01	0.10	0.01	0.00	0.00	0.01	0.07	0.01	0.01	0.03	0.03	0.04	0.04
Agricultural Tilled	AGT0ab	0.02	0.01	0.14	0.06	0.00	0.08	0.00	0.00	0.00	0.00	0.11	0.00	0.02	0.10	0.11	0.03	0.00
Agricultural Tilled	AGT0bc	0.11	0.06	0.29	0.19	0.00	0.09	0.00	0.00	0.00	0.00	0.16	0.00	0.06	0.32	0.30	0.32	0.00
Agricultural Tilled	AGT0cd	0.13	0.11	0.29	0.20	0.00	0.06	0.00	0.00	0.00	0.00	0.12	0.00	0.08	0.29	0.30	0.30	0.00
Agricultural Pasture/forest	AGPab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial/Prestige	IPRab	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.09	0.07	0.03	0.00	0.04	0.01	0.00	0.00	0.00	0.00
Industrial/Prestige	IPRbc	0.00	0.00	0.00	0.00	0.12	0.00	0.07	0.18	0.18	0.09	0.00	0.08	0.02	0.00	0.00	0.00	0.01
Industrial/Prestige	IPRcd	0.00	0.00	0.00	0.00	0.17	0.00	0.16	0.27	0.17	0.08	0.00	0.25	0.03	0.00	0.00	0.00	0.01
Prestige Business Park	IPEab	0.02	0.02	0.00	0.03	0.04	0.00	0.02	0.05	0.05	0.07	0.00	0.03	0.01	0.00	0.00	0.00	0.05
Prestige Business Park	IPEbc	0.08	0.11	0.00	0.08	0.11	0.00	0.13	0.10	0.12	0.21	0.00	0.07	0.02	0.00	0.00	0.00	0.28
Prestige Business Park	IPEcd	0.09	0.20	0.00	0.08	0.15	0.00	0.28	0.15	0.12	0.20	0.00	0.20	0.03	0.00	0.00	0.00	0.26
	Sum URF AREAS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

S (m3)	S (m3)	S (mm)
81.90	81.90	
525241.23	525241.23	641.32
226896.58	226896.58	277.04
210074.75	210074.75	256.50
74965.14	74965.14	91.53
11940.50	11940.50	14.58
106.00	106.00	
679746.57	679746.57	641.27
328171.92	328171.92	309.60
249053.67	249053.67	234.96
86779.10	86779.10	81.87
13801.34	13801.34	13.02
26.40	26.40	
169104.90	169104.90	640.55
91246.24	91246.24	345.63
57857.98	57857.98	219.16
17510.50	17510.50	66.33
2771.05	2771.05	10.50
147.70	147.70	
947716.09	947716.09	641.65
430752.40	430752.40	291.64
359891.76	359891.76	243.66
131079.95	131079.95	88.75
20888.10	20888.10	14.14
424.87	424.87	
2731762.24	2731762.24	642.96
366216.57	366216.57	86.19
1399021.41	1399021.41	329.28
769690.47	769690.47	181.16
123544.63	123544.63	29.08
78.04	78.04	
501874.96	501874.96	643.10
61953.50	61953.50	79.39
244660.99	244660.99	313.51
152122.63	152122.63	194.93
24476.78	24476.78	31.36
20.62	20.62	
132380.66	132380.66	642.00
22180.39	22180.39	107.57
66193.23	66193.23	321.01
35560.90	35560.90	172.46
5697.93	5697.93	27.63
37.51	37.51	
239637.39	239637.39	638.86
88425.95	88425.95	235.74
94207.84	94207.84	251.15
48280.12	48280.12	128.71
7683.02	7683.02	20.48
35.64	35.64	
227601.44	227601.44	638.61
81326.33	81326.33	228.19
91047.21	91047.21	255.46
46886.72	46886.72	131.56
7459.63	7459.63	20.93
200.91	200.91	
1286533.98	1286533.98	640.35
525961.65	525961.65	261.79
486071.94	486071.94	241.94
229610.98	229610.98	114.29
36595.45	36595.45	18.21
#N/A	#N/A	

W	W	W(mm)
106.30	106.30	
683686.94	683686.94	643.17
196840.96	196840.96	185.17
297607.45	297607.45	279.97
150511.10	150511.10	141.59
24151.79	24151.79	22.72
214.80	214.80	
1378304.33	1378304.33	641.67
444324.97	444324.97	206.86
598050.92	598050.92	278.42
274036.49	274036.49	127.58
43800.63	43800.63	20.39
86.90	86.90	
559523.06	559523.06	643.87
176836.94	176836.94	203.49
238786.20	238786.20	274.78
113890.51	113890.51	131.06
18281.14	18281.14	21.04
393.50	393.50	
2519806.99	2519806.99	640.36
969098.40	969098.40	246.28
1047250.20	1047250.20	266.14
425913.14	425913.14	108.24
67603.29	67603.29	17.18
60.50	60.50	
387707.84	387707.84	640.84
85493.03	85493.03	141.31
189448.83	189448.83	313.14
92980.42	92980.42	153.69
14813.39	14813.39	24.48
89.90	89.90	
578117.36	578117.36	643.07
251478.64	251478.64	279.73
222024.22	222024.22	246.97
84933.42	84933.42	94.48
13573.38	13573.38	15.10
100.90	100.90	
645842.45	645842.45	640.08
166914.91	166914.91	165.43
306374.43	306374.43	303.64
144608.07	144608.07	143.32
22962.37	22962.37	22.76
132.00	132.00	
846825.17	846825.17	641.53
244565.16	244565.16	185.28
385367.46	385367.46	291.95
178616.49	178616.49	135.32
28459.18	28459.18	21.56
109.90	109.90	
703870.27	703870.27	640.44
259048.20	259048.20	235.70
300181.74	300181.74	273.13
122607.88	122607.88	111.56
19430.92	19430.92	17.68
213.96	213.96	
1381706.81	1381706.81	645.78
91671.59	91671.59	42.85
765137.30	765137.30	357.61
412037.55	412037.55	192.58
66202.28	66202.28	30.94
60.90	60.90	
390941.16	390941.16	641.94
105856.93	105856.93	173.82
176095.07	176095.07	289.15
88323.16	88323.16	145.03
14107.12	14107.12	23.16

T	T	T(mm)
108.10	108.10	
694510.43	694510.43	642.47
307623.38	307623.38	284.57
270598.97	270598.97	250.32
96502.50	96502.50	89.27
15366.40	15366.40	14.21
439.73	439.73	
2818679.89	2818679.89	641.00
838813.17	838813.17	190.76
1241513.00	1241513.00	282.33
609015.30	609015.30	138.50
97159.45	97159.45	22.10
99.20	99.20	
637016.85	637016.85	642.15
285913.30	285913.30	288.22
251073.75	251073.75	253.10
84315.80	84315.80	85.00
13379.66	13379.66	13.49
59.30	59.30	
380528.12	380528.12	641.70
195967.29	195967.29	330.47
139828.25	139828.25	235.80
38829.94	38829.94	65.48
6139.90	6139.90	10.35
100.60	100.60	
646097.31	646097.31	642.24
294773.74	294773.74	293.02
252163.26	252163.26	250.66
83385.14	83385.14	82.89
13258.85	13258.85	13.18
126.20	126.20	
810272.88	810272.88	642.05
358495.41	358495.41	284.07
317645.00	317645.00	251.70
112205.41	112205.41	88.91
17850.37	17850.37	14.14
59.13	59.13	
380945.73	380945.73	644.22
50549.15	50549.15	85.48
206134.80	206134.80	348.60
100061.69	100061.69	169.21
16027.74	16027.74	27.10
312.10	312.10	
1997769.30	1997769.30	640.11
1009358.44	1009358.44	323.41
740735.21	740735.21	237.34
221032.65	221032.65	70.82
34729.51	34729.51	11.13
254.80	254.80	
1625114.11	1625114.11	637.80
518761.14	518761.14	203.60
741722.61	741722.61	291.10
318339.47	318339.47	124.94
50232.88	50232.88	19.71
413.89	413.89	
2670029.87	2670029.87	645.10
251541.99	251541.99	60.77
1434154.68	1434154.68	346.51
775309.80	775309.80	187.32
124477.55	124477.55	30.07
373.16	373.16	
2408063.25	2408063.25	645.32
211974.56	211974.56	56.81
1303701.47	1303701.47	349.37
702395.32	702395.32	188.23
112790.69	112790.69	30.23
301.45	301.45	
1941687.62	1941687.62	644.12
259465.99	259465.99	86.07
999854.81	999854.81	331.69
541576.46	541576.46	179.66
86815.56	86815.56	28.80
71.10	71.10	
454457.77	454457.77	639.18
228350.38	228350.38	321.17
167496.25	167496.25	235.58
52957.34	52957.34	74.48
8318.27	8318.27	11.70

Sulfur

	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b
AREA (ha)	81.90	106.00	26.40	147.70	424.87	78.04	20.62	37.51	35.64	200.91
SUPPLY	641.32	641.27	640.55	641.65	642.96	643.10	642.00	638.86	638.61	640.35
RO	277.04	309.60	345.63	291.64	86.19	79.39	107.57	235.74	228.19	261.79
ET	256.50	234.96	219.16	243.66	329.28	313.51	321.01	251.15	255.46	241.94
AGWO	91.53	81.87	66.33	88.75	181.16	194.93	172.46	128.71	131.56	114.29
IGWI	14.58	13.02	10.50	14.14	29.08	31.36	27.63	20.48	20.93	18.21
Error (%)	0.26	0.29	-0.17	0.54	2.68	3.72	2.08	0.43	0.39	0.64

Welland

	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24
AREA (ha)	106.30	214.80	86.90	393.50	60.50	89.90	100.90	132.00	109.90	213.96	60.90
SUPPLY	643.17	641.67	643.87	640.36	640.84	643.07	640.08	641.53	640.44	645.78	641.94
RO	185.17	206.86	203.49	246.28	141.31	279.73	165.43	185.28	235.70	42.85	173.82
ET	279.97	278.42	274.78	266.14	313.14	246.97	303.64	291.95	273.13	357.61	289.15
AGWO	141.59	127.58	131.06	108.24	153.69	94.48	143.32	135.32	111.56	192.58	145.03
IGWI	22.72	20.39	21.04	17.18	24.48	15.10	22.76	21.56	17.68	30.94	23.16
Error (%)	2.13	1.31	2.10	0.39	1.28	1.06	0.77	1.16	0.37	3.38	1.68

Twenty-Mile

	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
AREA (ha)	108.10	439.73	99.20	59.30	100.60	126.20	59.13	312.10	254.80	413.89	373.16	301.45	71.10
SUPPLY	642.47	641.00	642.15	641.70	642.24	642.05	644.22	640.11	637.80	645.10	645.32	644.12	639.18
RO	284.57	190.76	288.22	330.47	293.02	284.07	85.48	323.41	203.60	60.77	56.81	86.07	321.17
ET	250.32	282.33	253.10	235.80	250.66	251.70	348.60	237.34	291.10	346.51	349.37	331.69	235.58
AGWO	89.27	138.50	85.00	65.48	82.89	88.91	169.21	70.82	124.94	187.32	188.23	179.66	74.48
IGWI	14.21	22.10	13.49	10.35	13.18	14.14	27.10	11.13	19.71	30.07	30.23	28.80	11.70
Error (%)	0.64	1.14	0.37	-0.06	0.39	0.50	2.15	-0.40	-0.24	3.17	3.21	2.78	-0.59

Final Balances - All Subwatershed

Sulfur											
	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	AVERAGE
AREA (ha)	82	106	26	148	425	78	21	38	36	201	
SUPPLY (mm)	641	641	641	642	643	643	642	639	639	640	641
RO (mm)	277	310	346	292	86	79	108	236	228	262	222
ET (mm)	257	235	219	244	329	314	321	251	255	242	267
AGWO (mm)	92	82	66	89	181	195	172	129	132	114	
IGWI (mm)	15	13	10	14	29	31	28	20	21	18	
Infil (mm)	106	95	77	103	210	226	200	149	152	133	145
Error (%)	0.26	0.29	-0.17	0.54	2.68	3.72	2.08	0.43	0.39	0.64	

Welland												
	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	AVERAGE
AREA (ha)	106	215	87	394	61	90	101	132	110	214	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	646	642	642
RO (mm)	185	207	203	246	141	280	165	185	236	43	174	188
ET (mm)	280	278	275	266	313	247	304	292	273	358	289	289
AGWO (mm)	142	128	131	108	154	94	143	135	112	193	145	
IGWI (mm)	23	20	21	17	24	15	23	22	18	31	23	
Infil (mm)	164	148	152	125	178	110	166	157	129	224	168	156
Error (%)	2.13	1.31	2.10	0.39	1.28	1.06	0.77	1.16	0.37	3.38	1.68	

Twenty-Mile														
	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37	AVERAGE
AREA (ha)	108	440	99	59	101	126	59	312	255	414	373	301	71	
SUPPLY (mm)	642	641	642	642	642	642	644	640	638	645	645	644	639	642
RO (mm)	285	191	288	330	293	284	85	323	204	61	57	86	321	212
ET (mm)	250	282	253	236	251	252	349	237	291	347	349	332	236	285
AGWO (mm)	89	138	85	65	83	89	169	71	125	187	188	180	74	
IGWI (mm)	14	22	13	10	13	14	27	11	20	30	30	29	12	
Infil (mm)	103	161	98	76	96	103	196	82	145	217	218	208	86	138
Error (%)	0.64	1.14	0.37	-0.06	0.39	0.50	2.15	-0.40	-0.24	3.17	3.21	2.78	-0.59	

Final Balances and Presented Data- Subwatershed of Interest

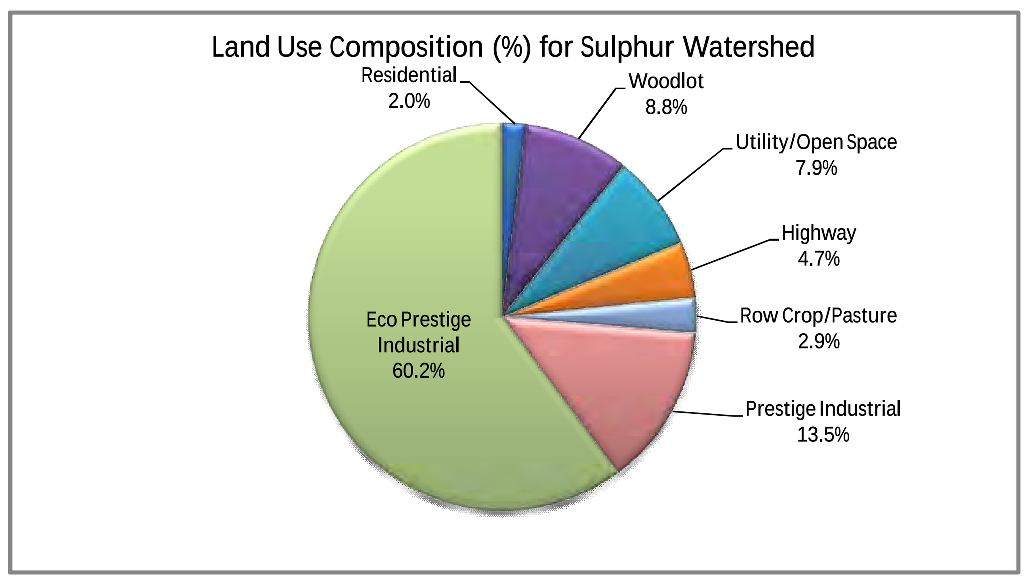
Sulphur Watershed - Water Balance					
	S-5	**S-6**	**S-7**	**S-8**	**AVERAGE**
AREA (ha)	82	106	26	148	
SUPPLY (mm)	641	641	641	642	641
RO (mm)	277	310	346	292	306
ET (mm)	257	235	219	244	239
INFIL (mm)	106	95	77	103	95

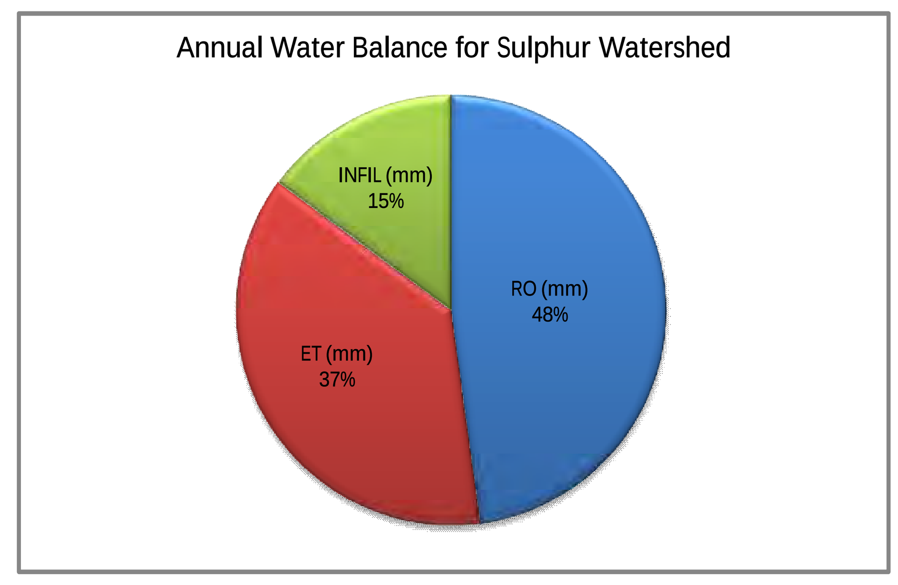
Welland											
	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-24**	**AVERAGE**
AREA (ha)	106	215	87	394	61	90	101	132	110	61	
SUPPLY (mm)	643	642	644	640	641	643	640	642	640	642	642
RO (mm)	185	207	203	246	141	280	165	185	236	174	202
ET (mm)	280	278	275	266	313	247	304	292	273	289	282
INFIL (mm)	164	148	152	125	178	110	166	157	129	168	150

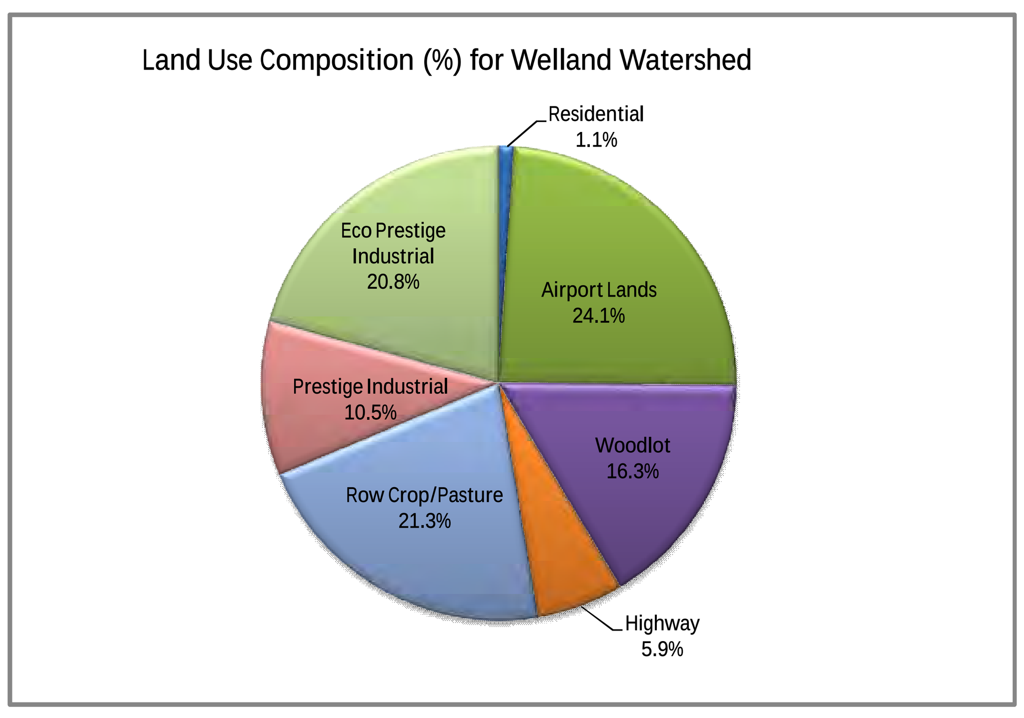
Twenty-Mile									
	T-25	**T-27**	**T-28**	**T-29**	**T-30**	**T-32**	**T-33**	**T-37**	**AVERAGE**
AREA (ha)	108	99	59	101	126	312	255	71	
SUPPLY (mm)	642	642	642	642	642	640	638	639	641
RO (mm)	285	288	330	293	284	323	204	321	291
ET (mm)	250	253	236	251	252	237	291	236	251
INFIL (mm)	103	98	76	96	103	82	145	86	99

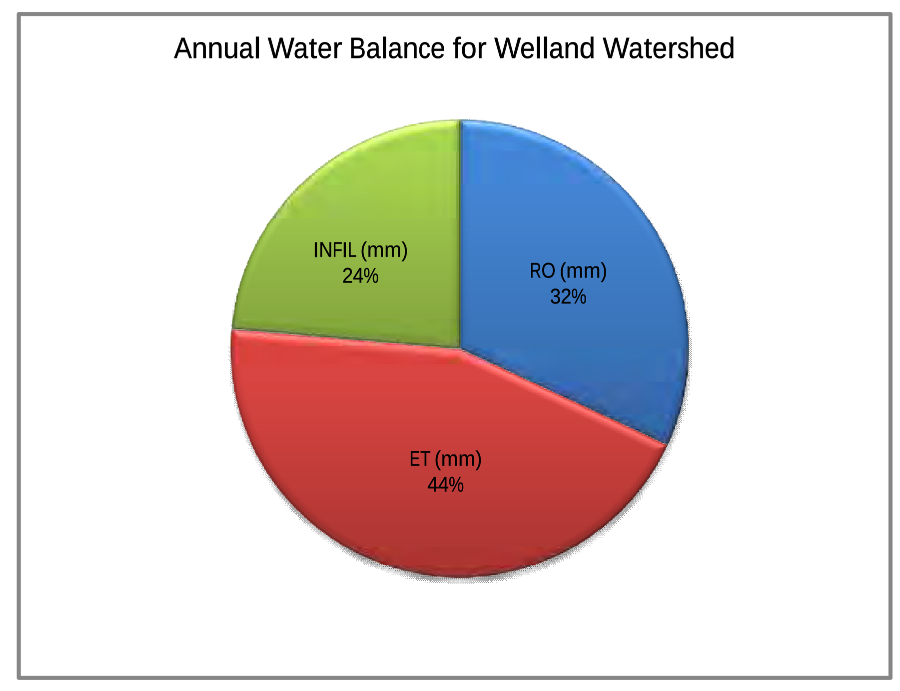
LAND USE COMPOSITION

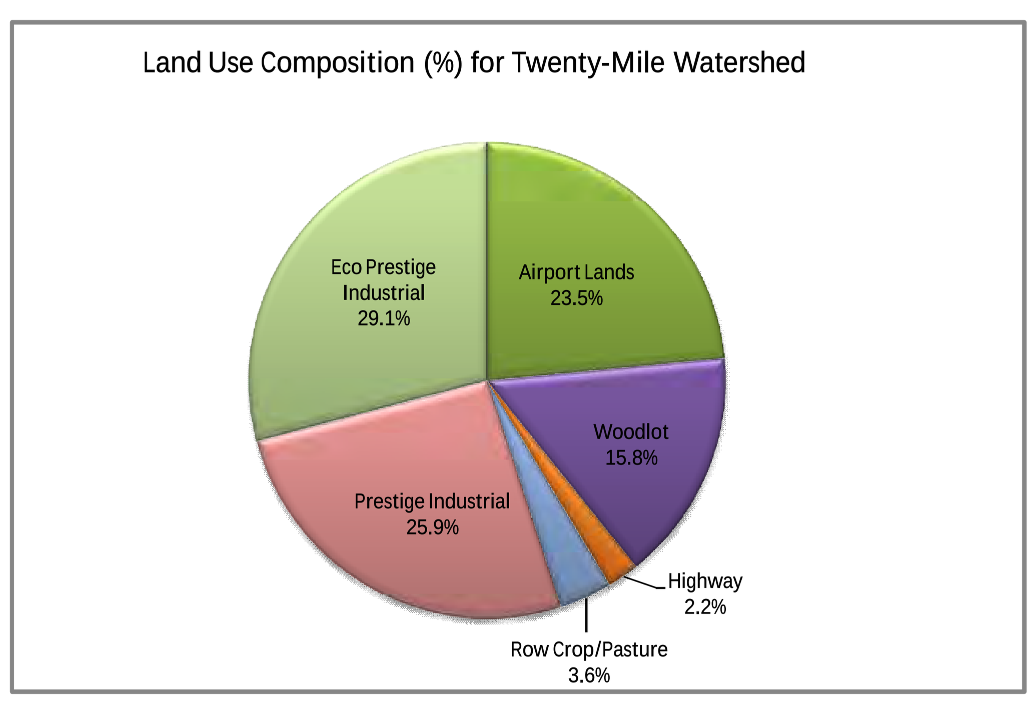
		SULFUR	**WELLAND**	**TWENTY-MILE**
Res Low Density	RLD5ab	3.60	2.00	0.00
Res Low Density	RLD5bc	2.20	6.00	0.00
Res Low Density	RLD5cd	1.30	6.30	0.00
Res Med Denisty	RMD5ab	0.00	0.00	0.00
Res Med Denisty	RMD5bc	0.00	0.00	0.00
Res Med Denisty	RMD5cd	0.00	0.00	0.00
Res High Density	RHD5ab	0.00	0.00	0.00
Res High Density	RHD5bc	0.00	0.00	0.00
Res High Density	RHD5cd	0.00	0.00	0.00
Commercial	CSM1bc	0.00	0.00	0.00
Institutional	EIS1ab	0.00	62.10	26.80
Institutional	EIS1bc	0.00	125.00	94.70
Institutional	EIS1cd	0.00	139.50	144.50
Utility/Transport/Parks	OPL0ab	28.10	58.10	18.70
Utility/Transport/Parks	OPL0bc	10.80	81.10	53.10
Utility/Transport/Parks	OPL0cd	7.20	66.50	76.50
Valley Segment	OVL0ab	10.40	3.10	3.80
Valley Segment	OVL0bc	2.70	5.70	10.20
Valley Segment	OVL0cd	1.40	6.30	16.10
Roads	THC0ab	9.80	19.00	2.60
Roads	THC0bc	4.20	31.80	8.90
Roads and ROW	THC0cd	3.10	29.60	12.90
Agricultural Tilled	AGT0ab	5.30	65.10	4.00
Agricultural Tilled	AGT0bc	3.30	113.20	15.80
Agricultural Tilled	AGT0cd	1.90	110.90	20.50
Agricultural Pasture/forest	AGPab	0.00	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.00	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00
Industrial/Prestige	IPRab	24.60	38.10	36.50
Industrial/Prestige	IPRbc	15.50	59.60	92.40
Industrial/Prestige	IPRcd	8.70	44.80	164.20
Prestige Business Park	IPEab	139.60	66.40	38.00
Prestige Business Park	IPEbc	45.80	110.60	114.70
Prestige Business Park	IPEcd	32.50	104.80	176.50

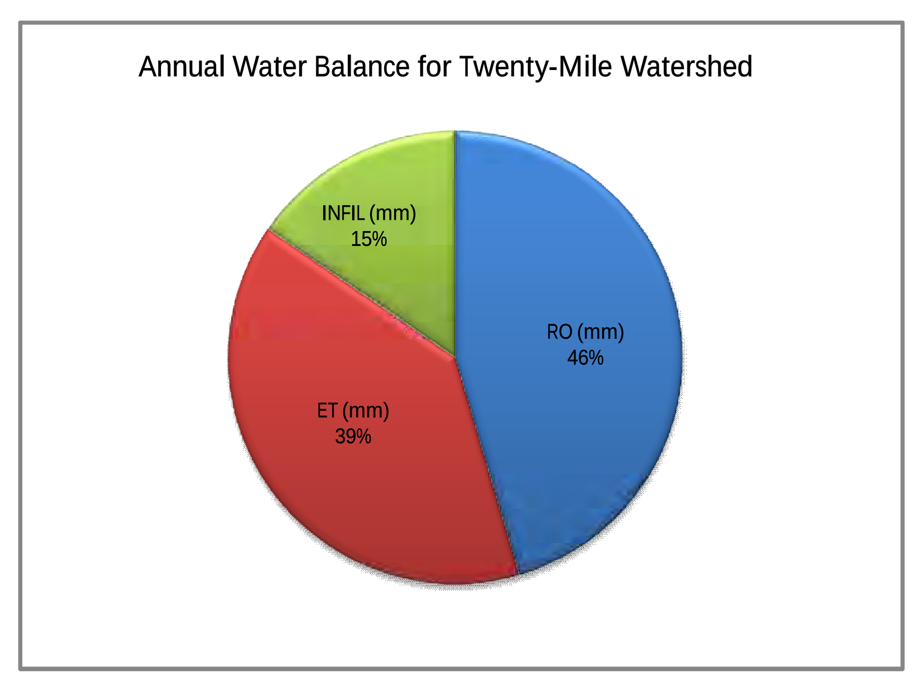












LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**	
Res. Low Density	7.10	14.30	0.00	
Res. Med Denisty	0.00	0.00	0.00	
Res. High Density	0.00	0.00	0.00	
Commercial	0.00	0.00	0.00	
Institutional	0.00	326.60	266.00	
Utility/Transport/Park	46.10	205.70	148.30	
Valley Segment	14.50	15.10	30.10	
Roads	17.10	80.40	24.40	
Agricultural Tilled	10.50	289.20	40.30	
Agricultural Pasture/forest	0.00	0.00	0.00	
Industiral/Prestige	48.80	142.50	293.10	
Prestige Business Park	217.90	281.80	329.20	
TOTAL	362.00	1355.60	1131.40	2849.00

LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**	
Residential	7.1	14.3	0.0	
Commercial	0.0	0.0	0.0	
Airport Lands	0.0	326.6	266.0	
Woodlot	46.1	220.8	178.4	
	14.50			
Highway	17.1	80.4	24.4	
Row Crop/Pasture	10.5	289.2	40.3	
Prestige Industrial	48.80	142.50	293.10	
Eco Prestige Industrial	217.90	281.80	329.20	
TOTAL	362.00	1355.60	1131.40	2849.00

LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**	
Residential	7.1	14.3	0.0	
Commercial	0.0	0.0	0.0	
Airport Lands	0.0	326.6	266.0	
Woodlot	31.9	205.7	148.3	
Utility/Open Space	28.7	15.1	30.1	
Highway	17.1	80.4	24.4	
Row Crop/Pasture	10.5	289.2	40.3	
Prestige Industrial	48.80	142.50	293.10	
Eco Prestige Industrial	217.90	281.80	329.20	
TOTAL	362.00	1355.60	1131.40	2849.00

AVERAGES:

Annual Average URF Output Data (mm)

Year	Month	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
	Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	6201	6202	6203	6301	6302	6303
	Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	6701	6702	6703	6801	6802	6803
		Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
AVERAGES:		**Total Moisture Supply = SUPY (Pervious)**																											
[mm]	**1991-1996**	**JAN**	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9
AVERAGES:		**Total Moisture Supply = SUPY (Impervious)**																											
[mm]	**1991-1996**	**JAN**	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**SURLI = SURLI (Pervious)**																											
[mm]	**1991-1996**	**JAN**	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**SURLI = SURLI (Impervious)**																											
[mm]	**1991-1996**	**JAN**	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**Runoff = SURO+IFWO (pervious areas)**																											
[mm]	**1991-1996**	**JAN**	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	75.9	0.3	1.6	6.6	0.3	1.6	6.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	21.8	0.1	0.3	1.7	0.1	0.3	1.7
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	33.7	0.1	0.3	1.8	0.1	0.3	1.9
	1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	102.0	0.3	1.6	7.4	0.3	1.6	7.4
	1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	113.2	0.7	2.7	9.7	0.7	2.7	9.7
	1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	93.3	0.6	2.6	8.3	0.6	2.6	8.4
	1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	149.9	0.4	2.8	10.7	0.4	2.8	10.9
	1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	88.9	0.3	1.9	7.8	0.3	1.9	7.9
	1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	47.0	0.3	1.3	3.8	0.3	1.3	3.8
	1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	114.9	0.2	2.7	9.0	0.2	2.7	9.1
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	94.1	0.3	1.4	6.2	0.3	1.4	6.1
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	20.9	0.1	0.3	1.4	0.1	0.3	1.3
		ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	955.7	3.6	19.4	74.3	3.6	19.5	74.8
AVERAGES:		**Runoff = SURO (impervious areas)**																											
[mm]																													
	1991-1996	**JAN**	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**(IMPEV)**																											
[mm]	**1991-1996**	**JAN**	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**(TAET)**																											
[mm]	**1991-1996**	**JAN**	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.3
	1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4	7.5
	1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.0	23.3	24.3	24.4	23.3	24.3	24.4
	1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	50.5	44.6	47.5	45.8	44.6	47.5	45.8
	1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	60.2	51.3	53.0	50.7	51.3	53.0	50.7
	1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	71.5	61.1	63.1	61.3	61.1	63.1	61.3
	1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	66.6	55.6	58.8	56.1	55.6	58.8	56.1
	1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	44.9	38.4	38.4	36.3	38.4	38.4	36.3
	1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	36.0	30.7	31.4	31.8	30.7	31.4	31.8
	1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.6	13.5	13.8	14.3	13.5	13.8	14.3
	1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1	4.5
		ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	385.9	333.6	345.8	336.8	333.6	345.8	336.8
AVERAGES:		**(IFWO)**																											
[mm]	**1991-1996**	**JAN**	0.2	1.3	4.2	0.3	1.5	4.8	0.6	2.1	6.1	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	30.6	36.1	0.3	1.5	6.3	0.3	1.5	6.3
	1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.7	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	9.4	13.5	0.1	0.3	1.6	0.1	0.3	1.6
	1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.4	0.1	0.5	1.9	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	9.5	14.9	0.0	0.3	1.8	0.0	0.3	1.8
	1991-1996	APR	0.2	1.0	5.5	0.2	1.3	6.3	0.4	2.1	7.9	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	32.5	45.1	0.3	1.5	7.1	0.3	1.5	7.1
	1991-1996	MAY	0.4	1.9	6.9	0.6	2.4	7.7	0.9	3.5	9.1	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	41.1	41.0	0.7	2.6	8.9	0.7	2.6	8.8
	1991-1996	JUN	0.4	2.1	4.9	0.6	2.6	5.4	0.9	3.5	6.4	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	36.9	31.8	0.5	2.6	6.7	0.5	2.6	6.5
	1991-1996	JUL	0.2	2.0	5.6	0.3	2.5	6.4	0.6	3.6	7.8	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	40.8	32.8	0.3	2.7	9.2	0.3	2.7	9.1
	1991-1996	AUG	0.2	1.3	3.5	0.3	1.7	4.0	0.5	2.5	4.9	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	29.6	25.4	0.2	1.8	5.9	0.2	1.8	5.8
	1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.6	0.5	1.7	3.1	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	15.8	14.7	0.3	1.3	3.7	0.3	1.3	3.6
	1991-1996	OCT	0.1	1.1	3.4	0.1	1.6	3.9	0.3	2.6	5.0	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	38.5	40.7	0.2	2.5	5.5	0.2	2.5	5.4
	1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.3	0.2	1.2	4.2	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	39.4	44.1	0.2	1.3	6.0	0.2	1.3	5.9
	1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.4	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	9.4	15.7	0.1	0.3	1.3	0.1	0.3	1.3
		ANNUAL	2.1	12.8	42.1	2.9	16.5	48.1	5.1	24.1	59.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	333.4	355.9	3.2	18.6	64.1	3.2	18.6	63.2
AVERAGES:		**(AGWO)**																											
[mm]	**1991-1996**	**JAN**	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	29.9	18.3	17.1	14.8	18.3	17.1	14.8
	1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	26.3	16.2	15.3	13.3	16.2	15.3	13.3
	1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	27.5	16.6	15.6	13.8	16.6	15.6	13.7
	1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	27.9	16.5	15.6	13.9	16.5	15.6	13.8
	1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	32.6	19.3	18.3	16.2	19.3	18.3	16.1
	1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	31.7	19.2	17.9	15.6	19.2	17.9	15.5
	1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	33.0	20.6	18.9	16.3	20.6	18.9	16.2
	1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	33.9	21.3	19.2	16.6	21.3	19.2	16.5
	1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	31.4	19.6	17.7	15.1	19.6	17.7	15.1
	1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	34.0	21.1	19.0	16.1	21.1	19.0	16.0
	1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	36.1	22.1	20.1	17.0	22.1	20.1	17.0
	1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	36.2	21.9	20.2	17.2	21.9	20.2	17.2
		ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	380.6	232.6	214.9	185.7	232.6	214.9	185.4
AVERAGES:		**(AGWI)**																											
[mm]	**1991-1996**	**JAN**	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	31.6	22.8	22.6	19.7	22.8	22.6	19.7
	1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	12.4	6.1	6.1	6.3	6.1	6.1	6.3
	1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	24.5	11.4	11.0	10.8	11.4	11.0	10.8
	1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	59.5	33.7	32.3	29.4	33.7	32.3	29.3
	1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	37.8	26.5	23.6	18.5	26.5	23.6	18.4
	1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	28.8	19.9	17.0	13.5	19.9	17.0	13.5
	1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	42.1	29.5	25.1	21.4	29.5	25.1	21.3
	1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	27.5	15.5	13.2	11.4	15.5	13.2	11.3
	1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	24.1	13.4	11.7	9.4	13.4	11.7	9.4
	1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	56.6	33.8	31.2	25.2	33.8	31.1	25.1
	1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	50.3	31.0	30.2	26.2	31.0	30.2	26.2
	1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	15.5	7.7	8.1	7.5	7.7	8.1	7.5
		ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	410.7	251.5	231.9	199.2	251.5	231.9	198.8
AVERAGES:		**(IGWI)**																											
[mm]	**1991-1996**	**JAN**	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	4.7	3.4	3.4	2.9	3.4	3.4	2.9
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	1.8	0.9	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	3.7	1.7	1.6	1.6	1.7	1.6	1.6
	1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	8.9	5.0	4.8	4.4	5.0	4.8	4.4
	1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	5.6	4.0	3.5	2.8	4.0	3.5	2.8
	1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	4.3	3.0	2.5	2.0	3.0	2.5	2.0
	1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	6.3	4.4	3.8	3.2	4.4	3.7	3.2
	1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	4.1	2.3	2.0	1.7	2.3	2.0	1.7
	1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	3.6	2.0	1.7	1.4	2.0	1.7	1.4
	1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	8.5	5.1	4.7	3.8	5.1	4.7	3.8
	1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	7.5	4.6	4.5	3.9	4.6	4.5	3.9
	1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	2.3	1.2	1.2	1.1	1.2	1.2	1.1
		ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	61.4	37.6	34.7	29.8	37.6	34.7	29.7

AVERAGES:

Adjusted URF Values

Year	Month			RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
			Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
		Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	6201	6202	6203	6301	6302	6303
		Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	6701	6702	6703	6801	6802	6803
			Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
	1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
	1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
		ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Impervious)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

Runoff = SURO+IFWO (pervious areas)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]																													
	1991-1996	JAN	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	24.5	0.3	1.6	6.6	0.3	1.6	6.6
	1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	7.0	0.1	0.3	1.7	0.1	0.3	1.7
	1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	11.9	0.1	0.3	1.8	0.1	0.3	1.9
	1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	35.5	0.3	1.6	7.4	0.3	1.6	7.4
	1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	40.9	0.7	2.7	9.7	0.7	2.7	9.7
	1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	34.6	0.6	2.6	8.3	0.6	2.6	8.4
	1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	53.1	0.4	2.8	10.7	0.4	2.8	10.9
	1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	33.1	0.3	1.9	7.8	0.3	1.9	7.9
	1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	17.7	0.3	1.3	3.8	0.3	1.3	3.8
	1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	40.3	0.2	2.7	9.0	0.2	2.7	9.1
	1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	32.3	0.3	1.4	6.2	0.3	1.4	6.1
	1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	7.3	0.1	0.3	1.4	0.1	0.3	1.3
		ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	338.7	3.6	19.4	74.3	3.6	19.5	74.8

Runoff = SURO (impervious areas)

AVERAGES:

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(IMPEV)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
	1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(TAET)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	1.8	1.8	1.8	1.8	1.8	1.8
	1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	2.2	2.2	2.3	2.2	2.2	2.3
	1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4	7.5
	1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.7	23.3	24.3	24.4	23.3	24.3	24.4
	1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.2	44.6	47.5	45.8	44.6	47.5	45.8
	1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	22.3	51.3	53.0	50.7	51.3	53.0	50.7
	1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	25.3	61.1	63.1	61.3	61.1	63.1	61.3
	1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	24.8	55.6	58.8	56.1	55.6	58.8	56.1
	1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	16.9	38.4	38.4	36.3	38.4	38.4	36.3
	1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	12.6	30.7	31.4	31.8	30.7	31.4	31.8
	1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.0	13.5	13.8	14.3	13.5	13.8	14.3
	1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	3.9	4.1	4.5	3.9	4.1	4.5
		ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	136.8	333.6	345.8	336.8	333.6	345.8	336.8

AVERAGES:

(IFWO)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	0.2	1.3	4.1	0.3	1.5	4.6	0.5	1.9	5.4	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	9.9	11.6	0.3	1.5	6.3	0.3	1.5	6.3
	1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.5	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	3.0	4.3	0.1	0.3	1.6	0.1	0.3	1.6
	1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.3	0.0	0.4	1.7	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	3.3	5.3	0.0	0.3	1.8	0.0	0.3	1.8
	1991-1996	APR	0.2	1.0	5.4	0.2	1.3	6.0	0.3	1.9	7.1	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	11.3	15.7	0.3	1.5	7.1	0.3	1.5	7.1
	1991-1996	MAY	0.4	1.8	6.8	0.5	2.3	7.4	0.8	3.2	8.2	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	14.8	14.8	0.7	2.6	8.9	0.7	2.6	8.8
	1991-1996	JUN	0.4	2.0	4.8	0.5	2.5	5.2	0.8	3.2	5.8	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	13.7	11.8	0.5	2.6	6.7	0.5	2.6	6.5
	1991-1996	JUL	0.2	2.0	5.5	0.3	2.4	6.1	0.5	3.2	7.0	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	14.5	11.6	0.3	2.7	9.2	0.3	2.7	9.1
	1991-1996	AUG	0.2	1.3	3.4	0.2	1.6	3.8	0.5	2.3	4.4	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	11.0	9.5	0.2	1.8	5.9	0.2	1.8	5.8
	1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.5	0.4	1.5	2.8	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	5.9	5.5	0.3	1.3	3.7	0.3	1.3	3.6
	1991-1996	OCT	0.1	1.1	3.4	0.1	1.5	3.8	0.3	2.3	4.5	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	13.5	14.3	0.2	2.5	5.5	0.2	2.5	5.4
	1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.2	0.2	1.1	3.8	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	13.5	15.2	0.2	1.3	6.0	0.2	1.3	5.9
	1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.2	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	3.3	5.5	0.1	0.3	1.3	0.1	0.3	1.3
		ANNUAL	2.0	12.7	41.6	2.8	15.7	46.0	4.6	21.7	53.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	118.1	126.1	3.2	18.6	64.1	3.2	18.6	63.2

AVERAGES:

(AGWO)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	9.6	18.3	17.1	14.8	18.3	17.1	14.8
	1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	8.5	16.2	15.3	13.3	16.2	15.3	13.3
	1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	9.7	16.6	15.6	13.8	16.6	15.6	13.7
	1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	9.7	16.5	15.6	13.9	16.5	15.6	13.8
	1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	11.8	19.3	18.3	16.2	19.3	18.3	16.1
	1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	11.8	19.2	17.9	15.6	19.2	17.9	15.5
	1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	11.7	20.6	18.9	16.3	20.6	18.9	16.2
	1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	12.6	21.3	19.2	16.6	21.3	19.2	16.5
	1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	11.8	19.6	17.7	15.1	19.6	17.7	15.1
	1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	11.9	21.1	19.0	16.1	21.1	19.0	16.0
	1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	12.4	22.1	20.1	17.0	22.1	20.1	17.0
	1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	12.6	21.9	20.2	17.2	21.9	20.2	17.2
		ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	134.9	232.6	214.9	185.7	232.6	214.9	185.4

AVERAGES:

(AGWI)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	10.2	22.8	22.6	19.7	22.8	22.6	19.7
	1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	4.0	6.1	6.1	6.3	6.1	6.1	6.3
	1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	8.6	11.4	11.0	10.8	11.4	11.0	10.8
	1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	20.7	33.7	32.3	29.4	33.7	32.3	29.3
	1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	13.6	26.5	23.6	18.5	26.5	23.6	18.4
	1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	10.7	19.9	17.0	13.5	19.9	17.0	13.5
	1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	14.9	29.5	25.1	21.4	29.5	25.1	21.3
	1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	10.3	15.5	13.2	11.4	15.5	13.2	11.3
	1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	9.1	13.4	11.7	9.4	13.4	11.7	9.4
	1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	19.8	33.8	31.2	25.2	33.8	31.1	25.1
	1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	17.3	31.0	30.2	26.2	31.0	30.2	26.2
	1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	5.4	7.7	8.1	7.5	7.7	8.1	7.5
		ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	145.5	251.5	231.9	199.2	251.5	231.9	198.8

AVERAGES:

(IGWI)

	Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
[mm]	1991-1996	JAN	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	1.5	3.4	3.4	2.9	3.4	3.4	2.9
	1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.6	0.9	0.9	0.9	0.9	0.9	0.9
	1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.3	1.7	1.6	1.6	1.7	1.6	1.6
	1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	3.1	5.0	4.8	4.4	5.0	4.8	4.4
	1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	2.0	4.0	3.5	2.8	4.0	3.5	2.8
	1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	1.6	3.0	2.5	2.0	3.0	2.5	2.0
	1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	2.2	4.4	3.8	3.2	4.4	3.7	3.2
	1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	1.5	2.3	2.0	1.7	2.3	2.0	1.7
	1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.4	2.0	1.7	1.4	2.0	1.7	1.4
	1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	3.0	5.1	4.7	3.8	5.1	4.7	3.8
	1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	2.6	4.6	4.5	3.9	4.6	4.5	3.9
	1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	0.8	1.2	1.2	1.1	1.2	1.2	1.1
		ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	21.7	37.6	34.7	29.8	37.6	34.7	29.7

AVERAGES:

Original URF Averages with Summation of SURLI + SUPLY

Year	Month	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
	Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	6201	6202	6203	6301	6302	6303
	Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	6701	6702	6703	6801	6802	6803
		Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

AVERAGES:

Total Moisture Supply = SUPY (Pervious)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

AVERAGES:

Total Moisture Supply = SUPY (Impervious)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

SURLI = SURLI (Pervious)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.5	0.5	0.5	2.1	2.1	2.1	5.1	5.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	82.8	82.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.3	23.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	3.1	3.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.6	3.6	3.6	8.7	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.4	141.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.3	3.3	3.3	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.1	128.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.1	1.1	1.1	4.5	4.5	4.5	10.8	10.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	176.5	176.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.7	2.7	2.7	6.3	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	103.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.8	1.8	1.8	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.8	69.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.9	3.9	3.9	9.3	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151.4	151.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.2	2.2	2.2	5.2	5.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119.2	119.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.9	6.9	6.9	29.4	29.4	29.4	70.0	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,176.7	1,176.7	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

SURLI = SURLI (Impervious)

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Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	27.9	29.4	40.0	27.5	28.3	34.4	23.2	23.8	27.9	115.3	55.2	55.9	63.7	36.0	36.8	41.5	0.6	2.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	7.9	7.9	8.2	7.7	7.7	8.0	6.5	6.5	6.7	32.6	15.6	15.6	15.9	10.1	10.2	10.6	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	17.1	17.3	19.0	16.9	17.0	18.1	14.2	14.2	15.2	69.9	33.4	33.6	34.7	21.7	22.0	23.6	0.4	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	47.6	48.2	53.3	46.9	47.2	50.7	39.4	39.7	42.8	192.6	92.3	92.6	95.3	60.0	60.9	64.4	1.0	3.1	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	43.1	44.4	61.3	42.5	43.4	53.6	35.7	36.6	43.9	172.1	82.4	82.9	94.2	53.5	54.1	72.6	1.3	2.4	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	34.8	37.2	58.3	34.2	36.1	48.0	28.8	30.6	38.3	138.7	66.4	67.2	84.5	43.1	44.1	77.9	0.7	2.6	64.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	59.1	61.6	84.4	58.4	60.2	74.1	49.1	50.8	61.5	238.3	113.9	114.9	132.4	73.6	74.9	104.7	0.8	2.2	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	34.6	36.9	56.1	34.2	35.9	47.1	28.8	30.4	38.3	136.7	65.3	66.1	84.3	42.2	43.2	78.7	0.5	1.8	57.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	23.4	23.7	26.6	23.1	23.3	25.3	19.4	19.6	21.5	92.9	44.4	44.5	46.1	28.7	28.9	30.9	0.3	0.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	50.7	52.2	71.0	50.1	51.3	62.7	42.1	43.6	51.6	206.2	98.5	99.1	117.9	63.7	64.6	105.0	0.4	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	40.1	40.7	44.2	39.5	39.7	42.0	33.2	33.4	35.2	163.7	78.4	78.8	80.6	51.1	51.7	54.6	0.6	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	8.9	9.1	9.4	8.8	8.9	9.0	7.4	7.5	7.6	36.4	17.4	17.6	17.7	11.4	11.8	11.9	0.2	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	395.4	408.5	531.8	389.7	398.8	473.1	327.7	336.5	390.5	1,595.2	763.1	768.8	867.2	494.9	503.3	676.4	6.9	20.7	256.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

SUPLY + SURLI = (Pervious)

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Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	39.9	39.9	39.9	41.6	41.6	41.6	44.5	44.5	44.5	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	122.2	122.2	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.1	11.1	11.1	11.6	11.6	11.6	12.4	12.4	12.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	34.3	34.3	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	28.1	28.1	28.1	29.1	29.1	29.1	30.9	30.9	30.9	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	78.7	78.7	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	76.5	76.5	76.5	79.3	79.3	79.3	84.3	84.3	84.3	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	217.1	217.1	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	73.2	73.2	73.2	75.7	75.7	75.7	80.3	80.3	80.3	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	200.5	200.5	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	61.6	61.6	61.6	63.6	63.6	63.6	67.3	67.3	67.3	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	164.3	164.3	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	97.9	97.9	97.9	101.4	101.4	101.4	107.7	107.7	107.7	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	273.4	273.4	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	62.0	62.0	62.0	64.0	64.0	64.0	67.7	67.7	67.7	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	164.8	164.8	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.6	42.6	42.6	44.0	44.0	44.0	46.5	46.5	46.5	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	112.0	112.0	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	82.6	82.6	82.6	85.5	85.5	85.5	90.9	90.9	90.9	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	233.0	233.0	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.9	46.9	46.9	48.5	48.5	48.5	51.5	51.5	51.5	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	181.6	181.6	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.5	14.5	14.5	15.0	15.0	15.0	15.9	15.9	15.9	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	40.8	40.8	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	636.8	636.8	636.8	659.3	659.3	659.3	699.9	699.9	699.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	1,822.6	1,822.6	645.9	645.9	645.9	645.9	645.9	645.9

AVERAGES:

SUPLY + SURLI = (Impervious)

AGWO

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Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	65.7	67.1	77.7	65.2	66.1	72.2	60.9	61.5	65.6	153.0	92.9	93.6	101.4	73.7	74.5	79.2	38.3	39.7	50.8	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	18.9	18.9	19.2	18.7	18.7	19.0	17.5	17.5	17.7	43.6	26.6	26.6	26.9	21.2	21.2	21.6	11.1	11.3	11.8	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	44.9	45.1	46.8	44.6	44.7	45.8	41.9	42.0	42.9	97.6	61.2	61.3	62.5	49.4	49.8	51.4	28.2	28.6	33.4	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	123.3	123.8	129.0	122.5	122.8	126.4	115.0	115.3	118.4	268.3	167.9	168.3	171.0	135.7	136.5	140.1	76.7	78.8	85.6	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	115.5	116.8	133.7	114.9	115.8	126.0	108.1	109.0	116.3	244.5	154.8	155.3	166.6	125.9	126.5	145.0	73.7	74.8	113.8	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	95.7	98.2	119.2	95.2	97.0	108.9	89.8	91.5	99.3	199.6	127.3	128.2	145.4	104.0	105.0	138.8	61.6	63.6	125.1	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	156.0	158.5	181.3	155.2	157.0	171.0	145.9	147.6	158.4	335.2	210.7	211.7	229.2	170.5	171.8	201.6	97.7	99.1	143.5	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	96.0	98.3	117.4	95.6	97.2	108.5	90.2	91.8	99.7	198.1	126.7	127.5	145.7	103.5	104.6	140.1	61.8	63.2	118.9	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	65.6	65.9	68.8	65.3	65.4	67.5	61.6	61.8	63.7	135.1	86.6	86.7	88.3	70.9	71.1	73.1	42.5	42.7	45.6	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	132.4	133.9	152.6	131.7	133.0	144.4	123.8	125.3	133.2	287.8	180.1	180.8	199.5	145.3	146.3	186.6	82.0	83.0	87.4	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	102.5	103.1	106.6	101.9	102.1	104.4	95.6	95.8	97.6	226.1	140.8	141.2	143.0	113.5	114.1	117.0	63.0	65.0	69.5	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	23.2	23.3	23.6	23.0	23.1	23.3	21.6	21.7	21.8	50.6	31.7	31.9	31.9	25.6	26.0	26.1	14.5	15.2	15.7	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	1,039.6	1,052.7	1,176.0	1,034.0	1,043.0	1,117.3	971.9	980.7	1,034.7	2,239.4	1,407.3	1,413.1	1,511.4	1,139.1	1,147.5	1,320.6	651.1	664.9	901.0	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

Runoff = SURO+IFWO (pervious areas)

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Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.3	1.5	5.8	0.4	1.8	6.7	0.7	2.5	8.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	37.8	75.9	0.3	1.6	6.6	0.3	1.6	6.6
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.3	0.1	0.4	1.8	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	10.2	21.8	0.1	0.3	1.7	0.1	0.3	1.7
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.4	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	11.0	33.7	0.1	0.3	1.8	0.1	0.3	1.9
1991-1996	APR	0.2	1.1	6.3	0.3	1.5	7.4	0.4	2.3	9.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	41.3	102.0	0.3	1.6	7.4	0.3	1.6	7.4
1991-1996	MAY	0.5	2.1	9.3	0.6	2.7	10.6	1.0	4.0	13.2	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	60.1	113.2	0.7	2.7	9.7	0.7	2.7	9.7
1991-1996	JUN	0.4	2.4	7.9	0.6	3.1	9.0	1.0	4.5	11.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	56.6	93.3	0.6	2.6	8.3	0.6	2.6	8.4
1991-1996	JUL	0.3	2.4	8.9	0.4	3.0	10.5	0.7	4.4	13.9	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	79.2	149.9	0.4	2.8	10.7	0.4	2.8	10.9
1991-1996	AUG	0.2	1.6	6.3	0.3	2.2	7.4	0.6	3.4	9.6	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	58.7	88.9	0.3	1.9	7.8	0.3	1.9	7.9
1991-1996	SEP	0.2	1.1	2.7	0.3	1.3	3.2	0.5	1.8	4.1	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	24.3	47.0	0.3	1.3	3.8	0.3	1.3	3.8
1991-1996	OCT	0.1	1.3	6.0	0.2	2.0	7.3	0.4	3.4	9.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	65.9	114.9	0.2	2.7	9.0	0.2	2.7	9.1
1991-1996	NOV	0.1	0.7	3.4	0.1	0.9	4.0	0.2	1.4	5.1	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	46.3	94.1	0.3	1.4	6.2	0.3	1.4	6.1
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.1	0.1	0.4	1.5	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	9.8	20.9	0.1	0.3	1.4	0.1	0.3	1.3
	ANNUAL	2.4	14.8	59.9	3.4	19.3	70.2	5.7	29.0	90.5	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	501.3	955.7	3.6	19.4	74.3	3.6	19.5	74.8

AVERAGES:

Runoff = SURO (impervious areas)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	63.5	64.9	75.5	63.0	63.9	70.0	58.7	59.3	63.4	150.8	90.7	91.4	99.2	71.5	72.3	77.0	36.1	37.5	48.5	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	17.8	17.8	18.2	17.7	17.7	17.9	16.5	16.5	16.7	42.6	25.6	25.6	25.8	20.1	20.2	20.6	10.1	10.3	10.8	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	39.0	39.1	40.8	38.7	38.8	39.9	36.0	36.1	37.0	91.7	55.2	55.4	56.6	43.5	43.8	45.4	22.2	22.6	27.4	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	108.2	108.8	113.9	107.5	107.8	111.4	100.0	100.3	103.4	253.2	152.9	153.2	155.9	120.6	121.5	125.1	61.6	63.7	70.5	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	98.0	99.3	116.2	97.4	98.3	108.5	90.6	91.5	98.8	227.0	137.3	137.8	149.1	108.4	109.0	127.5	56.2	57.3	96.3	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	79.1	81.5	102.6	78.6	80.4	92.3	73.2	74.9	82.7	183.0	110.7	111.5	128.8	87.4	88.4	122.2	45.0	47.0	108.5	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	134.8	137.3	160.0	134.0	135.8	149.8	124.7	126.4	137.1	314.0	189.5	190.5	208.0	149.2	150.6	180.3	76.5	77.9	122.3	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	79.0	81.2	100.4	78.5	80.2	91.4	73.1	74.7	82.6	181.0	109.6	110.4	128.6	86.5	87.6	123.0	44.8	46.1	101.8	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	53.3	53.6	56.6	53.0	53.2	55.2	49.3	49.5	51.4	122.8	74.3	74.4	76.0	58.6	58.8	60.9	30.3	30.5	33.4	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	115.6	117.1	135.9	114.9	116.2	127.6	107.0	108.5	116.5	271.1	163.4	164.0	182.8	128.6	129.5	169.9	65.3	66.3	70.7	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	91.2	91.7	95.3	90.6	90.8	93.1	84.3	84.5	86.3	214.8	129.5	129.9	131.7	102.2	102.8	105.7	51.6	53.7	58.1	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	20.3	20.4	20.7	20.2	20.2	20.4	18.8	18.8	18.9	47.7	28.8	29.0	29.1	22.7	23.2	23.2	11.6	12.3	12.8	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	899.8	912.9	1,036.1	894.1	903.2	977.5	832.1	840.8	894.8	2,099.6	1,267.4	1,273.2	1,371.6	999.3	1,007.7	1,180.8	511.3	525.0	761.1	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(IMPEV)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGES:

(TAET)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8
1991-1996	FEB	2.2	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.3	2.2	2.2	2.3
1991-1996	MAR	7.3	7.5	7.6	7.3	7.5	7.6	7.3	7.6	7.6	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	7.7	7.6	7.1	7.4	7.5	7.1	7.4	7.5
1991-1996	APR	24.0	24.6	24.8	24.1	24.7	24.9	24.2	24.8	24.9	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	25.3	25.0	23.3	24.3	24.4	23.3	24.3	24.4
1991-1996	MAY	47.0	49.1	48.9	47.4	49.3	49.0	48.0	49.7	49.2	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	52.8	50.5	44.6	47.5	45.8	44.6	47.5	45.8
1991-1996	JUN	56.6	57.9	57.1	57.1	58.2	57.3	58.1	58.8	57.7	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	66.2	60.2	51.3	53.0	50.7	51.3	53.0	50.7
1991-1996	JUL	66.8	68.2	67.9	67.5	68.8	68.2	68.5	69.8	68.7	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	78.4	71.5	61.1	63.1	61.3	61.1	63.1	61.3
1991-1996	AUG	61.5	63.9	62.9	62.3	64.5	63.3	63.7	65.4	63.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	75.0	66.6	55.6	58.8	56.1	55.6	58.8	56.1
1991-1996	SEP	43.8	43.8	42.4	44.2	44.1	42.6	44.8	44.5	42.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	51.2	44.9	38.4	38.4	36.3	38.4	38.4	36.3
1991-1996	OCT	33.1	33.6	33.8	33.3	33.8	34.0	33.7	34.1	34.2	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	37.6	36.0	30.7	31.4	31.8	30.7	31.4	31.8
1991-1996	NOV	39.1	37.2	33.0	40.9	39.0	34.2	44.0	41.9	36.0	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	14.8	14.6	13.5	13.8	14.3	13.5	13.8	14.3
1991-1996	DEC	4.2	4.3	4.6	4.3	4.4	4.6	4.3	4.4	4.6	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	4.9	4.8	3.9	4.1	4.5	3.9	4.1	4.5
	ANNUAL	387.5	394.3	387.2	392.4	398.4	389.8	400.8	405.1	393.9	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	418.1	385.9	333.6	345.8	336.8	333.6	345.8	336.8

AVERAGES:

(IFWO)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.2	1.3	4.2	0.3	1.5	4.8	0.6	2.1	6.1	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	30.6	36.1	0.3	1.5	6.3	0.3	1.5	6.3
1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.7	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	9.4	13.5	0.1	0.3	1.6	0.1	0.3	1.6
1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.4	0.1	0.5	1.9	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	9.5	14.9	0.0	0.3	1.8	0.0	0.3	1.8
1991-1996	APR	0.2	1.0	5.5	0.2	1.3	6.3	0.4	2.1	7.9	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	32.5	45.1	0.3	1.5	7.1	0.3	1.5	7.1
1991-1996	MAY	0.4	1.9	6.9	0.6	2.4	7.7	0.9	3.5	9.1	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	41.1	41.0	0.7	2.6	8.9	0.7	2.6	8.8
1991-1996	JUN	0.4	2.1	4.9	0.6	2.6	5.4	0.9	3.5	6.4	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	36.9	31.8	0.5	2.6	6.7	0.5	2.6	6.5
1991-1996	JUL	0.2	2.0	5.6	0.3	2.5	6.4	0.6	3.6	7.8	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	40.8	32.8	0.3	2.7	9.2	0.3	2.7	9.1
1991-1996	AUG	0.2	1.3	3.5	0.3	1.7	4.0	0.5	2.5	4.9	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	29.6	25.4	0.2	1.8	5.9	0.2	1.8	5.8
1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.6	0.5	1.7	3.1	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	15.8	14.7	0.3	1.3	3.7	0.3	1.3	3.6
1991-1996	OCT	0.1	1.1	3.4	0.1	1.6	3.9	0.3	2.6	5.0	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	38.5	40.7	0.2	2.5	5.5	0.2	2.5	5.4
1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.3	0.2	1.2	4.2	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	39.4	44.1	0.2	1.3	6.0	0.2	1.3	5.9
1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.4	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	9.4	15.7	0.1	0.3	1.3	0.1	0.3	1.3
	ANNUAL	2.1	12.8	42.1	2.9	16.5	48.1	5.1	24.1	59.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	333.4	355.9	3.2	18.6	64.1	3.2	18.6	63.2

AVERAGES:

(AGWO)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	17.5	16.5	14.1	18.6	17.5	14.8	20.5	19.1	15.9	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	53.7	29.9	18.3	17.1	14.8	18.3	17.1	14.8
1991-1996	FEB	15.5	14.7	12.7	16.4	15.6	13.3	18.2	17.1	14.4	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	47.7	26.3	16.2	15.3	13.3	16.2	15.3	13.3
1991-1996	MAR	15.8	15.1	13.2	16.8	16.0	13.9	18.6	17.5	14.9	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	49.2	27.5	16.6	15.6	13.8	16.6	15.6	13.7
1991-1996	APR	15.8	15.1	13.4	16.8	16.0	14.1	18.6	17.5	15.1	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	49.7	27.9	16.5	15.6	13.9	16.5	15.6	13.8
1991-1996	MAY	18.6	17.8	15.8	19.7	18.8	16.5	21.8	20.7	17.8	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	58.5	32.6	19.3	18.3	16.2	19.3	18.3	16.1
1991-1996	JUN	18.6	17.5	15.3	19.7	18.5	16.0	21.7	20.3	17.1	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	57.4	31.7	19.2	17.9	15.6	19.2	17.9	15.5
1991-1996	JUL	20.0	18.6	16.0	21.2	19.6	16.7	23.4	21.5	17.9	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	60.7	33.0	20.6	18.9	16.3	20.6	18.9	16.2
1991-1996	AUG	20.7	18.9	16.1	21.9	20.0	16.9	24.1	21.9	18.2	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	62.5	33.9	21.3	19.2	16.6	21.3	19.2	16.5
1991-1996	SEP	19.1	17.4	14.7	20.2	18.4	15.4	22.3	20.2	16.6	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	57.7	31.4	19.6	17.7	15.1	19.6	17.7	15.1
1991-1996	OCT	20.4	18.6	15.3	21.6	19.7	16.1	23.8	21.5	17.4	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	61.1	34.0	21.1	19.0	16.1	21.1	19.0	16.0
1991-1996	NOV	17.5	16.1	13.5	18.5	17.0	14.1	20.4	18.6	15.3	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	64.0	36.1	22.1	20.1	17.0	22.1	20.1	17.0
1991-1996	DEC	20.9	19.5	16.3	22.2	20.6	17.2	24.5	22.6	18.6	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	64.1	36.2	21.9	20.2	17.2	21.9	20.2	17.2
	ANNUAL	220.1	206.0	176.6	233.7	217.8	185.0	258.0	238.5	199.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	686.2	380.6	232.6	214.9	185.7	232.6	214.9	185.4

AVERAGES:

(AGWI)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	21.1	21.5	19.0	22.6	22.6	19.8	25.7	24.5	21.0	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	61.8	31.6	22.8	22.6	19.7	22.8	22.6	19.7
1991-1996	FEB	5.6	5.8	6.2	6.1	6.1	6.5	6.9	6.9	7.1	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	22.2	12.4	6.1	6.1	6.3	6.1	6.1	6.3
1991-1996	MAR	11.1	10.8	10.7	11.8	11.4	11.2	12.9	12.6	12.1	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	37.9	24.5	11.4	11.0	10.8	11.4	11.0	10.8
1991-1996	APR	32.7	31.7	29.7	34.7	33.7	30.9	38.1	37.1	33.0	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	107.1	59.5	33.7	32.3	29.4	33.7	32.3	29.3
1991-1996	MAY	26.2	23.8	18.7	27.7	25.1	19.4	30.5	27.3	20.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	72.4	37.8	26.5	23.6	18.5	26.5	23.6	18.4
1991-1996	JUN	19.7	17.3	13.2	20.9	18.1	13.9	22.9	19.5	14.9	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	55.6	28.8	19.9	17.0	13.5	19.9	17.0	13.5
1991-1996	JUL	29.0	24.9	20.4	30.6	26.2	21.5	33.2	28.6	23.2	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	85.2	42.1	29.5	25.1	21.4	29.5	25.1	21.3
1991-1996	AUG	15.5	13.4	10.7	16.4	14.3	11.3	18.2	15.9	12.4	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	46.1	27.5	15.5	13.2	11.4	15.5	13.2	11.3
1991-1996	SEP	12.8	11.4	8.7	13.8	12.0	9.2	15.4	13.2	10.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	40.4	24.1	13.4	11.7	9.4	13.4	11.7	9.4
1991-1996	OCT	31.3	28.8	21.8	33.3	30.6	23.1	36.9	33.5	25.4	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	92.9	56.6	33.8	31.2	25.2	33.8	31.1	25.1
1991-1996	NOV	20.7	20.1	17.2	22.0	21.3	17.9	24.2	23.3	19.4	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	90.7	50.3	31.0	30.2	26.2	31.0	30.2	26.2
1991-1996	DEC	7.5	7.8	7.5	7.9	8.2	7.8	8.8	9.0	8.4	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	26.4	15.5	7.7	8.1	7.5	7.7	8.1	7.5
	ANNUAL	233.2	217.2	183.7	247.7	229.7	192.7	273.7	251.5	207.7	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	738.7	410.7	251.5	231.9	199.2	251.5	231.9	198.8

AVERAGES:

(IGWI)

[mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	3.1	3.2	2.8	3.4	3.4	3.0	3.8	3.7	3.1	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	9.2	4.7	3.4	3.4	2.9	3.4	3.4	2.9
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	3.3	1.8	0.9	0.9	0.9	0.9	0.9	0.9
1991-1996	MAR	1.7	1.6	1.6	1.8	1.7	1.7	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	5.7	3.7	1.7	1.6	1.6	1.7	1.6	1.6
1991-1996	APR	4.9	4.7	4.4	5.2	5.0	4.6	5.7	5.5	4.9	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	16.0	8.9	5.0	4.8	4.4	5.0	4.8	4.4
1991-1996	MAY	3.9	3.5	2.8	4.1	3.7	2.9	4.6	4.1	3.1	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	10.8	5.6	4.0	3.5	2.8	4.0	3.5	2.8
1991-1996	JUN	2.9	2.6	2.0	3.1	2.7	2.1	3.4	2.9	2.2	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	8.3	4.3	3.0	2.5	2.0	3.0	2.5	2.0
1991-1996	JUL	4.3	3.7	3.1	4.6	3.9	3.2	5.0	4.3	3.5	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	12.7	6.3	4.4	3.8	3.2	4.4	3.7	3.2
1991-1996	AUG	2.3	2.0	1.6	2.5	2.1	1.7	2.7	2.4	1.8	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	6.9	4.1	2.3	2.0	1.7	2.3	2.0	1.7
1991-1996	SEP	1.9	1.7	1.3	2.1	1.8	1.4	2.3	2.0	1.5	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	6.0	3.6	2.0	1.7	1.4	2.0	1.7	1.4
1991-1996	OCT	4.7	4.3	3.3	5.0	4.6	3.5	5.5	5.0	3.8	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	13.9	8.5	5.1	4.7	3.8	5.1	4.7	3.8
1991-1996	NOV	3.1	3.0	2.6	3.3	3.2	2.7	3.6	3.5	2.9	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	13.6	7.5	4.6	4.5	3.9	4.6	4.5	3.9
1991-1996	DEC	1.1	1.2	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	3.9	2.3	1.2	1.2	1.1	1.2	1.2	1.1
	ANNUAL	34.8	32.5	27.5	37.0	34.3	28.8	40.9	37.6	31.0	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	110.4	61.4	37.6	34.7	29.8	37.6	34.7	29.7

AVERAGES:

Adjusted URFs for Lateral Inflow SURLI

Year	Month	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
	Surface	DSN	1013	1014	1015	1113	1114	1115	1213	1214	1215	2201	3001	3002	3003	4001	4002	4003	4101	4102	4103	5001	5003	6201	6202	6203	6301	6302	6303
	Sub-surface	DSN	1513	1514	1515	1613	1614	1615	1713	1714	1715	2701	3501	3502	3503	4501	4502	4503	4601	4602	4603	5501	5503	6701	6702	6703	6801	6802	6803
		Year	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

Adjustment Factor = SURLI/(SURLI+SUPY) (Pervious)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.0124	0.0124	0.0124	0.0513	0.0513	0.0513	0.1141	0.1141	0.1141	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6777	0.6777	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	FEB	0.0125	0.0125	0.0125	0.0516	0.0516	0.0516	0.1148	0.1148	0.1148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6790	0.6790	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	MAR	0.0109	0.0109	0.0109	0.0451	0.0451	0.0451	0.1012	0.1012	0.1012	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6473	0.6473	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	APR	0.0111	0.0111	0.0111	0.0458	0.0458	0.0458	0.1027	0.1027	0.1027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6514	0.6514	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	MAY	0.0105	0.0105	0.0105	0.0435	0.0435	0.0435	0.0978	0.0978	0.0978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6388	0.6388	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	JUN	0.0101	0.0101	0.0101	0.0418	0.0418	0.0418	0.0942	0.0942	0.0942	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6291	0.6291	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	JUL	0.0108	0.0108	0.0108	0.0448	0.0448	0.0448	0.1005	0.1005	0.1005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	AUG	0.0100	0.0100	0.0100	0.0415	0.0415	0.0415	0.0936	0.0936	0.0936	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6274	0.6274	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	SEP	0.0098	0.0098	0.0098	0.0408	0.0408	0.0408	0.0921	0.0921	0.0921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6234	0.6234	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	OCT	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6496	0.6496	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	NOV	0.0108	0.0108	0.0108	0.0447	0.0447	0.0447	0.1004	0.1004	0.1004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6563	0.6563	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	DEC	0.0110	0.0110	0.0110	0.0455	0.0455	0.0455	0.1021	0.1021	0.1021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6505	0.6505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	ANNUAL	0.0108	0.0108	0.0108	0.0445	0.0445	0.0445	0.1000	0.1000	0.1000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.6456	0.6456	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Adjustment Factor = SURLI/(SURLI+SUPY) (Impervious)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.4256	0.4380	0.5149	0.4219	0.4291	0.4773	0.3804	0.3864	0.4251	0.7536	0.5943	0.5974	0.6282	0.4884	0.4941	0.5241	0.0165	0.0507	0.2572	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	FEB	0.4164	0.4165	0.4266	0.4126	0.4124	0.4196	0.3705	0.3711	0.3783	0.7475	0.5865	0.5865	0.5901	0.4795	0.4802	0.4902	0.0063	0.0237	0.0709	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	MAR	0.3817	0.3842	0.4065	0.3782	0.3793	0.3947	0.3385	0.3391	0.3537	0.7157	0.5464	0.5474	0.5559	0.4385	0.4422	0.4597	0.0145	0.0285	0.1681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	APR	0.3861	0.3889	0.4134	0.3824	0.3840	0.4014	0.3422	0.3439	0.3610	0.7179	0.5494	0.5504	0.5574	0.4423	0.4458	0.4599	0.0132	0.0392	0.1160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	MAY	0.3733	0.3803	0.4585	0.3696	0.3746	0.4252	0.3303	0.3356	0.3776	0.7039	0.5322	0.5337	0.5655	0.4248	0.4278	0.5007	0.0181	0.0317	0.3637	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	JUN	0.3633	0.3792	0.4887	0.3598	0.3718	0.4404	0.3211	0.3341	0.3862	0.6947	0.5212	0.5244	0.5810	0.4141	0.4196	0.5610	0.0106	0.0417	0.5128	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	JUL	0.3791	0.3889	0.4656	0.3759	0.3831	0.4334	0.3362	0.3438	0.3883	0.7110	0.5403	0.5425	0.5774	0.4317	0.4362	0.5194	0.0086	0.0225	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	AUG	0.3608	0.3754	0.4774	0.3577	0.3687	0.4343	0.3192	0.3312	0.3844	0.6901	0.5154	0.5186	0.5786	0.4072	0.4133	0.5618	0.0076	0.0284	0.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	SEP	0.3568	0.3595	0.3869	0.3538	0.3554	0.3749	0.3152	0.3169	0.3374	0.6877	0.5127	0.5134	0.5220	0.4050	0.4067	0.4230	0.0080	0.0132	0.0753	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	OCT	0.3832	0.3900	0.4651	0.3801	0.3859	0.4346	0.3403	0.3482	0.3872	0.7163	0.5468	0.5483	0.5908	0.4381	0.4418	0.5626	0.0047	0.0165	0.0659	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	NOV	0.3914	0.3945	0.4146	0.3879	0.3890	0.4026	0.3473	0.3485	0.3607	0.7240	0.5568	0.5581	0.5636	0.4501	0.4533	0.4667	0.0089	0.0398	0.1016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1991-1996	DEC	0.3859	0.3888	0.3968	0.3819	0.3840	0.3882	0.3420	0.3438	0.3467	0.7186	0.5503	0.5530	0.5541	0.4436	0.4530	0.4547	0.0148	0.0619	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	ANNUAL	0.3803	0.3880	0.4522	0.3769	0.3824	0.4234	0.3372	0.3431	0.3774	0.7123	0.5422	0.5441	0.5738	0.4345	0.4386	0.5122	0.0106	0.0311	0.2850	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total Moisture Supply = SUPY (Pervious)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
	ANNUAL	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	629.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9	645.9

Total Moisture Supply = SUPY (Impervious)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	37.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	75.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	72.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	60.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	96.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	61.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	62.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	644.2	0.0	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Pervious)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.5	0.5	0.5	2.0	2.0	2.0	4.5	4.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	26.7	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.1	0.1	0.1	0.6	0.6	0.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	0.3	0.3	0.3	1.3	1.3	1.3	2.8	2.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	0.8	0.8	0.8	3.5	3.5	3.5	7.8	7.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.3	49.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	0.8	0.8	0.8	3.2	3.2	3.2	7.1	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.3	46.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.3	38.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	1.0	1.0	1.0	4.3	4.3	4.3	9.7	9.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	62.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	0.6	0.6	0.6	2.5	2.5	2.5	5.7	5.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	38.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	0.4	0.4	0.4	1.7	1.7	1.7	3.9	3.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	0.9	0.9	0.9	3.7	3.7	3.7	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.0	53.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	0.5	0.5	0.5	2.1	2.1	2.1	4.7	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.0	41.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	0.2	0.2	0.2	0.7	0.7	0.7	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	6.8	6.8	6.8	28.1	28.1	28.1	63.0	63.0	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	417.0	417.0	0.0	0.0	0.0	0.0	0.0	0.0

SURLI = SURLI (Impervious)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	16.1	16.5	19.4	15.9	16.2	18.0	14.3	14.6	16.0	28.4	22.4	22.5	23.7	18.4	18.6	19.8	0.6	1.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	4.6	4.6	4.7	4.5	4.5	4.6	4.1	4.1	4.2	8.2	6.5	6.5	6.5	5.3	5.3	5.4	0.1	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	10.6	10.7	11.3	10.5	10.5	11.0	9.4	9.4	9.8	19.9	15.2	15.2	15.4	12.2	12.3	12.8	0.4	0.8	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	29.2	29.4	31.3	28.9	29.1	30.4	25.9	26.0	27.3	54.3	41.6	41.6	42.2	33.5	33.7	34.8	1.0	3.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	27.0	27.5	33.2	26.8	27.1	30.8	23.9	24.3	27.3	51.0	38.5	38.6	40.9	30.8	31.0	36.3	1.3	2.3	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	22.1	23.1	29.8	21.9	22.7	26.8	19.6	20.4	23.5	42.3	31.8	32.0	35.4	25.2	25.6	34.2	0.6	2.5	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	36.7	37.7	45.1	36.4	37.1	42.0	32.6	33.3	37.6	68.9	52.3	52.6	55.9	41.8	42.3	50.3	0.8	2.2	31.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	22.1	23.0	29.3	22.0	22.6	26.7	19.6	20.3	23.6	42.4	31.6	31.8	35.5	25.0	25.4	34.5	0.5	1.7	29.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	15.1	15.2	16.3	14.9	15.0	15.8	13.3	13.4	14.2	29.0	21.6	21.7	22.0	17.1	17.2	17.8	0.3	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	31.3	31.8	38.0	31.0	31.5	35.5	27.8	28.4	31.6	58.5	44.6	44.8	48.2	35.8	36.1	45.9	0.4	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	24.4	24.6	25.9	24.2	24.3	25.1	21.7	21.7	22.5	45.2	34.7	34.8	35.2	28.1	28.3	29.1	0.6	2.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	5.5	5.5	5.7	5.4	5.5	5.5	4.9	4.9	4.9	10.2	7.8	7.9	7.9	6.3	6.5	6.5	0.2	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	245.0	250.0	291.3	242.8	246.3	272.8	217.2	221.0	243.1	458.9	349.3	350.5	369.6	279.9	282.6	330.0	6.9	20.0	183.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Runoff = SURO+IFWO (pervious areas)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.3	1.5	5.7	0.4	1.7	6.3	0.6	2.2	7.5	1.6	0.2	1.3	5.7	0.2	1.1	5.3	0.1	0.6	4.1	12.2	24.5	0.3	1.6	6.6	0.3	1.6	6.6
1991-1996	FEB	0.1	0.2	1.1	0.1	0.3	1.2	0.1	0.4	1.6	0.2	0.1	0.2	1.2	0.0	0.2	1.2	0.0	0.1	0.6	3.3	7.0	0.1	0.3	1.7	0.1	0.3	1.7
1991-1996	MAR	0.0	0.2	1.4	0.1	0.3	1.7	0.1	0.5	2.1	0.2	0.0	0.2	1.5	0.0	0.2	1.5	0.0	0.1	1.1	3.9	11.9	0.1	0.3	1.8	0.1	0.3	1.9
1991-1996	APR	0.2	1.1	6.2	0.3	1.4	7.1	0.4	2.1	8.6	1.1	0.2	1.0	6.5	0.2	1.0	6.4	0.1	0.5	5.0	14.4	35.5	0.3	1.6	7.4	0.3	1.6	7.4
1991-1996	MAY	0.5	2.1	9.2	0.6	2.6	10.2	0.9	3.6	11.9	2.2	0.4	1.9	9.2	0.4	1.8	8.9	0.1	1.0	7.7	21.7	40.9	0.7	2.7	9.7	0.7	2.7	9.7
1991-1996	JUN	0.4	2.4	7.8	0.6	3.0	8.6	0.9	4.0	10.1	2.5	0.4	2.1	7.9	0.4	2.1	7.7	0.2	1.3	6.7	21.0	34.6	0.6	2.6	8.3	0.6	2.6	8.4
1991-1996	JUL	0.3	2.3	8.8	0.4	2.9	10.1	0.6	4.0	12.5	2.4	0.2	2.1	9.4	0.2	2.0	9.1	0.1	1.0	5.8	28.1	53.1	0.4	2.8	10.7	0.4	2.8	10.9
1991-1996	AUG	0.2	1.6	6.2	0.3	2.1	7.1	0.5	3.0	8.7	1.8	0.2	1.4	6.8	0.2	1.3	6.5	0.1	0.6	4.2	21.9	33.1	0.3	1.9	7.8	0.3	1.9	7.9
1991-1996	SEP	0.2	1.0	2.7	0.3	1.2	3.1	0.5	1.6	3.8	1.0	0.2	1.0	3.0	0.2	1.0	3.0	0.1	0.5	2.0	9.1	17.7	0.3	1.3	3.8	0.3	1.3	3.8
1991-1996	OCT	0.1	1.3	6.0	0.2	1.9	6.9	0.3	3.0	8.7	1.3	0.1	1.1	6.4	0.1	1.1	6.2	0.0	0.1	1.4	23.1	40.3	0.2	2.7	9.0	0.2	2.7	9.1
1991-1996	NOV	0.1	0.7	3.4	0.1	0.8	3.8	0.2	1.2	4.6	0.6	0.1	0.6	3.3	0.1	0.8	4.6	0.0	0.4	3.1	15.9	32.3	0.3	1.4	6.2	0.3	1.4	6.1
1991-1996	DEC	0.0	0.2	0.9	0.0	0.2	1.0	0.1	0.3	1.3	0.2	0.0	0.2	0.9	0.0	0.2	1.0	0.0	0.1	0.7	3.4	7.3	0.1	0.3	1.4	0.1	0.3	1.3
	ANNUAL	2.4	14.7	59.3	3.2	18.4	67.1	5.1	26.1	81.4	15.0	2.2	13.1	61.7	2.1	13.0	61.4	0.8	6.3	42.4	177.6	338.7	3.6	19.4	74.3	3.6	19.5	74.8

Runoff = SURO (impervious areas)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	36.4	36.5	36.6	36.4	36.5	36.6	36.3	36.4	36.4	37.2	36.8	36.8	36.9	36.6	36.6	36.6	35.5	35.6	36.1	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.8	10.6	10.6	10.6	10.5	10.5	10.5	10.0	10.0	10.1	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	24.1	24.1	24.2	24.1	24.1	24.2	23.8	23.8	23.9	26.1	25.1	25.1	25.1	24.4	24.4	24.5	21.9	22.0	22.8	21.8	21.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	66.4	66.5	66.8	66.4	66.4	66.7	65.8	65.8	66.0	71.4	68.9	68.9	69.0	67.3	67.3	67.5	60.8	61.2	62.4	60.6	60.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	61.4	61.6	62.9	61.4	61.5	62.3	60.7	60.8	61.5	67.2	64.2	64.2	64.8	62.3	62.4	63.7	55.2	55.5	61.3	54.9	54.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	50.4	50.6	52.4	50.3	50.5	51.6	49.7	49.9	50.7	55.9	53.0	53.0	54.0	51.2	51.3	53.6	44.5	45.0	52.8	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	83.7	83.9	85.5	83.6	83.8	84.8	82.8	82.9	83.9	90.7	87.1	87.2	87.9	84.8	84.9	86.7	75.8	76.1	82.5	75.6	75.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	50.5	50.7	52.5	50.4	50.6	51.7	49.8	50.0	50.9	56.1	53.1	53.2	54.2	51.3	51.4	53.9	44.4	44.8	52.6	44.3	44.3	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	34.3	34.3	34.7	34.3	34.3	34.5	33.8	33.8	34.1	38.4	36.2	36.2	36.3	34.9	34.9	35.1	30.0	30.1	30.9	29.9	29.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	71.3	71.4	72.7	71.3	71.4	72.2	70.6	70.7	71.4	76.9	74.1	74.1	74.8	72.2	72.3	74.3	65.0	65.2	66.0	64.9	64.9	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	55.5	55.5	55.8	55.5	55.5	55.6	55.0	55.0	55.2	59.3	57.4	57.4	57.5	56.2	56.2	56.4	51.2	51.5	52.2	51.1	51.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	12.5	12.5	12.5	12.5	12.5	12.5	12.3	12.4	12.4	13.4	12.9	13.0	13.0	12.6	12.7	12.7	11.4	11.5	11.6	11.4	11.4	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	557.6	558.6	567.6	557.1	557.8	563.6	551.5	552.4	557.1	604.0	580.2	580.4	584.6	565.1	565.7	576.0	505.8	508.7	544.2	504.4	504.4	0.0	0.0	0.0	0.0	0.0	0.0

(IMPEV)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.9	0.9	0.8	0.9	0.9	0.8	1.0	1.0	0.9	0.4	0.6	0.6	0.6	0.8	0.8	0.8	1.6	1.5	1.2	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	FEB	0.9	0.9	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.4	0.7	0.7	0.7	0.8	0.8	0.8	1.6	1.6	1.5	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAR	3.7	3.7	3.6	3.7	3.7	3.6	4.0	4.0	3.9	1.7	2.7	2.7	2.7	3.4	3.4	3.2	5.9	5.8	5.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	APR	9.2	9.1	8.8	9.2	9.2	9.0	9.8	9.8	9.6	4.2	6.7	6.7	6.6	8.3	8.3	8.1	14.8	14.4	13.2	15.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	MAY	11.3	11.1	9.7	11.3	11.2	10.3	12.0	11.9	11.2	5.3	8.4	8.4	7.8	10.3	10.3	9.0	17.6	17.4	11.4	18.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUN	11.1	10.8	8.9	11.1	10.9	9.7	11.8	11.6	10.7	5.3	8.3	8.3	7.3	10.2	10.1	7.6	17.2	16.7	8.5	17.4	17.4	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	JUL	13.0	12.8	11.2	13.1	12.9	11.9	13.9	13.8	12.8	6.1	9.6	9.6	8.9	11.9	11.8	10.1	20.8	20.5	14.2	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	AUG	10.8	10.6	8.9	10.9	10.7	9.6	11.5	11.3	10.4	5.3	8.2	8.2	7.1	10.1	10.0	7.4	16.8	16.5	8.8	17.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	SEP	8.1	8.0	7.7	8.1	8.1	7.8	8.6	8.6	8.3	3.9	6.1	6.1	6.0	7.5	7.4	7.2	12.4	12.4	11.6	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	OCT	9.8	9.6	8.5	9.8	9.7	8.9	10.4	10.3	9.7	4.5	7.2	7.1	6.5	8.9	8.8	6.9	15.7	15.6	14.8	15.8	15.8	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	NOV	6.8	6.7	6.5	6.8	6.8	6.6	7.3	7.2	7.1	3.1	4.9	4.9	4.9	6.1	6.1	5.9	11.0	10.7	10.0	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
1991-1996	DEC	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	0.8	1.3	1.3	1.3	1.6	1.6	1.6	2.9	2.8	2.7	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
	ANNUAL	86.7	85.6	76.6	87.1	86.4	80.6	92.7	91.9	87.1	40.2	64.0	63.8	59.6	79.1	78.5	68.2	138.4	135.5	100.0	139.9	139.9	0.0	0.0	0.0	0.0	0.0	0.0

(IFWO)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	0.2	1.3	4.1	0.3	1.5	4.6	0.5	1.9	5.4	1.1	0.2	1.2	4.6	0.1	1.0	4.9	0.0	0.6	3.6	9.9	11.6	0.3	1.5	6.3	0.3	1.5	6.3
1991-1996	FEB	0.1	0.2	1.0	0.1	0.3	1.2	0.1	0.4	1.5	0.2	0.0	0.2	1.2	0.0	0.2	1.1	0.0	0.1	0.6	3.0	4.3	0.1	0.3	1.6	0.1	0.3	1.6
1991-1996	MAR	0.0	0.2	1.2	0.0	0.3	1.3	0.0	0.4	1.7	0.2	0.0	0.2	1.3	0.0	0.2	1.3	0.0	0.1	0.9	3.3	5.3	0.0	0.3	1.8	0.0	0.3	1.8
1991-1996	APR	0.2	1.0	5.4	0.2	1.3	6.0	0.3	1.9	7.1	0.9	0.2	0.9	6.0	0.2	0.9	6.1	0.1	0.4	4.7	11.3	15.7	0.3	1.5	7.1	0.3	1.5	7.1
1991-1996	MAY	0.4	1.8	6.8	0.5	2.3	7.4	0.8	3.2	8.2	1.7	0.4	1.8	7.6	0.4	1.8	7.8	0.1	0.9	6.4	14.8	14.8	0.7	2.6	8.9	0.7	2.6	8.8
1991-1996	JUN	0.4	2.0	4.8	0.5	2.5	5.2	0.8	3.2	5.8	1.8	0.4	2.0	5.5	0.4	2.0	5.8	0.1	1.3	4.7	13.7	11.8	0.5	2.6	6.7	0.5	2.6	6.5
1991-1996	JUL	0.2	2.0	5.5	0.3	2.4	6.1	0.5	3.2	7.0	1.7	0.2	1.9	6.9	0.2	1.9	7.3	0.1	0.9	4.4	14.5	11.6	0.3	2.7	9.2	0.3	2.7	9.1
1991-1996	AUG	0.2	1.3	3.4	0.2	1.6	3.8	0.5	2.3	4.4	1.1	0.1	1.3	4.2	0.1	1.3	4.4	0.0	0.5	2.5	11.0	9.5	0.2	1.8	5.9	0.2	1.8	5.8
1991-1996	SEP	0.2	1.0	2.3	0.3	1.2	2.5	0.4	1.5	2.8	0.9	0.2	1.0	2.7	0.2	1.0	2.9	0.0	0.5	1.9	5.9	5.5	0.3	1.3	3.7	0.3	1.3	3.6
1991-1996	OCT	0.1	1.1	3.4	0.1	1.5	3.8	0.3	2.3	4.5	0.9	0.1	1.0	3.8	0.1	1.0	3.9	0.0	0.1	1.2	13.5	14.3	0.2	2.5	5.5	0.2	2.5	5.4
1991-1996	NOV	0.1	0.6	2.9	0.1	0.8	3.2	0.2	1.1	3.8	0.5	0.1	0.5	3.1	0.1	0.8	4.4	0.0	0.3	2.8	13.5	15.2	0.2	1.3	6.0	0.2	1.3	5.9
1991-1996	DEC	0.0	0.2	0.8	0.0	0.2	1.0	0.1	0.3	1.2	0.1	0.0	0.1	0.8	0.0	0.2	0.9	0.0	0.1	0.6	3.3	5.5	0.1	0.3	1.3	0.1	0.3	1.3
	ANNUAL	2.0	12.7	41.6	2.8	15.7	46.0	4.6	21.7	53.5	11.1	1.8	12.1	47.7	1.8	12.2	51.0	0.6	5.7	34.5	118.1	126.1	3.2	18.6	64.1	3.2	18.6	63.2

(TAET)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	1.8	1.8	1.8	1.7	1.7	1.8	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.8	1.8	1.9	1.9	1.9	1.9	0.6	0.6	1.8	1.8	1.8	1.8	1.8	1.8
1991-1996	FEB	2.2	2.3	2.3	2.1	2.2	2.2	2.0	2.1	2.1	2.3	2.2	2.3	2.3	2.2	2.3	2.3	2.4	2.4	2.4	0.8	0.8	2.2	2.2	2.3	2.2	2.2	2.3
1991-1996	MAR	7.2	7.4	7.5	7.0	7.2	7.2	6.6	6.8	6.8	7.5	7.3	7.5	7.6	7.3	7.5	7.6	7.6	7.7	7.7	2.7	2.7	7.1	7.4	7.5	7.1	7.4	7.5
1991-1996	APR	23.7	24.4	24.6	23.0	23.6	23.7	21.7	22.3	22.3	24.6	23.9	24.6	24.7	23.9	24.6	24.7	25.5	25.6	25.6	8.8	8.7	23.3	24.3	24.4	23.3	24.3	24.4
1991-1996	MAY	46.5	48.6	48.4	45.3	47.2	46.9	43.3	44.8	44.4	49.0	46.9	49.0	48.1	46.9	49.0	48.1	53.1	53.5	53.4	19.1	18.2	44.6	47.5	45.8	44.6	47.5	45.8
1991-1996	JUN	56.0	57.3	56.5	54.7	55.8	54.9	52.6	53.3	52.3	57.7	56.4	57.7	56.1	56.4	57.7	56.1	69.1	69.3	68.7	24.5	22.3	51.3	53.0	50.7	51.3	53.0	50.7
1991-1996	JUL	66.1	67.5	67.2	64.4	65.7	65.2	61.6	62.8	61.8	68.0	66.6	68.1	66.6	66.6	68.1	66.6	80.0	80.4	79.0	27.8	25.3	61.1	63.1	61.3	61.1	63.1	61.3
1991-1996	AUG	60.9	63.2	62.3	59.7	61.8	60.7	57.8	59.3	57.9	63.7	61.3	63.7	61.6	61.3	63.7	61.6	75.6	76.1	74.2	27.9	24.8	55.6	58.8	56.1	55.6	58.8	56.1
1991-1996	SEP	43.3	43.4	42.0	42.4	42.3	40.8	40.7	40.4	38.8	43.7	43.6	43.7	41.8	43.6	43.7	41.8	55.9	55.7	52.2	19.3	16.9	38.4	38.4	36.3	38.4	38.4	36.3
1991-1996	OCT	32.7	33.2	33.4	31.8	32.2	32.4	30.3	30.6	30.7	33.5	33.0	33.5	33.6	33.0	33.5	33.6	38.8	38.8	37.9	13.2	12.6	30.7	31.4	31.8	30.7	31.4	31.8
1991-1996	NOV	38.7	36.8	32.7	39.1	37.2	32.6	39.6	37.7	32.4	36.6	38.6	36.7	32.5	13.8	14.0	14.3	14.7	14.7	14.7	5.1	5.0	13.5	13.8	14.3	13.5	13.8	14.3
1991-1996	DEC	4.2	4.3	4.5	4.1	4.2	4.4	3.9	4.0	4.2	4.3	4.2	4.3	4.5	4.2	4.3	4.5	4.9	4.9	4.9	1.7	1.7	3.9	4.1	4.5	3.9	4.1	4.5
	ANNUAL	383.3	390.0	383.0	374.9	380.7	372.4	360.8	364.6	354.5	392.7	385.9	393.0	381.3	361.1	370.3	363.2	429.6	431.0	422.7	148.2	136.8	333.6	345.8	336.8	333.6	345.8	336.8

(AGWO)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	17.3	16.3	14.0	17.6	16.6	14.0	18.2	16.9	14.1	16.2	17.2	16.3	13.9	17.2	16.3	14.0	13.8	13.2	11.5	17.3	9.6	18.3	17.1	14.8	18.3	17.1	14.8
1991-1996	FEB	15.3	14.6	12.6	15.6	14.8	12.7	16.1	15.1	12.7	14.4	15.2	14.5	12.5	15.2	14.5	12.6	12.1	11.8	10.4	15.3	8.5	16.2	15.3	13.3	16.2	15.3	13.3
1991-1996	MAR	15.6	14.9	13.1	16.0	15.2	13.2	16.7	15.7	13.4	14.8	15.5	14.8	13.0	15.5	14.9	13.1	12.4	12.1	10.9	17.4	9.7	16.6	15.6	13.8	16.6	15.6	13.7
1991-1996	APR	15.6	15.0	13.3	16.0	15.3	13.4	16.7	15.7	13.5	14.8	15.5	14.9	13.2	15.5	14.9	13.3	12.7	12.4	11.4	17.3	9.7	16.5	15.6	13.9	16.5	15.6	13.8
1991-1996	MAY	18.4	17.6	15.7	18.9	18.0	15.8	19.7	18.6	16.0	17.4	18.2	17.5	15.6	18.2	17.5	15.7	15.2	15.0	13.9	21.1	11.8	19.3	18.3	16.2	19.3	18.3	16.1
1991-1996	JUN	18.4	17.4	15.1	18.9	17.8	15.3	19.7	18.4	15.5	17.2	18.2	17.2	15.1	18.2	17.3	15.2	15.4	15.0	13.7	21.3	11.8	19.2	17.9	15.6	19.2	17.9	15.5
1991-1996	JUL	19.8	18.4	15.8	20.3	18.8	15.9	21.0	19.3	16.1	18.2	19.6	18.3	15.8	19.6	18.3	15.9	16.7	16.0	14.3	21.5	11.7	20.6	18.9	16.3	20.6	18.9	16.2
1991-1996	AUG	20.5	18.8	16.0	21.0	19.2	16.2	21.8	19.9	16.5	18.5	20.3	18.7	16.0	20.3	18.7	16.2	17.2	16.3	14.3	23.3	12.6	21.3	19.2	16.6	21.3	19.2	16.5
1991-1996	SEP	18.9	17.3	14.6	19.4	17.7	14.8	20.2	18.3	15.1	17.0	18.7	17.2	14.6	18.7	17.2	14.7	15.8	15.0	12.9	21.7	11.8	19.6	17.7	15.1	19.6	17.7	15.1
1991-1996	OCT	20.1	18.4	15.2	20.6	18.8	15.4	21.4	19.3	15.6	18.2	20.0	18.3	15.2	20.0	18.3	15.3	16.2	15.1	12.6	21.4	11.9	21.1	19.0	16.1	21.1	19.0	16.0
1991-1996	NOV	17.3	15.9	13.3	17.7	16.3	13.5	18.4	16.8	13.7	15.8	17.1	15.9	13.3	20.8	19.2	16.0	16.4	15.4	12.9	22.0	12.4	22.1	20.1	17.0	22.1	20.1	17.0
1991-1996	DEC	20.7	19.3	16.2	21.2	19.7	16.4	22.0	20.3	16.7	19.0	20.5	19.2	16.1	20.5	19.2	16.2	16.1	15.3	13.0	22.4	12.6	21.9	20.2	17.2	21.9	20.2	17.2
	ANNUAL	217.8	203.8	174.7	223.2	208.1	176.8	232.2	214.7	179.1	201.4	216.1	202.7	174.4	219.8	206.2	178.2	180.0	172.6	151.7	243.2	134.9	232.6	214.9	185.7	232.6	214.9	185.4

(AGWI)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	20.8	21.3	18.8	21.5	21.5	18.8	22.8	21.7	18.6	21.1	20.7	21.2	18.8	21.1	21.5	19.2	17.2	18.0	16.6	19.9	10.2	22.8	22.6	19.7	22.8	22.6	19.7
1991-1996	FEB	5.6	5.7	6.1	5.8	5.8	6.2	6.1	6.1	6.2	5.7	5.5	5.7	6.0	5.4	5.6	6.0	4.1	4.4	4.8	7.1	4.0	6.1	6.1	6.3	6.1	6.1	6.3
1991-1996	MAR	11.0	10.7	10.6	11.2	10.9	10.7	11.6	11.3	10.8	10.6	10.9	10.6	10.6	10.9	10.6	10.6	9.7	9.6	9.9	13.4	8.6	11.4	11.0	10.8	11.4	11.0	10.8
1991-1996	APR	32.3	31.4	29.4	33.1	32.2	29.5	34.2	33.3	29.6	31.1	32.1	31.2	29.2	32.0	31.2	29.3	28.3	28.5	28.5	37.3	20.7	33.7	32.3	29.4	33.7	32.3	29.3
1991-1996	MAY	25.9	23.5	18.5	26.5	24.0	18.6	27.5	24.7	18.7	23.2	25.7	23.4	18.5	25.6	23.4	18.7	22.8	22.2	18.7	26.1	13.6	26.5	23.6	18.5	26.5	23.6	18.4
1991-1996	JUN	19.5	17.1	13.1	20.0	17.4	13.3	20.7	17.7	13.5	16.8	19.4	17.1	13.5	19.4	17.1	13.7	17.7	16.5	13.4	20.6	10.7	19.9	17.0	13.5	19.9	17.0	13.5
1991-1996	JUL	28.7	24.6	20.2	29.2	25.0	20.5	29.8	25.7	20.9	24.3	28.6	24.5	20.6	28.6	24.5	20.9	24.1	20.9	16.9	30.2	14.9	29.5	25.1	21.4	29.5	25.1	21.3
1991-1996	AUG	15.4	13.2	10.6	15.8	13.7	10.9	16.5	14.4	11.2	13.0	15.3	13.2	10.5	15.3	13.2	10.7	12.6	11.4	8.3	17.2	10.3	15.5	13.2	11.4	15.5	13.2	11.3
1991-1996	SEP	12.7	11.3	8.6	13.2	11.5	8.8	14.0	12.0	9.1	11.1	12.5	11.2	8.5	12.5	11.2	8.6	9.7	8.9	5.7	15.2	9.1	13.4	11.7	9.4	13.4	11.7	9.4
1991-1996	OCT	30.9	28.4	21.5	31.8	29.2	22.1	33.1	30.1	22.8	28.1	30.6	28.2	21.0	30.6	28.2	21.1	19.1	16.8	12.1	32.6	19.8	33.8	31.2	25.2	33.8	31.1	25.1
1991-1996	NOV	20.5	19.9	17.0	21.0	20.4	17.1	21.7	21.0	17.5	19.7	20.3	19.8	16.8	28.5	28.0	24.7	21.5	21.4	20.1	31.2	17.3	31.0	30.2	26.2	31.0	30.2	26.2
1991-1996	DEC	7.4	7.7	7.4	7.6	7.9	7.5	7.9	8.1	7.6	7.6	7.3	7.7	7.3	7.3	7.7	7.2	6.1	6.4	6.2	9.2	5.4	7.7	8.1	7.5	7.7	8.1	7.5
	ANNUAL	230.7	214.9	181.8	236.7	219.5	184.1	246.3	226.3	186.9	212.3	228.8	213.7	181.4	237.2	222.3	190.6	192.9	184.9	161.3	261.8	145.5	251.5	231.9	199.2	251.5	231.9	198.8

(IGWI)

AVERAGES: [mm]

Year	Month	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	JAN	3.1	3.2	2.8	3.2	3.2	2.8	3.4	3.2	2.8	3.1	3.1	3.2	2.8	3.1	3.2	2.9	2.6	2.7	2.5	3.0	1.5	3.4	3.4	2.9	3.4	3.4	2.9
1991-1996	FEB	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.6	0.7	0.7	1.1	0.6	0.9	0.9	0.9	0.9	0.9	0.9
1991-1996	MAR	1.6	1.6	1.6	1.7	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.5	2.0	1.3	1.7	1.6	1.6	1.7	1.6	1.6
1991-1996	APR	4.8	4.7	4.4	4.9	4.8	4.4	5.1	5.0	4.4	4.6	4.8	4.7	4.4	4.8	4.7	4.4	4.2	4.3	4.3	5.6	3.1	5.0	4.8	4.4	5.0	4.8	4.4
1991-1996	MAY	3.9	3.5	2.8	4.0	3.6	2.8	4.1	3.7	2.8	3.5	3.8	3.5	2.8	3.8	3.5	2.8	3.4	3.3	2.8	3.9	2.0	4.0	3.5	2.8	4.0	3.5	2.8
1991-1996	JUN	2.9	2.6	2.0	3.0	2.6	2.0	3.1	2.6	2.0	2.5	2.9	2.6	2.0	2.9	2.6	2.0	2.6	2.5	2.0	3.1	1.6	3.0	2.5	2.0	3.0	2.5	2.0
1991-1996	JUL	4.3	3.7	3.0	4.4	3.7	3.1	4.5	3.8	3.1	3.6	4.3	3.7	3.1	4.3	3.7	3.1	3.6	3.1	2.5	4.5	2.2	4.4	3.8	3.2	4.4	3.7	3.2
1991-1996	AUG	2.3	2.0	1.6	2.4	2.0	1.6	2.5	2.2	1.7	1.9	2.3	2.0	1.6	2.3	2.0	1.6	1.9	1.7	1.2	2.6	1.5	2.3	2.0	1.7	2.3	2.0	1.7
1991-1996	SEP	1.9	1.7	1.3	2.0	1.7	1.3	2.1	1.8	1.4	1.7	1.9	1.7	1.3	1.9	1.7	1.3	1.4	1.3	0.8	2.3	1.4	2.0	1.7	1.4	2.0	1.7	1.4
1991-1996	OCT	4.6	4.2	3.2	4.7	4.4	3.3	5.0	4.5	3.4	4.2	4.6	4.2	3.1	4.6	4.2	3.2	2.9	2.5	1.8	4.9	3.0	5.1	4.7	3.8	5.1	4.7	3.8
1991-1996	NOV	3.1	3.0	2.5	3.1	3.0	2.6	3.2	3.1	2.6	2.9	3.0	3.0	2.5	4.3	4.2	3.7	3.2	3.2	3.0	4.7	2.6	4.6	4.5	3.9	4.6	4.5	3.9
1991-1996	DEC	1.1	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.9	1.0	0.9	1.4	0.8	1.2	1.2	1.1	1.2	1.2	1.1
	ANNUAL	34.5	32.1	27.2	35.4	32.8	27.5	36.8	33.8	27.9	31.7	34.2	31.9	27.1	35.4	33.2	28.5	28.8	27.6	24.1	39.1	21.7	37.6	34.7	29.8	37.6	34.7	29.7

URF volumes (m^3) based on percentage of pervious and impervious land use

			RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
		Pervious Composition (%)	0.70	0.70	0.70	0.50	0.50	0.50	0.35	0.35	0.35	0.04	0.63	0.63	0.63	0.90	0.90	0.90	0.97	0.97	0.97	0.3	0.3	1.0	1.0	1.0	1.0	1.0	1.0
		Impervious Composition (%)	0.09	0.09	0.09	0.13	0.13	0.13	0.17	0.17	0.17	0.19	0.11	0.11	0.11	0.05	0.05	0.05	0.03	0.03	0.03	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
URF AREA :	**100000**	**Pervious Composition (m^2)**	70000	70000	70000	50000	50000	50000	35000	35000	35000	4000	63000	63000	63000	90000	90000	90000	97000	97000	97000	30000	30000	100000	100000	100000	100000	100000	100000
10 ha	**m^2**	**Impervious Composition (m^2)**	9000	9000	9000	13000	13000	13000	17000	17000	17000	19000	11000	11000	11000	5000	5000	5000	3000	3000	3000	70000	70000	0	0	0	0	0	0
		Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
		Total Moisture Supply = SUPY (Pervious)																											
AVERAGES:																													
	[m^3]	**1991-1996 JAN**	2759.9	2759.9	2759.9	1971.3	1971.3	1971.3	1379.9	1379.9	1379.9	157.7	2483.9	2483.9	2483.9	3543.3	3543.3	3543.3	3818.8	3818.8	3818.8	1181.4	1181.4	3936.0	3936.0	3936.0	3936.0	3936.0	3936.0
		1991-1996 FEB	770.5	770.5	770.5	550.4	550.4	550.4	385.2	385.2	385.2	44.0	693.4	693.4	693.4	991.2	991.2	991.2	1068.3	1068.3	1068.3	330.4	330.4	1101.4	1101.4	1101.4	1101.4	1101.4	1101.4
		1991-1996 MAR	1942.6	1942.6	1942.6	1387.6	1387.6	1387.6	971.3	971.3	971.3	111.0	1748.3	1748.3	1748.3	2497.7	2497.7	2497.7	2692.0	2692.0	2692.0	832.6	832.6	2775.3	2775.3	2775.3	2775.3	2775.3	2775.3
		1991-1996 APR	5297.2	5297.2	5297.2	3783.7	3783.7	3783.7	2648.6	2648.6	2648.6	302.7	4767.4	4767.4	4767.4	6810.6	6810.6	6810.6	7340.4	7340.4	7340.4	2270.2	2270.2	7567.4	7567.4	7567.4	7567.4	7567.4	7567.4
		1991-1996 MAY	5068.3	5068.3	5068.3	3620.2	3620.2	3620.2	2534.2	2534.2	2534.2	289.6	4561.5	4561.5	4561.5	6516.4	6516.4	6516.4	7023.3	7023.3	7023.3	2172.1	2172.1	7240.5	7240.5	7240.5	7240.5	7240.5	7240.5
		1991-1996 JUN	4266.2	4266.2	4266.2	3047.3	3047.3	3047.3	2133.1	2133.1	2133.1	243.8	3839.6	3839.6	3839.6	5485.2	5485.2	5485.2	5911.8	5911.8	5911.8	1828.4	1828.4	6094.6	6094.6	6094.6	6094.6	6094.6	6094.6
		1991-1996 JUL	6781.2	6781.2	6781.2	4843.7	4843.7	4843.7	3390.6	3390.6	3390.6	387.5	6103.0	6103.0	6103.0	8718.6	8718.6	8718.6	9396.7	9396.7	9396.7	2906.2	2906.2	9687.4	9687.4	9687.4	9687.4	9687.4	9687.4
		1991-1996 AUG	4296.6	4296.6	4296.6	3069.0	3069.0	3069.0	2148.3	2148.3	2148.3	245.5	3866.9	3866.9	3866.9	5524.2	5524.2	5524.2	5953.9	5953.9	5953.9	1841.4	1841.4	6138.0	6138.0	6138.0	6138.0	6138.0	6138.0
		1991-1996 SEP	2952.7	2952.7	2952.7	2109.1	2109.1	2109.1	1476.4	1476.4	1476.4	168.7	2657.5	2657.5	2657.5	3796.4	3796.4	3796.4	4091.7	4091.7	4091.7	1265.5	1265.5	4218.2	4218.2	4218.2	4218.2	4218.2	4218.2
		1991-1996 OCT	5715.2	5715.2	5715.2	4082.3	4082.3	4082.3	2857.6	2857.6	2857.6	326.6	5143.7	5143.7	5143.7	7348.1	7348.1	7348.1	7919.6	7919.6	7919.6	2449.4	2449.4	8164.5	8164.5	8164.5	8164.5	8164.5	8164.5
		1991-1996 NOV	3244.6	3244.6	3244.6	2317.6	2317.6	2317.6	1622.3	1622.3	1622.3	185.4	2920.2	2920.2	2920.2	5616.2	5616.2	5616.2	6053.0	6053.0	6053.0	1872.0	1872.0	6240.4	6240.4	6240.4	6240.4	6240.4	6240.4
		1991-1996 DEC	1001.3	1001.3	1001.3	715.2	715.2	715.2	500.6	500.6	500.6	57.2	901.1	901.1	901.1	1282.0	1282.0	1282.0	1381.7	1381.7	1381.7	427.3	427.3	1424.4	1424.4	1424.4	1424.4	1424.4	1424.4
		ANNUAL	44096.3	44096.3	44096.3	31497.3	31497.3	31497.3	22048.1	22048.1	22048.1	2519.8	39686.6	39686.6	39686.6	58129.8	58129.8	58129.8	62651.0	62651.0	62651.0	19376.8	19376.8	64588.0	64588.0	64588.0	64588.0	64588.0	64588.0
		Total Moisture Supply = SUPY (Impervious)																											
AVERAGES:																													
	[m^3]	**1991-1996 JAN**	339.4	339.4	339.4	490.3	490.3	490.3	641.1	641.1	641.1	716.2	414.7	414.7	414.7	188.5	188.5	188.5	113.1	113.1	113.1	2638.8	2638.8	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 FEB	99.1	99.1	99.1	143.1	143.1	143.1	187.1	187.1	187.1	209.2	121.1	121.1	121.1	55.0	55.0	55.0	33.0	33.0	33.0	770.6	770.6	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 MAR	249.8	249.8	249.8	360.8	360.8	360.8	471.8	471.8	471.8	527.3	305.3	305.3	305.3	138.8	138.8	138.8	83.3	83.3	83.3	1942.7	1942.7	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 APR	681.1	681.1	681.1	983.8	983.8	983.8	1286.5	1286.5	1286.5	1437.8	832.4	832.4	832.4	378.4	378.4	378.4	227.0	227.0	227.0	5297.2	5297.2	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 MAY	651.6	651.6	651.6	941.3	941.3	941.3	1230.9	1230.9	1230.9	1375.7	796.5	796.5	796.5	362.0	362.0	362.0	217.2	217.2	217.2	5068.3	5068.3	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 JUN	548.5	548.5	548.5	792.3	792.3	792.3	1036.1	1036.1	1036.1	1158.0	670.4	670.4	670.4	304.7	304.7	304.7	182.8	182.8	182.8	4266.2	4266.2	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 JUL	871.9	871.9	871.9	1259.4	1259.4	1259.4	1646.9	1646.9	1646.9	1840.6	1065.6	1065.6	1065.6	484.4	484.4	484.4	290.6	290.6	290.6	6781.2	6781.2	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 AUG	552.4	552.4	552.4	797.9	797.9	797.9	1043.5	1043.5	1043.5	1166.2	675.2	675.2	675.2	306.9	306.9	306.9	184.1	184.1	184.1	4296.6	4296.6	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 SEP	379.6	379.6	379.6	548.4	548.4	548.4	717.1	717.1	717.1	801.5	464.0	464.0	464.0	210.9	210.9	210.9	126.5	126.5	126.5	2952.7	2952.7	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 OCT	734.8	734.8	734.8	1061.4	1061.4	1061.4	1388.0	1388.0	1388.0	1551.3	898.1	898.1	898.1	408.2	408.2	408.2	244.9	244.9	244.9	5715.2	5715.2	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 NOV	561.6	561.6	561.6	811.2	811.2	811.2	1060.8	1060.8	1060.8	1185.7	686.4	686.4	686.4	312.0	312.0	312.0	187.2	187.2	187.2	4368.2	4368.2	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 DEC	128.2	128.2	128.2	185.2	185.2	185.2	242.2	242.2	242.2	270.6	156.7	156.7	156.7	71.2	71.2	71.2	42.7	42.7	42.7	997.1	997.1	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	5798.0	5798.0	5798.0	8374.9	8374.9	8374.9	10951.8	10951.8	10951.8	12240.0	7086.3	7086.3	7086.3	3221.1	3221.1	3221.1	1932.6	1932.6	1932.6	45094.7	45094.7	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**Runoff = SURO+IFWO (pervious areas)**																											
	[m^3]	**1991-1996 JAN**	18.1	103.5	400.2	18.8	86.3	317.0	21.5	78.1	262.2	6.4	14.1	84.7	361.5	16.7	100.2	476.1	6.0	60.7	393.0	365.8	734.0	34.7	157.2	655.7	34.7	157.3	656.7
		1991-1996 FEB	4.5	16.8	74.3	4.3	14.1	62.1	4.2	13.5	55.1	0.9	3.6	14.5	75.7	3.3	15.2	106.4	0.6	7.1	61.7	98.4	209.8	7.5	27.8	168.4	7.5	27.8	167.9
		1991-1996 MAR	3.2	15.8	99.4	2.7	14.8	83.1	2.6	16.0	74.5	0.9	2.7	12.9	95.2	3.8	17.8	130.7	2.9	10.2	105.5	116.2	356.5	5.7	32.3	184.6	5.7	32.3	185.2
		1991-1996 APR	16.5	76.8	432.7	14.4	70.2	352.8	13.6	73.1	301.9	4.2	14.0	62.9	406.6	19.3	89.3	576.5	8.5	48.8	483.4	432.0	1066.5	33.3	159.8	740.0	33.3	159.8	741.1
		1991-1996 MAY	33.7	144.8	641.4	29.8	127.7	509.0	30.0	126.4	417.6	8.6	27.8	117.4	577.5	39.0	165.9	803.3	12.7	97.2	749.3	650.8	1226.2	70.8	267.9	966.6	70.9	268.2	974.9
		1991-1996 JUN	30.6	167.6	548.3	29.0	147.8	432.1	31.6	141.5	353.1	10.0	24.8	134.6	499.9	35.3	189.2	696.9	15.5	130.6	651.5	629.4	1038.4	56.9	262.9	827.4	57.0	263.6	836.4
		1991-1996 JUL	18.4	164.0	614.9	18.0	145.4	503.1	20.8	140.1	438.0	9.8	14.9	131.1	593.3	21.3	183.8	816.1	10.1	92.5	564.4	842.0	1593.9	36.3	280.1	1075.0	36.3	281.5	1087.7
		1991-1996 AUG	12.8	113.6	433.1	13.3	104.5	353.3	18.3	106.6	303.9	7.0	10.0	87.2	425.4	14.3	121.1	582.2	5.6	56.5	411.0	656.1	993.8	26.5	187.0	776.3	26.5	187.8	790.6
		1991-1996 SEP	13.6	72.9	190.3	14.1	61.7	152.7	16.4	56.0	131.5	3.9	10.8	63.2	186.3	15.4	91.2	270.5	5.9	52.0	197.2	274.1	531.1	28.2	132.7	381.2	28.2	132.4	376.7
		1991-1996 OCT	8.0	92.7	417.6	8.4	94.8	347.1	11.2	106.4	304.1	5.2	6.4	70.4	400.9	9.1	99.2	560.2	2.3	12.0	135.6	693.1	1207.7	24.5	267.5	899.7	24.5	268.5	909.3
		1991-1996 NOV	6.8	46.4	234.9	6.5	42.3	189.3	6.8	43.2	161.3	2.6	5.3	37.9	211.0	12.5	76.2	416.6	4.0	36.7	297.5	477.8	970.3	27.1	135.5	615.3	27.1	135.5	614.5
		1991-1996 DEC	2.4	13.1	61.9	2.4	11.7	51.4	2.9	11.8	45.9	0.8	1.9	11.7	56.3	3.1	19.6	88.8	1.1	9.8	63.6	103.0	219.4	7.0	34.1	135.3	7.0	34.1	134.7
		ANNUAL	168.5	1027.9	4148.9	161.8	921.1	3353.1	179.9	912.2	2849.8	60.2	136.3	828.4	3889.5	192.9	1168.7	5524.1	75.3	614.1	4113.6	5329.2	10160.6	358.5	1944.7	7425.5	358.6	1948.7	7475.5
AVERAGES:		**Runoff = SURO (impervious areas)**																											
	[m^3]	**1991-1996 JAN**	328.0	328.3	329.8	473.7	473.9	475.3	617.9	618.1	619.6	705.9	404.8	404.9	405.7	182.8	182.9	183.2	106.6	106.8	108.2	2484.4	2484.4	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 FEB	93.7	93.7	93.8	135.3	135.3	135.4	176.2	176.2	176.3	204.3	116.4	116.4	116.5	52.4	52.4	52.4	30.0	30.0	30.2	699.1	699.1	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 MAR	216.8	216.9	218.1	312.9	312.9	314.1	405.1	405.2	406.7	495.2	275.6	275.7	276.3	122.1	122.2	122.7	65.7	66.0	68.5	1528.1	1528.1	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 APR	597.8	598.2	601.6	862.8	863.1	866.6	1118.0	1118.5	1122.8	1357.1	757.8	757.9	759.1	336.4	336.6	337.7	182.4	183.6	187.1	4242.7	4242.7	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 MAY	552.9	554.0	566.3	797.8	798.9	810.5	1031.6	1033.1	1045.6	1277.2	706.4	706.7	712.8	311.7	311.9	318.3	165.6	166.4	183.8	3842.7	3842.7	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 JUN	453.2	455.6	472.0	653.9	656.5	671.3	844.2	847.9	862.6	1061.6	582.9	583.4	593.8	256.0	256.5	268.2	133.5	135.0	158.5	3102.3	3102.3	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 JUL	753.2	755.1	769.8	1087.2	1089.1	1103.0	1407.3	1410.1	1426.1	1724.0	958.3	958.8	966.9	424.1	424.5	433.4	227.5	228.4	247.6	5295.4	5295.4	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 AUG	454.2	456.5	472.1	655.4	657.9	672.4	845.9	849.4	864.8	1065.7	584.2	584.8	596.1	256.3	256.8	269.5	133.3	134.4	157.7	3101.7	3101.7	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 SEP	308.7	309.0	312.1	445.5	445.7	448.8	574.5	574.9	579.1	728.8	398.4	398.4	399.6	174.5	174.6	175.6	90.1	90.3	92.6	2095.3	2095.3	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 OCT	641.8	642.8	654.1	926.4	927.6	938.2	1200.1	1202.3	1213.4	1460.9	814.6	814.8	822.7	361.2	361.5	371.6	194.9	195.5	198.0	4542.4	4542.4	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 NOV	499.6	499.9	501.9	721.1	721.2	723.2	935.1	935.3	937.7	1126.3	631.2	631.4	632.0	280.9	281.1	281.8	153.5	154.6	156.7	3575.3	3575.3	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 DEC	112.3	112.3	112.6	162.0	162.1	162.3	209.9	210.0	210.1	255.2	142.4	142.5	142.6	63.2	63.3	63.4	34.2	34.6	34.9	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	5018.0	5027.7	5108.5	7242.1	7252.0	7326.6	9375.9	9390.0	9471.5	11475.6	6382.1	6384.9	6430.6	2825.6	2828.5	2879.9	1517.5	1526.1	1632.6	35304.8	35304.8	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**(IMPEV)**																											
	[m^3]	**1991-1996 JAN**	8.2	8.1	7.0	12.0	11.8	10.8	16.8	16.6	15.6	7.5	7.1	7.1	6.5	4.1	4.0	3.8	4.7	4.5	3.6	111.7	111.7	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 FEB	8.5	8.5	8.4	12.4	12.4	12.3	17.4	17.4	17.2	7.8	7.4	7.4	7.3	4.2	4.2	4.1	4.8	4.8	4.5	113.6	113.6	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 MAR	33.4	33.3	32.1	48.6	48.5	47.3	67.6	67.5	66.0	32.4	30.0	29.9	29.3	16.9	16.8	16.2	17.8	17.5	15.0	420.5	420.5	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 APR	82.7	82.3	79.0	120.1	119.8	116.4	167.3	166.9	162.5	80.2	74.2	74.0	72.8	41.7	41.5	40.4	44.3	43.1	39.7	1047.2	1047.2	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 MAY	101.4	100.2	87.6	147.3	146.1	134.3	204.6	203.0	190.1	101.1	92.5	92.2	85.9	51.7	51.4	44.9	52.9	52.2	34.3	1257.9	1257.9	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 JUN	99.6	97.1	80.0	144.7	142.0	126.5	200.6	196.8	181.4	100.9	91.6	90.9	80.1	50.9	50.5	38.2	51.6	50.0	25.4	1217.0	1217.0	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 JUL	117.2	115.3	100.8	170.1	168.1	154.4	236.6	233.9	218.0	115.1	106.0	105.5	97.5	59.6	59.1	50.4	62.4	61.5	42.5	1467.6	1467.6	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 AUG	97.6	95.4	79.8	141.6	139.2	124.8	196.3	192.9	177.5	99.9	90.4	89.8	78.6	50.3	49.8	37.2	50.5	49.4	26.3	1187.4	1187.4	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 SEP	72.5	72.2	69.1	105.2	105.0	101.8	145.8	145.5	141.1	74.3	67.1	67.1	65.9	37.3	37.2	36.1	37.3	37.1	34.7	876.9	876.9	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 OCT	87.8	86.8	76.2	127.5	126.3	116.3	177.4	175.3	164.8	85.3	78.9	78.6	71.2	44.4	44.2	34.6	47.2	46.7	44.3	1107.4	1107.4	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 NOV	60.9	60.6	58.6	88.4	88.3	86.3	123.3	123.1	120.8	58.3	54.2	54.0	53.4	30.6	30.4	29.6	33.0	32.0	30.0	778.1	778.1	0.0	0.0	0.0	0.0	0.0	0.0
		1991-1996 DEC	16.2	16.1	15.9	23.6	23.5	23.3	32.8	32.7	32.6	15.7	14.5	14.4	14.4	8.2	8.0	8.0	8.7	8.3	8.0	205.5	205.5	0.0	0.0	0.0	0.0	0.0	0.0
		ANNUAL	780.0	770.3	689.6	1132.9	1123.0	1048.3	1576.0	1561.9	1480.4	764.5	704.3	701.4	655.8	395.5	392.6	341.1	415.1	406.5	300.0	9790.6	9790.6	0.0	0.0	0.0	0.0	0.0	0.0
AVERAGES:		**(TAET)**																											
	[m^3]	**1991-1996 JAN**	125.5	126.4	129.0	86.2	86.9	88.8	56.5	57.0	58.2	7.3	114.4	115.1	117.6	163.7	164.7	168.3	188.3	188.3	188.4	18.5	18.3	176.2	178.6	184.6	176.2	178.6	184.7
		1991-1996 FEB	154.8	159.0	160.3	106.5	109.6	110.1	69.9	71.9	72.0	9.2	141.0	144.8	146.4	201.4	206.6	208.7	235.4	235.8	236.1	22.5	22.6	215.4	224.8	227.3	215.4	224.8	227.3
		1991-1996 MAR	504.3	516.7	523.8	348.8	358.0	361.6	231.0	237.6	238.6	29.8	458.5	469.5	476.0	654.9	670.7	680.0	741.9	742.9	743.9	81.1	80.8	714.4	745.0	754.2	714.4	745.0	754.2
		1991-1996 APR	1659.6	1705.8	1719.4	1148.2	1179.0	1186.1	760.3	779.1	781.9	98.5	1508.4	1550.9	1556.3	2154.1	2215.0	2223.3	2475.6	2482.9	2485.3	264.9	261.8	2331.4	2431.4	2436.1	2331.4	2431.4	2436.0
		1991-1996 MAY	3257.6	3398.7	3386.9	2267.0	2360.0	2344.4	1516.2	1569.7	1554.0	195.8	2955.3	3085.2	3027.3	4220.7	4407.1	4325.2	5148.4	5186.3	5179.8	571.7	546.7	4460.4	4747.0	4581.1	4460.4	4747.0	4580.8
		1991-1996 JUN	3921.8	4009.2	3953.9	2737.3	2790.0	2745.6	1841.6	1864.6	1829.9	230.8	3554.9	3637.4	3536.8	5077.6	5196.3	5053.4	6698.4	6723.6	6662.1	736.2	669.3	5130.5	5298.1	5069.8	5130.5	5298.1	5069.3
		1991-1996 JUL	4623.7	4724.5	4703.7	3221.7	3286.4	3259.0	2157.6	2196.3	2163.9	272.1	4192.9	4287.7	4196.7	5989.6	6125.5	5996.5	7762.6	7796.2	7665.1	834.0	759.7	6112.5	6305.3	6134.5	6112.5	6305.2	6133.9
		1991-1996 AUG	4262.3	4426.7	4362.3	2986.0	3090.6	3033.6	2021.5	2075.6	2026.7	254.6	3859.3	4012.3	3882.1	5513.1	5732.2	5547.5	7334.1	7379.1	7199.4	837.9	744.8	5562.2	5880.0	5611.3	5562.2	5879.9	5610.6
		1991-1996 SEP	3033.7	3037.2	2939.6	2118.8	2114.1	2040.9	1425.1	1414.0	1359.6	174.9	2748.9	2755.6	2633.9	3927.0	3936.7	3763.8	5421.9	5399.6	5063.9	578.5	507.4	3842.1	3843.4	3628.3	3842.1	3843.3	3627.8
		1991-1996 OCT	2289.8	2326.0	2339.8	1590.1	1612.2	1620.5	1059.5	1071.7	1075.7	134.1	2078.8	2113.3	2114.1	2969.7	3019.0	3020.9	3765.9	3765.9	3674.4	395.5	378.2	3068.5	3143.0	3178.8	3068.5	3142.9	3178.3
		1991-1996 NOV	2710.1	2578.6	2286.7	1952.8	1860.7	1632.2	1385.3	1318.4	1133.9	146.4	2432.7	2314.6	2049.3	1246.4	1259.1	1287.3	1423.6	1424.5	1423.8	152.3	150.4	1349.8	1376.6	1427.6	1349.8	1376.6	1427.6
		1991-1996 DEC	293.7	300.3	315.0	203.2	208.4	219.1	134.8	139.0	145.8	17.3	267.0	272.7	286.6	381.5	389.7	409.4	476.9	477.3	477.3	51.7	50.5	393.8	411.9	447.9	393.8	411.9	447.8
		ANNUAL	26829.7	27301.3	26813.0	18745.0	19033.6	18620.3	12626.3	12761.3	12407.7	1570.9	24312.2	24758.9	24023.0	32499.5	33322.7	32684.4	41672.9	41802.4	40999.4	4445.6	4103.2	33357.0	34584.9	33681.3	33357.1	34584.7	33678.1
AVERAGES:		**(IFWO)**																											
	[m^3]	**1991-1996 JAN**	15.2	87.8	289.8	16.0	73.4	228.9	18.7	66.3	188.1	4.5	12.0	76.6	288.7	13.4	92.7	445.1	4.2	54.7	353.8	295.7	349.4	30.1	149.0	633.7	30.0	148.9	629.8
		1991-1996 FEB	3.7	16.0	70.6	3.7	13.6	58.6	3.9	12.9	51.6	0.8	3.0	13.9	73.1	2.6	14.3	103.4	0.4	6.3	59.2	90.6	129.8	6.7	26.6	164.5	6.7	26.6	163.8
		1991-1996 MAR	2.1	13.0	81.5	1.8	12.9	67.1	1.7	14.5	58.4	0.7	1.8	10.7	83.3	2.5	14.9	119.7	1.7	7.8	88.6	100.1	157.7	4.0	29.4	176.0	4.0	29.4	175.4
		1991-1996 APR	12.5	67.8	377.6	11.2	63.1	301.4	11.2	66.1	247.8	3.5	10.4	56.2	377.6	14.3	80.0	549.4	5.5	39.6	453.6	340.3	472.0	27.0	149.0	713.1	27.0	148.9	710.0
		1991-1996 MAY	29.9	129.4	475.6	26.7	113.3	367.7	27.1	110.3	288.7	6.6	25.0	110.5	475.8	35.3	158.8	703.9	8.7	90.1	625.2	444.9	444.2	66.3	260.4	888.7	66.3	260.1	878.8
		1991-1996 JUN	27.9	143.1	336.4	26.9	122.9	259.1	29.2	112.0	204.0	7.1	22.6	125.3	346.4	32.3	181.3	519.9	13.6	122.7	459.0	410.0	354.1	54.2	256.4	665.1	54.2	255.9	653.4
		1991-1996 JUL	15.9	139.2	387.6	15.8	120.8	305.2	18.9	112.4	246.1	6.9	12.8	120.6	436.8	18.3	174.2	657.7	7.6	85.8	424.4	433.9	348.7	31.8	269.9	923.7	31.8	269.0	905.8
		1991-1996 AUG	11.2	92.0	240.8	12.0	82.4	190.8	16.5	80.0	155.1	4.5	9.0	79.0	265.9	12.8	114.2	398.2	4.2	51.1	238.5	330.9	284.2	25.0	180.6	594.5	25.0	180.2	582.6
		1991-1996 SEP	12.6	69.5	160.5	13.2	58.8	124.3	15.6	52.8	99.0	3.4	9.9	61.4	171.4	14.2	88.9	258.2	4.8	50.4	186.9	178.3	165.8	26.6	130.2	368.4	26.6	129.8	360.3
		1991-1996 OCT	6.0	77.4	235.2	6.5	77.4	187.8	9.2	81.6	157.5	3.5	4.7	63.7	237.7	6.7	91.9	351.0	1.1	7.9	118.3	404.3	427.9	20.6	254.3	553.7	20.6	252.8	542.4
		1991-1996 NOV	4.8	41.3	200.8	4.8	38.4	159.9	5.7	39.2	133.3	2.1	3.7	34.3	192.9	7.8	68.3	394.2	2.3	28.9	276.4	405.8	454.9	19.2	127.4	595.4	19.2	127.3	591.0
		1991-1996 DEC	1.5	11.2	57.2	1.6	10.0	47.7	2.2	10.2	42.8	0.6	1.2	9.4	53.3	2.0	16.3	85.1	0.5	7.0	59.4	98.8	164.7	5.7	30.8	131.3	5.7	30.8	130.6
		ANNUAL	143.2	887.6	2913.9	140.3	786.8	2299.1	159.8	758.1	1873.7	44.3	116.1	761.5	3002.9	162.0	1095.9	4585.8	54.5	552.1	3343.2	3544.2	3784.1	317.0	1863.9	6408.0	317.0	1859.7	6323.6
AVERAGES:		**(AGWO)**																											
	[m^3]	**1991-1996 JAN**	1210.9	1143.4	976.5	880.9	829.8	702.3	636.2	593.2	494.2	64.7	1083.6	1024.9	876.8	1550.3	1467.4	1261.1	1337.1	1282.5	1114.4	519.6	289.4	1827.8	1711.8	1478.3	1827.8	1711.6	1475.4
		1991-1996 FEB	1068.4	1019.0	880.6	779.4	739.0	633.0	564.7	528.6	444.9	57.6	955.5	913.7	790.6	1368.0	1308.0	1137.3	1177.4	1142.3	1009.4	459.1	253.7	1621.0	1528.0	1330.2	1621.0	1527.8	1327.7
		1991-1996 MAR	1093.1	1045.1	915.2	801.8	761.7	661.4	585.6	549.6	468.9	59.0	975.8	935.5	820.4	1395.8	1338.9	1179.4	1206.4	1175.3	1053.8	520.6	291.3	1655.5	1563.8	1376.3	1655.5	1563.7	1374.0
		1991-1996 APR	1093.5	1047.3	929.6	800.8	763.3	670.7	583.2	550.6	474.2	59.2	976.4	937.5	833.5	1396.0	1341.2	1197.4	1229.6	1202.9	1102.2	519.6	291.5	1650.6	1561.5	1386.1	1650.5	1561.3	1384.1
		1991-1996 MAY	1286.2	1231.6	1096.4	943.4	900.2	791.5	688.2	652.2	560.5	69.6	1147.9	1101.7	982.4	1639.9	1575.7	1410.8	1473.5	1451.4	1347.0	634.2	353.7	1932.2	1826.3	1616.5	1932.2	1826.1	1614.3
		1991-1996 JUN	1285.7	1215.0	1059.0	943.9	888.5	765.4	689.5	644.1	543.3	68.6	1147.1	1086.6	950.9	1638.6	1554.0	1366.1	1492.5	1458.2	1327.8	638.5	353.1	1921.2	1789.2	1555.4	1921.2	1789.0	1553.0
		1991-1996 JUL	1384.4	1287.1	1104.4	1012.6	937.8	796.7	735.3	675.8	563.5	72.7	1236.6	1152.8	996.9	1766.5	1648.5	1433.8	1618.1	1556.8	1388.8	644.8	350.8	2062.3	1889.2	1627.6	2062.3	1889.0	1624.3
		1991-1996 AUG	1432.5	1313.1	1119.0	1049.4	959.6	810.6	763.4	695.3	576.8	74.1	1279.0	1175.0	1010.5	1827.1	1680.3	1454.4	1667.3	1579.3	1383.6	698.0	378.6	2125.9	1921.1	1656.7	2125.9	1920.8	1652.7
		1991-1996 SEP	1321.1	1209.0	1020.2	969.1	884.1	739.9	707.8	641.3	527.4	68.1	1179.4	1081.7	920.8	1684.8	1547.0	1326.0	1535.4	1454.1	1247.2	651.4	355.0	1958.2	1766.8	1515.0	1958.2	1766.5	1510.9
		1991-1996 OCT	1409.2	1287.6	1061.2	1030.7	939.0	768.3	748.8	677.1	545.9	72.6	1258.9	1152.9	954.7	1798.4	1648.6	1374.6	1568.1	1469.0	1224.5	642.2	357.2	2107.7	1903.8	1607.8	2107.7	1903.4	1603.4
		1991-1996 NOV	1208.4	1116.1	933.4	884.4	813.8	675.4	643.4	586.7	480.2	63.0	1078.8	999.2	838.8	1869.5	1726.8	1442.7	1587.5	1491.6	1250.3	660.1	371.7	2208.8	2012.9	1704.6	2208.8	2012.6	1700.6
		1991-1996 DEC	1448.7	1348.6	1131.6	1060.4	984.9	819.4	771.5	711.2	583.4	76.1	1293.5	1206.5	1013.4	1846.6	1724.4	1455.5	1565.2	1482.3	1262.8	672.0	379.4	2185.5	2016.8	1720.5	2185.5	2016.5	1716.9
		ANNUAL	15244.0	14264.7	12228.6	11162.2	10407.1	8839.1	8126.4	7514.1	6270.2	805.4	13612.5	12767.9	10989.8	19781.5	18560.7	16039.1	17458.1	16745.6	14712.0	7295.6	4046.3	23256.6	21491.1	18574.8	23256.6	21488.3	18537.1
AVERAGES:		**(IGWI)**																											
	[m^3]	**1991-1996 JAN**	217.6	222.4	196.6	160.4	160.3	140.3	119.2	113.7	97.4	12.6	194.4	200.0	177.0	283.1	289.2	257.6	248.8	261.5	240.4	89.3	45.7	340.4	337.2	293.8	340.4	337.1	293.6
		1991-1996 FEB	58.2	59.7	63.6	43.5	43.4	46.1	32.0	31.7	32.7	3.4	51.4	53.5	56.5	72.0	75.5	80.2	59.2	63.5	69.9	32.0	17.8	91.2	90.5	93.8	91.2	90.5	93.8
		1991-1996 MAR	114.9	111.6	110.8	83.9	81.4	80.0	60.5	59.2	56.7	6.3	102.6	99.9	99.4	146.2	142.9	142.7	140.1	139.5	144.0	59.9	38.7	170.4	164.1	160.8	170.4	164.1	160.7
		1991-1996 APR	338.3	328.4	307.4	247.1	240.4	220.5	178.8	174.1	154.8	18.6	302.1	293.4	275.3	430.7	419.1	394.0	409.5	412.6	413.4	167.4	92.9	504.0	482.9	438.6	504.0	482.9	438.4
		1991-1996 MAY	270.7	245.8	193.7	198.1	179.1	138.9	143.9	129.0	97.7	13.9	241.7	220.4	174.4	344.7	315.0	251.1	331.0	321.2	270.9	117.2	61.2	396.6	352.3	275.9	396.6	352.3	275.3
		1991-1996 JUN	204.2	179.0	137.0	149.4	129.7	99.3	108.3	92.6	70.8	10.1	182.6	160.8	127.5	260.8	229.9	184.3	256.5	239.1	194.8	92.4	47.9	297.8	253.8	202.2	297.8	253.8	201.2
		1991-1996 JUL	300.4	257.2	211.2	218.0	186.9	153.3	156.1	134.3	109.0	14.5	268.8	230.7	194.2	384.0	329.9	280.7	349.2	302.4	245.6	135.3	66.9	441.4	375.1	319.3	441.4	375.0	318.0
		1991-1996 AUG	160.7	138.6	110.7	117.7	102.3	81.2	86.5	75.4	58.6	7.8	143.8	123.8	98.9	205.5	177.1	143.6	182.5	164.9	120.4	77.0	46.0	232.3	197.0	170.6	232.3	197.0	169.4
		1991-1996 SEP	132.7	117.8	89.9	98.6	86.2	66.0	73.2	62.6	47.8	6.6	118.1	105.2	80.4	168.7	150.3	115.5	140.3	129.1	82.0	68.1	40.8	200.3	174.8	140.4	200.3	174.9	140.2
		1991-1996 OCT	323.4	297.4	225.3	237.4	217.9	164.9	173.3	157.4	119.4	16.8	288.3	265.6	197.6	411.8	379.6	284.0	277.1	243.7	175.6	146.0	88.9	505.3	465.5	376.7	505.3	465.4	375.6
		1991-1996 NOV	214.2	208.3	177.5	156.8	152.3	128.0	113.7	109.8	91.3	11.8	191.0	186.2	158.1	383.8	377.1	332.5	311.9	309.6	291.0	139.7	77.4	463.2	451.1	391.9	463.2	451.1	391.8
		1991-1996 DEC	77.3	80.7	77.1	56.5	58.7	55.7	41.5	42.2	39.6	4.6	69.1	72.1	68.4	98.3	103.3	96.7	89.1	93.5	89.5	41.3	24.3	115.8	121.4	112.7	115.8	121.4	112.7
		ANNUAL	2412.8	2247.3	1901.2	1768.1	1639.6	1375.4	1288.2	1183.7	977.5	126.9	2153.9	2011.5	1707.8	3189.5	2988.9	2562.8	2795.3	2680.5	2337.6	1173.5	652.4	3758.6	3465.6	2976.8	3758.6	3465.2	2970.9

AVERAGES:

Remaining impervious URF's

Year	Month		Code	SIDEWA	SLOPED	DRIVEW	FLAT R	INDUST
		Surface	DSN	1013	1014	1015	1114	1115
		Sub-surfa	DSN	1513	1514	1515	1614	1615
			Year	(mm)	(mm)	(mm)	(mm)	(mm)

Total Moisture Supply = SUPY (Impervious)

AVERAGES:						
1991-1996	**JAN**	37.7	37.7	37.7	37.7	37.7
1991-1996	FEB	11.0	11.0	11.0	11.0	11.0
1991-1996	MAR	27.8	27.8	27.8	27.8	27.8
1991-1996	APR	75.7	75.7	75.7	75.7	75.7
1991-1996	MAY	72.4	72.4	72.4	72.4	72.4
1991-1996	JUN	60.9	60.9	60.9	60.9	60.9
1991-1996	JUL	96.9	96.9	96.9	96.9	96.9
1991-1996	AUG	61.4	61.4	61.4	61.4	61.4
1991-1996	SEP	42.2	42.2	42.2	42.2	42.2
1991-1996	OCT	81.6	81.6	81.6	81.6	81.6
1991-1996	NOV	62.4	62.4	62.4	62.4	62.4
1991-1996	DEC	14.2	14.2	14.2	14.2	14.2
	ANNUAL	**644.2**	**644.2**	**644.2**	**644.2**	**644.2**

SURO (Impervious)

AVERAGES:						
1991-1996	**JAN**	35.5	35.9	35.5	35.2	35.3
1991-1996	FEB	10.0	10.1	10.0	10.0	10.0
1991-1996	MAR	21.9	23.4	21.9	21.0	21.4
1991-1996	APR	60.6	64.9	60.6	57.6	59.0
1991-1996	MAY	54.9	60.1	54.9	50.8	52.7
1991-1996	JUN	44.3	49.0	44.3	40.9	42.5
1991-1996	JUL	75.7	82.3	75.7	70.5	73.0
1991-1996	AUG	44.3	50.1	44.3	39.8	41.9
1991-1996	SEP	29.9	33.4	29.9	27.2	28.5
1991-1996	OCT	64.9	69.5	64.9	61.7	63.2
1991-1996	NOV	51.1	53.7	51.1	49.2	50.2
1991-1996	DEC	11.4	12.1	11.4	11.0	11.1
	ANNUAL	504.4	544.5	504.4	474.8	488.7

IMPEV

AVERAGES:						
1991-1996	**JAN**	1.6	1.6	1.6	1.6	1.6
1991-1996	FEB	1.6	1.2	1.6	2.0	1.8
1991-1996	MAR	6.0	4.4	6.0	6.8	6.4
1991-1996	APR	15.0	10.8	15.0	17.9	16.5
1991-1996	MAY	18.0	12.4	18.0	22.3	20.3
1991-1996	JUN	17.4	12.2	17.4	21.3	19.5
1991-1996	JUL	21.0	14.5	21.0	25.8	23.5
1991-1996	AUG	17.0	11.3	17.0	21.4	19.4
1991-1996	SEP	12.5	8.8	12.5	15.3	14.0
1991-1996	OCT	15.8	11.6	15.8	18.9	17.4
1991-1996	NOV	11.1	8.6	11.1	12.5	11.8
1991-1996	DEC	2.9	2.3	2.9	3.6	3.3
	ANNUAL	**139.9**	**99.7**	**139.9**	**169.4**	**155.5**

Remaining impervious URF volumes (m^3) based on land use composition

			Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
		Sidewalk Composition (%)		0.01	0.01	0.01	0.03	0.03	0.03	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sloped Roof Composition (%)		0.13	0.13	0.13	0.24	0.24	0.24	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Driveway Composition (%)		0.07	0.07	0.07	0.10	0.10	0.10	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Flat Roof Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.11	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Ind Park Composition (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.15	0.15	0.15	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
URF ARE/	**100000**	**Sidewalk Composition (%)**		1000	1000	1000	3000	3000	3000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 ha	**m^2**	**Sloped Roof Composition (%)**		13000	13000	13000	24000	24000	24000	32000	32000	32000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Driveway Composition (%)		7000	7000	7000	10000	10000	10000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Flat Roof Composition (%)		0	0	0	0	0	0	0	0	0	17000	11000	11000	11000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Ind Park Composition (%)		0	0	0	0	0	0	0	0	0	60000	15000	15000	15000	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0
			Year	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)	(m^3)
		Total Moisture Supply = SUPY (Impervious)																												
		AVERAGES:																												
		1991-1996	**JAN**	791.82	791.82	791.82	1395.09	1395.09	1395.09	1809.84	1809.84	1809.84	2902.64	980.11	980.11	980.11	188.48	188.48	188.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	FEB	231.18	231.18	231.18	407.31	407.31	407.31	528.40	528.40	528.40	847.64	286.22	286.22	286.22	55.04	55.04	55.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAR	582.81	582.81	582.81	1026.86	1026.86	1026.86	1332.14	1332.14	1332.14	2136.94	721.57	721.57	721.57	138.76	138.76	138.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	APR	1589.15	1589.15	1589.15	2799.93	2799.93	2799.93	3632.34	3632.34	3632.34	5826.89	1967.52	1967.52	1967.52	378.37	378.37	378.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAY	1520.50	1520.50	1520.50	2678.98	2678.98	2678.98	3475.43	3475.43	3475.43	5575.17	1882.53	1882.53	1882.53	362.02	362.02	362.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUN	1279.87	1279.87	1279.87	2255.01	2255.01	2255.01	2925.42	2925.42	2925.42	4692.87	1584.60	1584.60	1584.60	304.73	304.73	304.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUL	2034.35	2034.35	2034.35	3584.33	3584.33	3584.33	4649.94	4649.94	4649.94	7459.27	2518.72	2518.72	2518.72	484.37	484.37	484.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	AUG	1288.98	1288.98	1288.98	2271.06	2271.06	2271.06	2946.24	2946.24	2946.24	4726.26	1595.88	1595.88	1595.88	306.90	306.90	306.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	SEP	885.82	885.82	885.82	1560.73	1560.73	1560.73	2024.74	2024.74	2024.74	3248.01	1096.73	1096.73	1096.73	210.91	210.91	210.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	OCT	1714.55	1714.55	1714.55	3020.88	3020.88	3020.88	3918.98	3918.98	3918.98	6286.69	2122.78	2122.78	2122.78	408.23	408.23	408.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	NOV	1310.42	1310.42	1310.42	2308.83	2308.83	2308.83	2995.24	2995.24	2995.24	4805.01	1622.47	1622.47	1622.47	312.01	312.01	312.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	DEC	299.13	299.13	299.13	527.03	527.03	527.03	683.72	683.72	683.72	1096.80	370.35	370.35	370.35	71.22	71.22	71.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			ANNUAL	13528.57	13528.57	13528.57	23836.05	23836.05	23836.05	30922.43	30922.43	30922.43	49604.20	16749.47	16749.47	16749.47	3221.05	3221.05	3221.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Total SURO = SURO(Impervious)																												
		AVERAGES:																												
		1991-1996	**JAN**	750.232	750.232	750.232	1322.233	1322.233	1322.233	1715.643	1715.643	1715.643	2716.825	916.495	916.495	916.495	176.601	176.601	176.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	FEB	211.652	211.652	211.652	373.073	373.073	373.073	484.115	484.115	484.115	768.986	259.658	259.658	259.658	49.934	49.934	49.934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	MAR	479.452	479.452	479.452	846.480	846.480	846.480	1099.503	1099.503	1099.503	1641.574	552.181	552.181	552.181	107.040	107.040	107.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	APR	1328.709	1328.709	1328.709	2345.791	2345.791	2345.791	3046.925	3046.925	3046.925	4519.835	1518.673	1518.673	1518.673	295.071	295.071	295.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	MAY	1220.443	1220.443	1220.443	2156.010	2156.010	2156.010	2801.492	2801.492	2801.492	4027.777	1350.077	1350.077	1350.077	263.633	263.633	263.633	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	JUN	991.050	991.050	991.050	1751.231	1751.231	1751.231	2275.891	2275.891	2275.891	3243.016	1086.530	1086.530	1086.530	212.373	212.373	212.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	JUL	1675.041	1675.041	1675.041	2958.539	2958.539	2958.539	3843.851	3843.851	3843.851	5580.032	1871.217	1871.217	1871.217	365.058	365.058	365.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	AUG	1005.931	1005.931	1005.931	1778.709	1778.709	1778.709	2312.531	2312.531	2312.531	3188.516	1065.623	1065.623	1065.623	209.359	209.359	209.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	SEP	673.820	673.820	673.820	1191.022	1191.022	1191.022	1548.123	1548.123	1548.123	2169.670	725.898	725.898	725.898	142.298	142.298	142.298	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	OCT	1423.208	1423.208	1423.208	2512.644	2512.644	2512.644	3263.664	3263.664	3263.664	4838.390	1625.759	1625.759	1625.759	315.857	315.857	315.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	NOV	1106.527	1106.527	1106.527	1952.470	1952.470	1952.470	2535.203	2535.203	2535.203	3846.431	1294.006	1294.006	1294.006	250.773	250.773	250.773	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		1991-1996	DEC	247.647	247.647	247.647	437.078	437.078	437.078	567.611	567.611	567.611	855.413	287.962	287.962	287.962	55.731	55.731	55.731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
			ANNUAL	11113.712	11113.712	11113.712	19625.279	19625.279	19625.279	25494.549	25494.549	25494.549	37396.463	12554.077	12554.077	12554.077	2443.726	2443.726	2443.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		Total IMPEV = IMPEV(Impervious)																												
		AVERAGES:																												
		1991-1996	**JAN**	32.94	32.94	32.94	57.99	57.99	57.99	75.20	75.20	75.20	122.82	41.47	41.47	41.47	7.98	7.98	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	FEB	28.30	28.30	28.30	49.37	49.37	49.37	63.65	63.65	63.65	140.66	48.37	48.37	48.37	8.95	8.95	8.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAR	105.43	105.43	105.43	184.01	184.01	184.01	237.33	237.33	237.33	501.09	170.89	170.89	170.89	32.18	32.18	32.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	APR	259.73	259.73	259.73	453.04	453.04	453.04	584.11	584.11	584.11	1295.11	444.81	444.81	444.81	82.53	82.53	82.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	MAY	305.44	305.44	305.44	532.09	532.09	532.09	685.49	685.49	685.49	1595.65	549.62	549.62	549.62	101.34	101.34	101.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUN	298.09	298.09	298.09	519.57	519.57	519.57	669.57	669.57	669.57	1531.47	526.95	526.95	526.95	97.38	97.38	97.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	JUL	356.03	356.03	356.03	620.19	620.19	620.19	798.96	798.96	798.96	1846.75	635.66	635.66	635.66	117.38	117.38	117.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	AUG	282.69	282.69	282.69	491.88	491.88	491.88	633.23	633.23	633.23	1524.93	525.54	525.54	525.54	96.79	96.79	96.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	SEP	214.94	214.94	214.94	374.65	374.65	374.65	482.83	482.83	482.83	1101.41	378.91	378.91	378.91	70.05	70.05	70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	OCT	277.14	277.14	277.14	483.66	483.66	483.66	623.79	623.79	623.79	1367.89	469.42	469.42	469.42	87.24	87.24	87.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	NOV	201.28	201.28	201.28	351.94	351.94	351.94	454.43	454.43	454.43	923.01	315.25	315.25	315.25	59.18	59.18	59.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		1991-1996	DEC	52.99	52.99	52.99	92.64	92.64	92.64	119.60	119.60	119.60	257.33	88.64	88.64	88.64	16.34	16.34	16.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			ANNUAL	2415.00	2415.00	2415.00	4211.01	4211.01	4211.01	5428.19	5428.19	5428.19	12208.11	4195.52	4195.52	4195.52	777.35	777.35	777.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total URF volume (m3) for a single Ha

10Ha

Total Moisture Supply = SUPY (Pervious)+ SUPY (Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	**JAN**	3891.09	3891.09	3891.09	3856.69	3856.69	3856.69	3830.89	3830.89	3830.89	3776.59	3878.65	3878.65	3878.65	3920.22	3920.22	3920.22	3931.93	3931.93	3931.93	3820.15	3820.15	3935.97	3935.97	3935.97	3935.97	3935.97	3935.97
1991-1996	FEB	1100.74	1100.74	1100.74	1100.77	1100.77	1100.77	1100.79	1100.79	1100.79	1100.83	1100.75	1100.75	1100.75	1101.25	1101.25	1101.25	1101.29	1101.29	1101.29	1100.95	1100.95	1101.35	1101.35	1101.35	1101.35	1101.35	1101.35
1991-1996	MAR	2775.18	2775.18	2775.18	2775.21	2775.21	2775.21	2775.22	2775.22	2775.22	2775.25	2775.19	2775.19	2775.19	2775.25	2775.25	2775.25	2775.25	2775.25	2775.25	2775.23	2775.23	2775.32	2775.32	2775.32	2775.32	2775.32	2775.32
1991-1996	APR	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.37	7567.38	7567.37	7567.37	7567.37	7567.38	7567.38	7567.38	7567.38	7567.38	7567.38	7567.38	7567.38	7567.40	7567.40	7567.40	7567.40	7567.40	7567.40
1991-1996	MAY	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48	7240.48
1991-1996	JUN	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63	6094.63
1991-1996	JUL	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37	9687.37
1991-1996	AUG	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00	6138.00
1991-1996	SEP	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20	4218.20
1991-1996	OCT	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53	8164.53
1991-1996	NOV	5116.65	5116.65	5116.65	5437.62	5437.62	5437.62	5678.35	5678.35	5678.35	6176.06	5229.07	5229.07	5229.07	6240.18	6240.18	6240.18	6240.17	6240.17	6240.17	6240.19	6240.19	6240.35	6240.35	6240.35	6240.35	6240.35	6240.35
1991-1996	DEC	1428.59	1428.59	1428.59	1427.40	1427.40	1427.40	1426.51	1426.51	1426.51	1424.66	1428.18	1428.18	1428.18	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42	1424.42
	ANNUAL	63422.84	63422.84	63422.84	63708.27	63708.27	63708.27	63922.35	63922.35	63922.35	64363.98	63522.42	63522.42	63522.42	64571.92	64571.92	64571.92	64583.65	64583.65	64583.65	64471.54	64471.54	64588.02	64588.02	64588.02	64588.02	64588.02	64588.02
(m3) for a single Ha		**6342.284**	**6342.284**	**6342.284**	**6370.827**	**6370.827**	**6370.827**	**6392.235**	**6392.235**	**6392.235**	**6436.398**	**6352.242**	**6352.242**	**6352.242**	**6457.192**	**6457.192**	**6457.192**	**6458.365**	**6458.365**	**6458.365**	**6447.154**	**6447.154**	**6458.802**	**6458.802**	**6458.802**	**6458.802**	**6458.802**	**6458.802**

Total Runoff = SURO+IFWO (Pervious)+ SURO(Impervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	**JAN**	1096.337	1182.039	1480.184	1814.772	1882.442	2114.509	2355.071	2411.849	2597.472	3429.139	1335.415	1406.157	1683.619	376.1602	459.7146	835.8985	112.6285	167.5156	501.1389	2850.23	3218.436	34.7	157.1667	655.7333	34.71667	157.3167	656.7
1991-1996	FEB	309.8197	322.1246	379.7834	512.7034	522.5004	570.528	664.4872	673.8071	715.5534	974.1171	379.6835	390.6459	451.8595	105.6325	117.5457	208.7671	30.56173	37.11398	91.85351	797.4532	908.8812	7.45	27.76667	168.3667	7.45	27.76667	167.8833
1991-1996	MAR	699.4501	712.1493	796.9123	1162.064	1174.226	1243.676	1507.257	1520.725	1580.642	2137.61	830.5651	840.7472	923.6076	232.9379	247.0711	360.4648	68.64071	76.21218	173.9299	1644.243	1884.552	5.7	32.3	184.6333	5.7	32.28333	185.1667
1991-1996	APR	1943.068	2003.764	2362.966	3223.073	3279.107	3565.113	4178.536	4238.493	4471.7	5881.188	2290.414	2339.502	2684.372	650.7099	720.9609	1209.287	190.9456	232.4393	670.4728	4674.734	5309.187	33.3	159.7833	740.0333	33.3	159.8167	741.0833
1991-1996	MAY	1807.028	1919.233	2428.143	2983.579	3082.637	3475.436	3863.057	3961.007	4264.678	5313.624	2084.264	2174.101	2640.417	614.3124	741.4753	1385.28	178.3785	263.5127	933.1146	4493.574	5068.981	70.83333	267.85	966.6	70.88333	268.2167	974.9167
1991-1996	JUN	1474.87	1614.262	2011.35	2434.135	2555.535	2854.658	3151.73	3265.216	3491.554	4314.591	1694.167	1804.541	2180.208	503.6479	658.0667	1177.54	149.0052	265.6616	810.0067	3731.742	4140.751	56.91667	262.9333	827.3833	56.95	263.55	836.35
1991-1996	JUL	2446.716	2594.173	3059.744	4063.729	4193.024	4564.614	5271.945	5393.981	5707.966	7313.851	2844.374	2961.091	3431.47	810.3847	973.4234	1614.474	237.5778	320.8495	812.0006	6137.375	6889.33	36.28333	280.1333	1074.983	36.28333	281.4833	1087.717
1991-1996	AUG	1472.909	1575.955	1911.192	2447.45	2541.075	2804.439	3176.752	3268.516	3481.292	4261.232	1659.836	1737.594	2087.044	479.9164	587.2818	1061.05	138.8967	190.8362	568.6707	3757.771	4095.539	26.46667	186.95	776.3167	26.46667	187.8	790.5667
1991-1996	SEP	996.1406	1055.774	1176.147	1650.595	1698.49	1792.582	2139.022	2178.973	2258.784	2902.373	1135.063	1187.523	1311.802	332.1891	408.0601	588.3379	95.96274	142.3248	289.7521	2369.436	2626.473	28.16667	132.7	381.15	28.15	132.4	376.7
1991-1996	OCT	2072.986	2158.749	2494.924	3447.364	3535.108	3797.996	4474.904	4572.322	4781.243	6304.492	2446.71	2511.007	2849.304	686.1434	776.5597	1247.593	197.2254	207.5336	333.5921	5235.464	5750.153	24.53333	267.5	899.7167	24.53333	268.4833	909.2833
1991-1996	NOV	1612.893	1652.747	1843.271	2680.012	2715.993	2864.938	3477.098	3513.765	3634.201	4975.265	1930.57	1963.298	2137.074	544.0977	607.98	949.1376	157.5553	191.2445	454.2258	4053.078	4545.556	27.08333	135.5167	615.2667	27.08333	135.5	614.4833
1991-1996	DEC	362.3467	373.068	422.099	601.4712	610.8448	650.731	780.4544	789.4182	823.6603	1111.375	432.3128	442.1586	486.8132	122.0211	138.6261	207.8915	35.30099	44.42156	98.51922	898.452	1014.816	7.033333	34.06667	135.3	7.033333	34.08333	134.6667
	ANNUAL	16300.28	17169.35	20371.11	27029.13	27798.36	30305.02	35050.31	35796.68	37815.83	48932.23	19072.49	19767.45	22874.2	5462.266	6440.884	10847.8	1592.779	2140.201	5746.243	40633.99	45465.38	358.4667	1944.667	7425.483	358.55	1948.7	7475.517
(m3) for a single Ha		**1630.028**	**1716.935**	**2037.111**	**2702.913**	**2779.836**	**3030.502**	**3505.031**	**3579.668**	**3781.583**	**4893.223**	**1907.249**	**1976.745**	**2287.42**	**546.2266**	**644.0884**	**1084.78**	**159.2779**	**214.0201**	**574.6243**	**4063.399**	**4546.538**	**35.84667**	**194.4667**	**742.5483**	**35.855**	**194.87**	**747.5517**

Total Evapo = IMPEV(Impervious)+ TAET(Pervious) (m^3)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	**JAN**	166.70	167.39	168.94	156.18	156.72	157.65	148.44	148.85	149.00	137.59	162.95	163.66	165.58	175.71	176.74	180.04	193.02	192.85	191.91	130.19	129.99	176.15	178.55	184.62	176.18	178.58	184.65
1991-1996	FEB	191.68	195.87	197.02	168.29	171.36	171.72	150.98	152.89	152.87	157.64	196.78	200.52	202.06	214.55	219.73	221.78	240.19	240.55	240.62	136.17	136.25	215.43	224.83	227.27	215.43	224.83	227.27
1991-1996	MAR	643.17	655.40	661.33	581.35	590.52	592.88	535.90	542.44	541.94	563.34	659.36	670.25	676.21	703.92	719.59	728.39	759.61	760.43	758.88	501.61	501.31	714.37	744.95	754.20	714.37	744.95	754.17
1991-1996	APR	2002.03	2047.80	2058.11	1721.37	1751.83	1755.56	1511.69	1530.04	1528.50	1473.74	2027.36	2069.66	2073.96	2278.36	2339.00	2346.25	2519.91	2526.01	2524.93	1312.10	1308.97	2331.42	2431.42	2436.10	2331.42	2431.42	2435.98
1991-1996	MAY	3664.43	3804.37	3779.94	2946.36	3038.15	3010.77	2406.27	2458.15	2429.66	1892.58	3597.40	3726.96	3662.76	4373.75	4559.87	4471.44	5201.35	5238.52	5214.15	1829.63	1804.58	4460.38	4747.03	4581.05	4460.38	4747.00	4580.75
1991-1996	JUN	4319.49	4404.43	4332.01	3401.61	3451.57	3391.59	2711.83	2730.95	2680.92	1863.15	4173.43	4255.25	4143.88	5225.88	5344.12	5188.98	6749.95	6773.57	6687.50	1953.18	1886.26	5130.48	5298.12	5069.75	5130.48	5298.10	5069.28
1991-1996	JUL	5096.93	5195.83	5160.53	4011.96	4074.70	4033.64	3193.08	3229.13	3180.83	2233.98	4934.60	5028.85	4929.85	6166.51	6302.02	6164.30	7824.96	7857.68	7707.51	2301.51	2227.30	6112.45	6305.25	6134.48	6112.45	6305.18	6133.90
1991-1996	AUG	4642.63	4804.77	4724.76	3619.53	3721.70	3650.21	2851.09	2901.66	2837.44	1879.43	4475.26	4627.66	4486.27	5660.15	5878.77	5681.43	7384.56	7428.58	7225.71	2025.33	1932.28	5562.20	5879.98	5611.30	5562.20	5879.92	5610.58
1991-1996	SEP	3321.14	3324.33	3223.67	2598.70	2593.70	2517.32	2053.79	2042.32	1983.49	1350.63	3194.98	3201.54	3078.71	4034.27	4043.95	3870.04	5459.19	5436.65	5098.63	1455.38	1384.22	3842.08	3843.35	3628.27	3842.07	3843.33	3627.82
1991-1996	OCT	2654.80	2689.95	2693.10	2201.24	2222.15	2220.50	1860.72	1870.76	1864.27	1587.28	2627.09	2661.28	2654.70	3101.40	3150.43	3142.77	3813.13	3812.55	3718.71	1502.89	1485.63	3068.48	3142.95	3178.82	3068.48	3142.92	3178.32
1991-1996	NOV	2972.28	2840.45	2546.57	2393.20	2300.92	2070.46	1963.04	1895.92	1709.14	1127.72	2802.17	2683.91	2417.93	1336.17	1348.68	1376.12	1456.65	1456.53	1453.76	930.37	928.45	1349.77	1376.57	1427.63	1349.77	1376.57	1427.60
1991-1996	DEC	362.95	369.43	383.95	319.46	324.52	335.09	287.24	291.34	297.96	290.34	370.19	375.82	389.59	405.97	414.02	433.77	485.61	485.55	485.31	257.13	255.96	393.82	411.92	447.85	393.82	411.92	447.82
	ANNUAL	30024.72	30486.65	29917.62	24088.85	24367.63	23879.63	19630.44	19751.39	19316.34	14543.45	29212.04	29655.84	28874.32	33672.34	34492.61	33802.93	42088.05	42208.94	41299.41	14236.19	13893.73	33357.03	34584.92	33681.33	33357.05	34584.72	33678.13
(m3) for a single Ha		**3002.472**	**3048.665**	**2991.762**	**2408.885**	**2436.763**	**2387.963**	**1963.044**	**1975.139**	**1931.634**	**1454.345**	**2921.204**	**2965.584**	**2887.432**	**3367.234**	**3449.261**	**3380.293**	**4208.805**	**4220.894**	**4129.941**	**1423.619**	**1389.373**	**3335.703**	**3458.492**	**3368.133**	**3335.705**	**3458.472**	**3367.813**

(AGWO)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	**JAN**	1,210.90	1,143.41	976.54	880.91	829.76	702.30	636.24	593.22	494.19	64.67	1,083.60	1,024.91	876.83	1,550.33	1,467.42	1,261.11	1,337.10	1,282.47	1,114.43	519.64	289.40	1,827.80	1,711.82	1,478.32	1,827.80	1,711.62	1,475.35
1991-1996	FEB	1,068.44	1,019.04	880.60	779.41	739.03	632.99	564.72	528.58	444.86	57.64	955.51	913.69	790.63	1,368.05	1,307.96	1,137.32	1,177.43	1,142.27	1,009.43	459.07	253.67	1,621.00	1,527.98	1,330.15	1,621.00	1,527.83	1,327.73
1991-1996	MAR	1,093.13	1,045.07	915.23	801.78	761.73	661.45	585.59	549.62	468.92	59.04	975.78	935.53	820.39	1,395.78	1,338.86	1,179.39	1,206.44	1,175.33	1,053.82	520.59	291.27	1,655.50	1,563.80	1,376.25	1,655.50	1,563.65	1,373.95
1991-1996	APR	1,093.45	1,047.27	929.61	800.83	763.31	670.68	583.25	550.62	474.24	59.21	976.43	937.46	833.48	1,395.96	1,341.15	1,197.39	1,229.59	1,202.95	1,102.19	519.60	291.55	1,650.55	1,561.52	1,386.12	1,650.53	1,561.33	1,384.10
1991-1996	MAY	1,286.24	1,231.61	1,096.38	943.36	900.24	791.45	688.24	652.24	560.52	69.59	1,147.93	1,101.72	982.37	1,639.91	1,575.69	1,410.80	1,473.54	1,451.41	1,347.01	634.20	353.68	1,932.17	1,826.27	1,616.47	1,932.17	1,826.08	1,614.25
1991-1996	JUN	1,285.71	1,214.96	1,059.04	943.90	888.51	765.39	689.45	644.12	543.27	68.61	1,147.11	1,086.65	950.91	1,638.63	1,553.97	1,366.11	1,492.46	1,458.15	1,327.78	638.53	353.15	1,921.23	1,789.17	1,555.37	1,921.23	1,788.98	1,552.97
1991-1996	JUL	1,384.38	1,287.13	1,104.42	1,012.58	937.81	796.74	735.28	675.78	563.52	72.70	1,236.57	1,152.75	996.92	1,766.48	1,648.55	1,433.76	1,618.12	1,556.77	1,388.81	644.81	350.82	2,062.30	1,889.18	1,627.62	2,062.30	1,888.95	1,624.32
1991-1996	AUG	1,432.52	1,313.10	1,119.00	1,049.36	959.65	810.59	763.44	695.34	576.81	74.07	1,279.04	1,174.98	1,010.54	1,827.12	1,680.32	1,454.40	1,667.25	1,579.29	1,383.62	698.00	378.64	2,125.88	1,921.07	1,656.70	2,125.87	1,920.80	1,652.72
1991-1996	SEP	1,321.14	1,208.95	1,020.18	969.14	884.14	739.93	707.76	641.29	527.42	68.14	1,179.37	1,081.73	920.78	1,684.76	1,547.00	1,326.02	1,535.36	1,454.06	1,247.23	651.35	355.00	1,958.17	1,766.78	1,514.97	1,958.15	1,766.50	1,510.87
1991-1996	OCT	1,409.24	1,287.59	1,061.16	1,030.74	938.95	768.26	748.83	677.07	545.86	72.64	1,258.89	1,152.86	954.69	1,798.37	1,648.59	1,374.63	1,568.12	1,469.00	1,224.51	642.23	357.20	2,107.68	1,903.75	1,607.82	2,107.68	1,903.42	1,603.35
1991-1996	NOV	1,208.38	1,116.15	933.37	884.44	813.83	675.36	643.45	586.73	480.20	63.00	1,078.81	999.20	838.81	1,869.48	1,726.79	1,442.66	1,587.49	1,491.63	1,250.27	660.13	371.75	2,208.80	2,012.92	1,704.55	2,208.80	2,012.60	1,700.57
1991-1996	DEC	1,448.70	1,348.63	1,131.56	1,060.36	984.92	819.43	771.53	711.19	583.37	76.12	1,293.45	1,206.45	1,013.43	1,846.62	1,724.42	1,455.50	1,565.18	1,482.29	1,262.84	672.02	379.36	2,185.53	2,016.80	1,720.50	2,185.53	2,016.53	1,716.88
	ANNUAL	15,244.01	14,264.67	12,228.61	11,162.22	10,407.15	8,839.05	8,126.41	7,514.08	6,270.15	805.43	13,612.49	12,767.93	10,989.78	19,781.46	18,560.69	16,039.07	17,458.08	16,745.63	14,711.96	7,295.55	4,046.26	23,256.62	21,491.05	18,574.82	23,256.57	21,488.30	18,537.05
(m3) for a single Ha		**1524.401**	**1426.467**	**1222.861**	**1116.222**	**1040.715**	**883.9055**	**812.6406**	**751.4084**	**627.0151**	**80.5434**	**1361.249**	**1276.793**	**1098.978**	**1978.146**	**1856.069**	**1603.907**	**1745.808**	**1674.563**	**1471.196**	**729.5554**	**404.6265**	**2325.662**	**2149.105**	**1857.482**	**2325.657**	**2148.83**	**1853.705**

(IGWI)

	Code	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
1991-1996	**JAN**	217.5831	222.4452	196.5564	160.4485	160.3141	140.3272	119.1619	113.7201	97.41011	12.586	194.4285	199.9515	177.03	283.125	289.215	257.625	248.7888	261.4635	240.3983	89.264	45.70286	340.4167	337.15	293.8167	340.4167	337.1333	293.6333
1991-1996	FEB	58.17758	59.7213	63.61516	43.52189	43.35593	46.10618	31.98241	31.72424	32.67431	3.389333	51.408	53.487	56.5005	71.97	75.51	80.19	59.23467	63.50267	69.92083	31.98604	17.78875	91.2	90.45	93.81667	91.2	90.45	93.8
1991-1996	MAR	114.8635	111.5978	110.79	83.91846	81.43576	79.96365	60.49243	59.19219	56.65464	6.336667	102.6375	99.9285	99.4455	146.175	142.905	142.65	140.1003	139.5183	144.0288	59.94086	38.6949	170.4333	164.05	160.8	170.4333	164.05	160.7333
1991-1996	APR	338.2745	328.3639	307.3775	247.056	240.4325	220.5303	178.804	174.0725	154.8009	18.59133	302.148	293.412	275.331	430.695	419.07	393.99	409.5178	412.638	413.3978	167.4189	92.91696	503.95	482.9333	438.6167	503.95	482.8667	438.4333
1991-1996	MAY	270.6869	245.8324	193.6529	198.05	179.1194	138.9467	143.8849	129.0438	97.72491	13.88	241.668	220.374	174.3945	344.745	314.97	251.085	330.9963	321.1508	270.9372	117.2225	61.16467	396.5833	352.2833	275.8667	396.5833	352.2667	275.3
1991-1996	JUN	204.1999	178.9766	137.0187	149.3595	129.6844	99.30948	108.2679	92.59578	70.78367	10.06933	182.5845	160.755	127.4595	260.835	229.92	184.26	256.4842	239.1212	194.7598	92.35108	47.93059	297.75	253.8167	202.2333	297.75	253.8	201.2167
1991-1996	JUL	300.433	257.2486	211.2367	218.034	186.8772	153.3243	156.1033	134.3478	109.0451	14.496	268.758	230.6745	194.208	383.97	329.91	280.725	349.1838	302.3652	245.6202	135.3202	66.92829	441.4333	375.0833	319.3	441.4333	374.9667	317.9833
1991-1996	AUG	160.6596	138.5762	110.7408	117.6775	102.3099	81.16736	86.47704	75.44731	58.56433	7.756667	143.8395	123.8055	98.931	205.5	177.105	143.64	182.5378	164.8515	120.4093	76.96941	45.96743	232.3333	197.0167	170.6167	232.3333	196.9667	169.4333
1991-1996	SEP	132.7316	117.7603	89.94325	98.58618	86.19696	66.03851	73.18536	62.63574	47.82814	6.636	118.0515	105.1995	80.3985	168.66	150.345	115.485	140.3105	129.1393	82.02967	68.13074	40.76171	200.3	174.8333	140.3833	200.3	174.85	140.2167
1991-1996	OCT	323.3717	297.4337	225.331	237.3869	217.8996	164.9499	173.2666	157.3903	119.4256	16.77333	288.267	265.5765	197.6415	411.78	379.62	283.995	277.129	243.6963	175.5862	145.9591	88.87249	505.25	465.5167	376.65	505.25	465.4167	375.6333
1991-1996	NOV	214.1928	208.3186	177.5054	156.7579	152.2841	128.0285	113.7259	109.7954	91.33963	11.78067	190.974	186.1545	158.067	383.805	377.085	332.52	311.9197	309.5755	291.0162	139.7219	77.44702	463.1667	451.0833	391.9333	463.1667	451.0667	391.7833
1991-1996	DEC	77.34105	80.71023	77.09875	56.47276	58.74757	55.73304	41.51043	42.20708	39.62479	4.571333	69.132	72.1455	68.3655	98.25	103.29	96.66	89.06217	93.4595	89.4825	41.3418	24.25425	115.8	121.4167	112.7333	115.8	121.4	112.7167
	ANNUAL	2412.787	2247.31	1901.215	1768.102	1639.625	1375.45	1288.248	1183.71	977.4588	126.8667	2153.897	2011.464	1707.773	3189.51	2988.945	2562.825	2795.265	2680.482	2337.587	1173.458	652.4177	3758.617	3465.633	2976.767	3758.617	3465.233	2970.883
(m3) for a single Ha		**241.2787**	**224.731**	**190.1215**	**176.8102**	**163.9625**	**137.545**	**128.8248**	**118.371**	**97.74588**	**12.68667**	**215.3897**	**201.1464**	**170.7773**	**318.951**	**298.8945**	**256.2825**	**279.5265**	**268.0482**	**233.7587**	**117.3458**	**65.24177**	**375.8617**	**346.5633**	**297.6767**	**375.8617**	**346.5233**	**297.0883**

Annual Water Balance
Volume for single Ha (m3)

Paramter (m3)	RLD5ab	RLD5bc	RLD5cd	RMD5ab	RMD5bc	RMD5cd	RHD5ab	RHD5bc	RHD5cd	CSMbc	EISab	EISbc	EIScd	OPLab
SUPY	6342.3	6342.3	6342.3	6370.8	6370.8	6370.8	6392.2	6392.2	6392.2	6436.4	6352.2	6352.2	6352.2	6457.2
RO	1630.0	1716.9	2037.1	2702.9	2779.8	3030.5	3505.0	3579.7	3781.6	4893.2	1907.2	1976.7	2287.4	546.2
ET	3002.5	3048.7	2991.8	2408.9	2436.8	2388.0	1963.0	1975.1	1931.6	1454.3	2921.2	2965.6	2887.4	3367.2
AGWO	1524.4	1426.5	1222.9	1116.2	1040.7	883.9	812.6	751.4	627.0	80.5	1361.2	1276.8	1099.0	1978.1
IGWI	241.3	224.7	190.1	176.8	164.0	137.5	128.8	118.4	97.7	12.7	215.4	201.1	170.8	319.0

Paramter (m3)	OPLbc	OPLcd	OVLab	OVLbc	OVLcd	THCab	THCcd	AGT0ab	AGT0bc	AGT0cd	AGPab	AGP0bc	AGP0cd
SUPY	6457.2	6457.2	6458.4	6458.4	6458.4	6447.2	6447.2	6458.8	6458.8	6458.8	6458.8	6458.8	6458.8
RO	644.1	1084.8	159.3	214.0	574.6	4063.4	4546.5	35.8	194.5	742.5	35.9	194.9	747.6
ET	3449.3	3380.3	4208.8	4220.9	4129.9	1423.6	1389.4	3335.7	3458.5	3368.1	3335.7	3458.5	3367.8
AGWO	1856.1	1603.9	1745.8	1674.6	1471.2	729.6	404.6	2325.7	2149.1	1857.5	2325.7	2148.8	1853.7
IGWI	298.9	256.3	279.5	268.0	233.8	117.3	65.2	375.9	346.6	297.7	375.9	346.5	297.1

Paramter (m3)	SUPY	RO	ET	AGWO	IGWI
RLD5ab	6342.284	1630.028	3002.472	1524.401	241.2787
RLD5bc	6342.284	1716.935	3048.665	1426.467	224.731
RLD5cd	6,342.28	2,037.11	2,991.76	1,222.86	190.12
RMD5ab	6370.827	2702.913	2408.885	1116.222	176.8102
RMD5bc	6370.827	2779.836	2436.763	1040.715	163.9625
RMD5cd	6370.827	3030.502	2387.963	883.9055	137.545
RHD5ab	6392.235	3505.031	1963.044	812.6406	128.8248
RHD5bc	6392.235	3579.668	1975.139	751.4084	118.371
RHD5cd	6392.235	3781.583	1931.634	627.0151	97.74588
CSMbc	6436.398	4893.223	1454.345	80.5434	12.68667
EISab	6352.242	1907.249	2921.204	1361.249	215.3897
EISbc	6352.242	1976.745	2965.584	1276.793	201.1464
EIScd	6352.242	2287.42	2887.432	1098.978	170.7773
OPLab	6457.192	546.2266	3367.234	1978.146	318.951
OPLbc	6457.192	644.0884	3449.261	1856.069	298.8945
OPLcd	6457.192	1084.78	3380.293	1603.907	256.2825
OVLab	6458.365	159.2779	4208.805	1745.808	279.5265
OVLbc	6458.365	214.0201	4220.894	1674.563	268.0482
OVLcd	6458.365	574.6243	4129.941	1471.196	233.7587
THCab	6447.154	4063.399	1423.619	729.5554	117.3458
THCcd	6447.154	4546.538	1389.373	404.6265	65.24177
AGT0ab	6458.802	35.84667	3335.703	2325.662	375.8617
AGT0bc	6458.802	194.4667	3458.492	2149.105	346.5633
AGT0cd	6458.802	742.5483	3368.133	1857.482	297.6767
AGPab	6458.802	35.855	3335.705	2325.657	375.8617
AGP0bc	6458.802	194.87	3458.472	2148.83	346.5233
AGP0cd	6458.802	747.5517	3367.813	1853.705	297.0883

Annual Water Balance for each Subcatchment

LAND USE IN HA

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	1.17	2.70	0.60	9.70	40.85	15.99	5.25	17.31	18.63	45.50	0.00	2.77	0.91	6.54	0.00	0.09	0.05	0.00	0.03	0.28	0.78	0.78	38.57	1.13	0.28	0.48	0.75	1.46	3.82	0.90	3.14	2.63	2.20	0.34
Res Low Density	3	RLD5bc	1014	1514	0.23	1.92	0.37	6.09	29.35	1.81	1.35	2.21	2.45	24.20	0.00	2.29	1.32	14.85	0.00	0.26	0.24	0.00	0.11	0.59	2.29	1.87	42.70	5.75	0.58	1.32	2.35	2.18	7.90	3.55	10.00	7.05	21.06	1.88
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	3.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.71	14.26	0.00	0.23	0.40	0.00	0.21	0.58	2.42	2.57	25.93	12.79	0.88	1.26	2.23	1.69	23.60	4.60	9.12	6.91	20.32	1.77
Res Med Denisty	3	RMD5ab	1113	1613	0.00				1.16					9.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.28	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.06	0.00	0.00	0.03
Res Med Denisty	3	RMD5bc	1114	1614	0.00				0.84					5.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.20	0.00	0.00	0.18
Res Med Denisty	3	RMD5cd	1115	1615	0.00				0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.18	0.00	0.00	0.17
Res High Density	3	RHD5ab	1213	1713	0.00				1.05					0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	21.41	0.00	0.00	0.00	0.01	0.00	0.00	0.08	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00				0.75					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	23.71	0.00	0.00	0.00	0.04	0.00	0.00	0.31	0.00	0.00	0.03	0.00
Res High Density	3	RHD5cd	1215	1715	0.00				0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	0.00	0.00	0.00	14.40	0.00	0.00	0.00	0.04	0.00	0.00	0.41	0.00	0.00	0.03	0.00
Commercial	2	CSM1bc	2201	2701	0.00		10.85	9.47	1.97	1.13				29.11	0.00	0.32	0.00	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.55	0.00	0.00	5.99	9.94	0.29	0.24	0.00	1.36	0.08	0.18	0.97
Institutional	2	EIS1ab	3001	3501	0.00		0.77	5.78	18.88			1.72		2.19	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.46	4.02	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.51	0.00	0.00	0.00
Institutional	2	EIS1bc	3002	3502	0.00		0.48	3.63	13.57			0.22		1.16	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	1.09	4.45	0.00	0.00	0.00	0.00	1.13	0.00	0.00	1.63	0.00	0.00	0.00
Institutional	2	EIS1cd	3003	3503	0.00		0.00	2.05	0.00			0.00		0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	1.49	2.70	0.00	0.00	0.00	0.00	0.88	0.00	0.00	1.48	0.00	0.00	0.00
Utility/Transport/Parks	2	OPL0ab	4001	4501	8.74	3.56		6.50	20.61			3.17	3.13	22.44	0.00	11.14	0.00	22.77	4.91	0.00	3.92	3.41	1.52	0.00	0.00	3.60	17.24	0.26	0.16	0.34	1.86	0.59	7.18	16.67	0.04	0.14	1.39	1.62
Utility/Transport/Parks	2	OPL0bc	4002	4502	1.69	2.53		4.08	14.81			0.40	0.41	11.93	0.00	9.19	0.00	51.74	9.60	0.00	17.92	16.50	6.77	0.00	0.00	8.58	19.09	1.34	0.33	0.94	5.86	0.88	14.85	65.75	0.13	0.38	13.30	9.07
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.00	0.00		2.31	0.00			0.00	0.00	0.00	0.00	4.18	0.00	49.68	11.93	0.00	30.28	19.33	12.91	0.00	0.00	11.79	11.59	2.97	0.50	0.89	5.56	0.69	44.35	85.13	0.12	0.37	12.83	8.53
Valley Segment	2	OVL0ab	4101	4601	3.80	2.35	0.55	9.29	43.73	3.12	3.72				11.55	16.95	5.58	11.73	2.79	3.12	0.76	1.33	0.75	10.56	1.64	1.08	9.15	0.44	2.07	3.35	3.30	5.90	3.77	3.10	10.97	12.49	1.03	0.67
Valley Segment	2	OVL0bc	4102	4602	0.73	1.68	0.34	5.83	31.42	0.35	0.96				7.53	13.98	8.10	26.66	5.46	8.62	3.49	6.42	3.35	22.23	4.80	2.58	10.13	2.22	4.26	9.17	10.38	8.82	7.81	12.22	34.97	33.51	9.83	3.76
Valley Segment	2	OVL0cd	4103	4603	0.00	0.00	0.00	3.30	0.00	0.00	0.00				2.82	6.35	4.39	25.59	6.78	7.58	5.89	7.53	6.39	22.11	5.09	3.54	6.15	4.95	6.46	8.70	9.85	6.85	23.32	15.82	31.88	32.84	9.48	3.54
Roads	2	THC0ab	5001	5501	0.96	1.95	2.25	7.03	27.62	5.93	2.47	12.48	11.02	48.94																								
Roads and ROW	2	THC0cd	5003	5503	0										1.06	3.00	3.44	20.80	1.84	5.34	1.09	5.81	8.06	2.22	7.92	1.79	44.33	3.44	0.82	1.10	2.26	3.95	7.51	2.60	10.88	10.19	13.04	6.86
Agricultural Tilled	2	AGT0ab	6201	6701	53.97	48.16	6.17	34.97	103.73	44.65	1.93				43.97	64.65	19.32	26.39	3.23	10.41	2.79	6.22	5.00	29.89	4.76	10.06	36.16	3.68	6.95	10.61	10.02	6.31	18.16	4.30	41.88	42.24	9.95	2.66
Agricultural Tilled	2	AGT0bc	6202	6702	10.43	34.33	3.83	21.96	74.53	5.06	0.50				28.65	53.33	28.02	59.95	6.33	28.80	12.73	30.10	22.28	62.92	13.99	23.98	40.04	18.64	14.24	29.01	31.57	9.43	37.57	16.94	133.55	113.28	95.04	14.90
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	12.42	0.00	0.00	0.00				10.72	24.22	15.19	57.56	7.87	25.33	21.51	35.27	42.51	62.58	14.82	32.95	24.31	41.47	21.64	27.55	29.95	7.33	112.22	21.93	121.78	111.03	91.73	14.02
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00						3.53																											
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00						0.91																											
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00						0.00																											
		Sum URF AREAS			81.7	99.2	26.2	147.9	424.9	78.0	20.6	37.5	35.6	200.9	106.3	214.7	87.0	393.7	60.7	89.8	101.1	132.1	109.9	214.0	60.9	108.2	439.7	99.1	59.2	100.7	126.0	59.1	312.3	255.0	413.9	373.2	301.4	71.0

LAND USE IN %

Land use	uci	Code	DSN Surface	DSN -subsurface	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
Res Low Density	3	RLD5ab	1013	1513	0.01	0.03	0.02	0.07	0.10	0.20	0.25	0.46	0.52	0.23	0.00	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.09	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.01	0.01	0.01	0.00
Res Low Density	3	RLD5bc	1014	1514	0.00	0.02	0.01	0.04	0.07	0.02	0.07	0.06	0.07	0.12	0.00	0.01	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.10	0.06	0.01	0.01	0.02	0.04	0.03	0.01	0.02	0.02	0.07	0.03
Res Low Density	3	RLD5cd	1015	1515	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.06	0.13	0.01	0.01	0.02	0.03	0.08	0.02	0.02	0.02	0.07	0.02
Res Med Denisty	3	RMD5ab	1113	1613	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5bc	1114	1614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res Med Denisty	3	RMD5cd	1115	1615	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5ab	1213	1713	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5bc	1214	1714	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Res High Density	3	RHD5cd	1215	1715	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	2	CSM1bc	2201	2701	0.00	0.00	0.41	0.06	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Institutional	2	EIS1ab	3001	3501	0.00	0.00	0.03	0.04	0.04	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1bc	3002	3502	0.00	0.00	0.02	0.02	0.03	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Institutional	2	EIS1cd	3003	3503	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Utility/Transport/Parks	2	OPL0ab	4001	4501	0.11	0.04	0.00	0.04	0.05	0.00	0.00	0.08	0.09	0.11	0.00	0.05	0.00	0.06	0.08	0.00	0.04	0.03	0.01	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.01	0.01	0.02	0.07	0.00	0.00	0.00	0.02
Utility/Transport/Parks	2	OPL0bc	4002	4502	0.02	0.03	0.00	0.03	0.03	0.00	0.00	0.01	0.01	0.06	0.00	0.04	0.00	0.13	0.16	0.00	0.18	0.12	0.06	0.00	0.00	0.08	0.04	0.01	0.01	0.01	0.05	0.01	0.05	0.26	0.00	0.00	0.04	0.13
Utility/Transport/Parks	2	OPL0cd	4003	4503	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.13	0.20	0.00	0.30	0.15	0.12	0.00	0.00	0.11	0.03	0.03	0.01	0.01	0.04	0.01	0.14	0.33	0.00	0.00	0.04	0.12
Valley Segment	2	OVL0ab	4101	4601	0.05	0.02	0.02	0.06	0.10	0.04	0.18	0.00	0.00	0.00	0.11	0.08	0.06	0.03	0.05	0.03	0.01	0.01	0.01	0.05	0.03	0.01	0.02	0.00	0.04	0.03	0.03	0.10	0.01	0.01	0.03	0.03	0.00	0.01
Valley Segment	2	OVL0bc	4102	4602	0.01	0.02	0.01	0.04	0.07	0.00	0.05	0.00	0.00	0.00	0.07	0.07	0.09	0.07	0.09	0.10	0.03	0.05	0.03	0.10	0.08	0.02	0.02	0.02	0.07	0.09	0.08	0.15	0.02	0.05	0.08	0.09	0.03	0.05
Valley Segment	2	OVL0cd	4103	4603	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.05	0.07	0.11	0.08	0.06	0.06	0.06	0.10	0.08	0.03	0.01	0.05	0.11	0.09	0.08	0.12	0.07	0.06	0.08	0.09	0.03	0.05
Roads	2	THC0ab	5001	5501	0.01	0.02	0.09	0.05	0.07	0.08	0.12	0.33	0.31	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Roads and ROW	2	THC0cd	5003	5503	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.04	0.05	0.03	0.06	0.01	0.04	0.07	0.01	0.13	0.02	0.10	0.03	0.01	0.01	0.02	0.07	0.02	0.01	0.03	0.03	0.04	0.10
Agricultural Tilled	2	AGT0ab	6201	6701	0.66	0.49	0.24	0.24	0.24	0.57	0.09	0.00	0.00	0.00	0.41	0.30	0.22	0.07	0.05	0.12	0.03	0.05	0.05	0.14	0.08	0.09	0.08	0.04	0.12	0.11	0.08	0.11	0.06	0.02	0.10	0.11	0.03	0.04
Agricultural Tilled	2	AGT0bc	6202	6702	0.13	0.35	0.15	0.15	0.18	0.06	0.02	0.00	0.00	0.00	0.27	0.25	0.32	0.15	0.10	0.32	0.13	0.23	0.20	0.29	0.23	0.22	0.09	0.19	0.24	0.29	0.25	0.16	0.12	0.07	0.32	0.30	0.32	0.21
Agricultural Tilled	2	AGT0cd	6203	6703	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.11	0.17	0.15	0.13	0.28	0.21	0.27	0.39	0.29	0.24	0.30	0.06	0.42	0.37	0.27	0.24	0.12	0.36	0.09	0.29	0.30	0.30	0.20
Agricultural Pasture/forest	2	AGPab	6301	6801	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPbc	6302	6802	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Pasture/forest	2	AGPcd	6303	6803	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Sum URF AREAS			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

			S-5						S-6						S-7					
Land use	uci	Code	Area (ha)	SUPY	RO	ET	AGWO	IGWI	Area (ha)	SUPY	RO	ET	AGWO	IGWI	Area (ha)	SUPY	RO	ET	AGWO	IGWI
Res Low Density	3	RLD5ab	1.17	7420.472183	1907.132675	3512.892565	1783.548947	282.2960359	2.70	17124.16658	4401.075404	8106.675151	4115.882186	651.4523904	0.60	3805.37035	978.0167565	1801.483367	914.6404857	144.7671979
Res Low Density	3	RLD5bc	0.23	1458.725301	394.8949588	701.1930312	328.08752	51.68813108	1.92	12177.18512	3296.514439	5853.437478	2738.817558	431.483529	0.37	2346.645049	635.2658033	1128.006181	527.7929669	83.15047173
Res Low Density	3	RLD5cd	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5ab	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5bc	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5cd	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res High Density	3	RHD5ab	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res High Density	3	RHD5bc	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res High Density	3	RHD5cd	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Commercial	2	CSM1bc	0.00	0	0	0	0	0	0.00	0	0	0	0	0	10.85	69834.91685	53091.46551	15779.6455	873.89589	137.6503333
Institutional	2	EIS1ab	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.77	4891.22652	1468.582105	2249.326971	1048.162038	165.8500305
Institutional	2	EIS1bc	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.48	3049.076272	948.8377059	1423.480164	612.860472	96.550272
Institutional	2	EIS1cd	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
[illegible]																				

			S-8						S-9						S-10					
Land use	uci	Code	Area (ha)	SUPY	RO	ET	AGWO	IGWI	Area (ha)	SUPY	RO	ET	AGWO	IGWI	Area (ha)	SUPY	RO	ET	AGWO	IGWI
Res Low Density	3	RLD5ab	9.70	61520.15399	15811.2709	29123.9811	14786.68785	2340.403032	40.85	259082.298	66586.64084	122650.9926	62271.77307	9856.233388	15.99	101413.1198	26064.14656	48009.53173	24375.16894	3858.045823
Res Low Density	3	RLD5bc	6.09	38624.50905	10456.13173	18566.372	8687.186942	1368.611819	29.35	186146.033	50392.03061	89478.32811	41866.82049	6595.854988	1.81	11479.53389	3107.651632	5518.084289	2581.906136	406.7631185
Res Low Density	3	RLD5cd	3.44	21817.45667	7007.660336	10291.65992	4206.643011	654.0179353	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5ab	0.00	0	0	0	0	0	1.16	7390.15932	3135.378795	2794.306773	1294.817655	205.0998761	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5bc	0.00	0	0	0	0	0	0.84	5351.49468	2335.06242	2046.880822	874.2004751	137.7285382	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5cd	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Res High Density	3	RHD5ab	0.00	0	0	0	0	0	1.05	6711.846225	3680.282616	2061.195964	853.2726242	135.2660007	0.00	0	0	0	0	0
Res High Density	3	RHD5bc	0.00	0	0	0	0	0	0.75	4794.175875	2684.751088	1481.354304	563.5562957	88.77823789	0.00	0	0	0	0	0
Res High Density	3	RHD5cd	0.00	0	0	0	0	0	0.00	0	0	0	0	0	0.00	0	0	0	0	0
Commercial	2	CSM1bc	9.47	60952.6878	46338.81828	13772.64911	762.745998	120.1427333	1.97	12679.7038	9639.648576	2865.060058	158.670498	24.99273333	1.13	7273.129589	5529.341569	1643.410084	91.014042	14.33593333
Institutional	2	EIS1ab	5.78	36715.96011	11023.90204	16884.5583	7868.021532	1244.952177	18.88	119930.3334	36008.87033	55152.32885	25700.38867	4066.556592	0.00	0	0	0	0	0
Institutional	2	EIS1bc	3.63	23058.63931	7175.585151	10765.06874	4634.75732	730.161432	13.57	86199.92711	26824.43264	40242.97047	17326.07626	2729.556648	0.00	0	0	0	0	0
Institutional	2	EIS1cd	2.05	13022.09658	4689.211215	5919.236392	2252.905515	350.0933625	0.00	0	0	0	0	0	0.00	0	0	0	0	0
[illegible]																				

			S-11					
Land use	uci	Code	Area (ha)	SUPY	RO	ET	AGWO	IGWI
Res Low Density	3	RLD5ab	5.25	33296.99056	8557.646619	15762.97946	8003.10425	1266.712981
Res Low Density	3	RLD5bc	1.35	8562.083288	2317.861715	4115.698226	1925.731096	303.3868563
Res Low Density	3	RLD5cd	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5ab	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5bc	0.00	0	0	0	0	0
Res Med Denisty	3	RMD5cd	0.00	0	0	0	0	0
Res High Density	3	RHD5ab	0.00	0	0	0	0	0
Res High Density	3	RHD5bc	0.00	0	0	0	0	0
Res High Density	3	RHD5cd	0.00	0	0	0	0	0
Commercial	2	CSM1bc	0.00	0	0	0	0	0
Institutional	2	EIS1ab	0.00	0	0	0	0	0
Institutional	2	EIS1bc	0.00	0	0	0	0	0
Institutional	2	EIS1cd	0.00	0	0	0	0	0
[illegible]								

[illegible]

Annual Water Balance for each Subcatchment - Summary and Reorganization

S (m3)	S (m3)	S (mm)	W	W	W(mm)	T	T	T(mm)
81.72	**81.72**		106.30	**106.30**		108.19	**108.19**	
527620.20	**527620.20**	**645.64**	**686555.12**	**686555.12**	**645.86**	**697809.24**	**697809.24**	**644.96**
16789.84	**16789.84**	**20.55**	25016.17	**25016.17**	**23.53**	76797.90	**76797.90**	**70.98**
276014.32	**276014.32**	**337.76**	375365.02	**375365.02**	**353.12**	366146.35	**366146.35**	**338.42**
179025.39	**179025.39**	**219.07**	221094.42	**221094.42**	**207.99**	200864.59	**200864.59**	**185.65**
28897.19	**28897.19**	**35.36**	35622.06	**35622.06**	**33.51**	32238.84	**32238.84**	**29.80**
99.18	**99.18**		214.67	**214.67**		439.73	**439.73**	
640011.36	**640011.36**	**645.30**	1385561.92	**1385561.92**	**645.44**	2818679.89	**2818679.89**	**641.00**
28331.60	**28331.60**	**28.57**	84849.21	**84849.21**	**39.53**	838813.17	**838813.17**	**190.76**
333809.44	**333809.44**	**336.57**	748311.12	**748311.12**	**348.59**	1241513.00	**1241513.00**	**282.33**
212713.94	**212713.94**	**214.47**	429710.66	**429710.66**	**200.17**	609015.30	**609015.30**	**138.50**
34309.65	**34309.65**	**34.59**	69167.06	**69167.06**	**32.22**	97159.45	**97159.45**	**22.10**
26.21	**26.21**		86.98	**86.98**		99.07	**99.07**	
168769.29	**168769.29**	**643.91**	561417.38	**561417.38**	**645.43**	637556.89	**637556.89**	**643.52**
67391.17	**67391.17**	**257.12**	43390.42	**43390.42**	**49.88**	95564.87	**95564.87**	**96.46**
63162.34	**63162.34**	**240.99**	302001.61	**302001.61**	**347.19**	327573.82	**327573.82**	**330.64**
29728.80	**29728.80**	**113.43**	168668.37	**168668.37**	**193.91**	172127.22	**172127.22**	**173.74**
4783.28	**4783.28**	**18.25**	27128.28	**27128.28**	**31.19**	27526.77	**27526.77**	**27.78**
147.85	**147.85**		393.71	**393.71**		59.17	**59.17**	
951149.18	**951149.18**	**643.32**	2538154.42	**2538154.42**	**644.68**	381954.72	**381954.72**	**645.51**
159122.65	**159122.65**	**107.62**	362398.81	**362398.81**	**92.05**	31868.64	**31868.64**	**53.86**
470866.70	**470866.70**	**318.48**	1323933.91	**1323933.91**	**336.27**	208438.57	**208438.57**	**352.26**
254892.31	**254892.31**	**172.40**	678101.10	**678101.10**	**172.23**	111602.79	**111602.79**	**188.61**
40900.49	**40900.49**	**27.66**	108748.30	**108748.30**	**27.62**	17915.47	**17915.47**	**30.28**
424.87	**424.87**		60.73	**60.73**		100.73	**100.73**	
2731762.24	**2731762.24**	**642.96**	392199.64	**392199.64**	**645.76**	650091.20	**650091.20**	**645.37**
366216.57	**366216.57**	**86.19**	42855.78	**42855.78**	**70.56**	75660.25	**75660.25**	**75.11**
1399021.41	**1399021.41**	**329.28**	214478.08	**214478.08**	**353.14**	344202.51	**344202.51**	**341.70**
769690.47	**769690.47**	**181.16**	107127.18	**107127.18**	**176.39**	181171.94	**181171.94**	**179.86**
123544.63	**123544.63**	**29.08**	17190.83	**17190.83**	**28.31**	29095.48	**29095.48**	**28.88**
78.04	**78.04**		89.79	**89.79**		125.98	**125.98**	
501874.96	**501874.96**	**643.10**	579769.14	**579769.14**	**645.73**	812771.77	**812771.77**	**645.16**
61953.50	**61953.50**	**79.39**	56823.64	**56823.64**	**63.29**	117066.30	**117066.30**	**92.92**
244660.99	**244660.99**	**313.51**	309647.93	**309647.93**	**344.87**	421004.05	**421004.05**	**334.18**
152122.63	**152122.63**	**194.93**	167151.93	**167151.93**	**186.17**	216890.54	**216890.54**	**172.16**
24476.78	**24476.78**	**31.36**	26863.05	**26863.05**	**29.92**	34816.05	**34816.05**	**27.64**
20.62	**20.62**		101.07	**101.07**		59.13	**59.13**	
132380.66	**132380.66**	**642.00**	652635.13	**652635.13**	**645.70**	380945.73	**380945.73**	**644.22**
22180.39	**22180.39**	**107.57**	75619.25	**75619.25**	**74.82**	50549.15	**50549.15**	**85.48**
66193.23	**66193.23**	**321.01**	348998.65	**348998.65**	**345.29**	206134.80	**206134.80**	**348.60**
35560.90	**35560.90**	**172.46**	180566.54	**180566.54**	**178.65**	100061.69	**100061.69**	**169.21**
5697.93	**5697.93**	**27.63**	28967.88	**28967.88**	**28.66**	16027.74	**16027.74**	**27.10**
37.51	**37.51**		132.06	**132.06**		312.30	**312.30**	
239637.39	**239637.39**	**638.86**	852819.68	**852819.68**	**645.77**	2012752.99	**2012752.99**	**644.49**
88425.95	**88425.95**	**235.74**	98633.37	**98633.37**	**74.69**	271731.22	**271731.22**	**87.01**
94207.84	**94207.84**	**251.15**	449494.39	**449494.39**	**340.36**	1055886.29	**1055886.29**	**338.10**
48280.12	**48280.12**	**128.71**	239622.30	**239622.30**	**181.45**	547304.35	**547304.35**	**175.25**
7683.02	**7683.02**	**20.48**	38486.06	**38486.06**	**29.14**	87622.29	**87622.29**	**28.06**
35.64	**35.64**		109.89	**109.89**		255.03	**255.03**	
227601.44	**227601.44**	**638.61**	709603.39	**709603.39**	**645.72**	1645709.53	**1645709.53**	**645.30**
81326.33	**81326.33**	**228.19**	97108.00	**97108.00**	**88.37**	209543.70	**209543.70**	**82.16**
91047.21	**91047.21**	**255.46**	364971.99	**364971.99**	**332.12**	881626.78	**881626.78**	**345.69**
46886.72	**46886.72**	**131.56**	194787.23	**194787.23**	**177.25**	442199.75	**442199.75**	**173.39**
7459.63	**7459.63**	**20.93**	31270.21	**31270.21**	**28.46**	70895.84	**70895.84**	**27.80**
200.91	**200.91**		213.96	**213.96**		413.89	**413.89**	
1286533.98	**1286533.98**	**640.35**	1381706.81	**1381706.81**	**645.78**	2670029.87	**2670029.87**	**645.10**
525961.65	**525961.65**	**261.79**	91671.59	**91671.59**	**42.85**	251541.99	**251541.99**	**60.77**
486071.94	**486071.94**	**241.94**	765137.30	**765137.30**	**357.61**	1434154.68	**1434154.68**	**346.51**
229610.98	**229610.98**	**114.29**	412037.55	**412037.55**	**192.58**	775309.80	**775309.80**	**187.32**
36595.45	**36595.45**	**18.21**	66202.28	**66202.28**	**30.94**	124477.55	**124477.55**	**30.07**
#N/A	**#N/A**		60.86	**60.86**		373.16	**373.16**	
			392091.46	**392091.46**	**644.26**	2408063.25	**2408063.25**	**645.32**
			69201.56	**69201.56**	**113.71**	211974.56	**211974.56**	**56.81**
			196791.70	**196791.70**	**323.36**	1303701.47	**1303701.47**	**349.37**
			100515.78	**100515.78**	**165.16**	702395.32	**702395.32**	**188.23**
			16109.37	**16109.37**	**26.47**	112790.69	**112790.69**	**30.23**
						301.45	**301.45**	
						1941687.62	**1941687.62**	**644.12**
						259465.99	**259465.99**	**86.07**
						999854.81	**999854.81**	**331.69**
						541576.46	**541576.46**	**179.66**
						86815.56	**86815.56**	**28.80**
						70.98	**70.98**	
						457829.54	**457829.54**	**644.98**
						76787.05	**76787.05**	**108.18**
						230446.62	**230446.62**	**324.65**
						119246.72	**119246.72**	**167.99**
						19134.56	**19134.56**	**26.96**

Sulfur

	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13a	S-13b
AREA (ha)	**81.72**	**99.18**	**26.21**	**147.85**	**424.87**	**78.04**	**20.62**	**37.51**	**35.64**	**200.91**
SUPPLY	645.64	645.30	643.91	643.32	642.96	643.10	642.00	638.86	638.61	640.35
RO	20.55	28.57	257.12	107.62	86.19	79.39	107.57	235.74	228.19	261.79
ET	337.76	336.57	240.99	318.48	329.28	313.51	321.01	251.15	255.46	241.94
AGWO	219.07	214.47	113.43	172.40	181.16	194.93	172.46	128.71	131.56	114.29
IGWI	35.36	34.59	18.25	27.66	29.08	31.36	27.63	20.48	20.93	18.21
Error (%)	5.10	4.82	2.19	2.67	2.68	3.72	2.08	0.43	0.39	0.64

Welland

	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-23	W-24
AREA (ha)	**106.30**	**214.67**	**86.98**	**393.71**	**60.73**	**89.79**	**101.07**	**132.06**	**109.89**	**213.96**	**60.86**
SUPPLY	645.86	645.44	645.43	644.68	645.76	645.73	645.70	645.77	645.72	645.78	644.26
RO	23.53	39.53	49.88	92.05	70.56	63.29	74.82	74.69	88.37	42.85	113.71
ET	353.12	348.59	347.19	336.27	353.14	344.87	345.29	340.36	332.12	357.61	323.36
AGWO	207.99	200.17	193.91	172.23	176.39	186.17	178.65	181.45	177.25	192.58	165.16
IGWI	33.51	32.22	31.19	27.62	28.31	29.92	28.66	29.14	28.46	30.94	26.47
Error (%)	4.29	3.86	3.60	2.56	2.69	3.33	2.83	3.12	3.03	3.38	2.42

Twenty-Mile

	T-25	T-26	T-27	T-28	T-29	T-30	T-31	T-32	T-33	T-34	T-35	T-36	T-37
AREA (ha)	**108.19**	**439.73**	**99.07**	**59.17**	**100.73**	**125.98**	**59.13**	**312.30**	**255.03**	**413.89**	**373.16**	**301.45**	**70.98**
SUPPLY	644.96	641.00	643.52	645.51	645.37	645.16	644.22	644.49	645.30	645.10	645.32	644.12	644.98
RO	70.98	190.76	96.46	53.86	75.11	92.92	85.48	87.01	82.16	60.77	56.81	86.07	108.18
ET	338.42	282.33	330.64	352.26	341.70	334.18	348.60	338.10	345.69	346.51	349.37	331.69	324.65
AGWO	185.65	138.50	173.74	188.61	179.86	172.16	169.21	175.25	173.39	187.32	188.23	179.66	167.99
IGWI	29.80	22.10	27.78	30.28	28.88	27.64	27.10	28.06	27.80	30.07	30.23	28.80	26.96
Error (%)	3.12	1.14	2.32	3.18	3.07	2.83	2.15	2.49	2.52	3.17	3.21	2.78	2.67

Final Balances - All Subwatershed

Sulfur											
	S-5	**S-6**	**S-7**	**S-8**	**S-9**	**S-10**	**S-11**	**S-12**	**S-13a**	**S-13b**	**AVERAGE**
AREA (ha)	82	99	26	148	425	78	21	38	36	201	
SUPPLY (mm)	646	645	644	643	643	643	642	639	639	640	642
RO (mm)	21	29	257	108	86	79	108	236	228	262	141
ET (mm)	338	337	241	318	329	314	321	251	255	242	295
AGWO (mm)	219	214	113	172	181	195	172	129	132	114	
IGWI (mm)	35	35	18	28	29	31	28	20	21	18	
Infil (mm)	254	249	132	200	210	226	200	149	152	133	191
Error (%)	5.10	4.77	1.19	2.25	2.57	3.53	2.18	1.14	1.07	0.89	

Welland												
	W-14	**W-15**	**W-16**	**W-17**	**W-18**	**W-19**	**W-20**	**W-21**	**W-22**	**W-23**	**W-24**	**AVERAGE**
AREA (ha)	106	215	87	394	61	90	101	132	110	214	61	
SUPPLY (mm)	646	645	645	645	646	646	646	646	646	646	644	645
RO (mm)	24	40	50	92	71	63	75	75	88	43	114	67
ET (mm)	353	349	347	336	353	345	345	340	332	358	323	344
AGWO (mm)	208	200	194	172	176	186	179	181	177	193	165	
IGWI (mm)	34	32	31	28	28	30	29	29	28	31	26	
Infil (mm)	241	232	225	200	205	216	207	211	206	224	192	212
Error (%)	4.29	3.77	3.54	2.36	2.58	3.28	2.69	3.01	2.94	3.36	2.31	

Twenty-Mile														
	T-25	**T-26**	**T-27**	**T-28**	**T-29**	**T-30**	**T-31**	**T-32**	**T-33**	**T-34**	**T-35**	**T-36**	**T-37**	**AVERAGE**
AREA (ha)	108	440	99	59	101	126	59	312	255	414	373	301	71	
SUPPLY (mm)	645	641	644	646	645	645	644	644	645	645	645	644	645	645
RO (mm)	71	191	96	54	75	93	85	87	82	61	57	86	108	80
ET (mm)	338	282	331	352	342	334	349	338	346	347	349	332	325	340
AGWO (mm)	186	138	174	189	180	172	169	175	173	187	188	180	168	
IGWI (mm)	30	22	28	30	29	28	27	28	28	30	30	29	27	
Infil (mm)	215	161	202	219	209	200	196	203	201	217	218	208	195	203
Error (%)	3.12	1.14	2.32	3.18	3.07	2.83	2.15	2.49	2.52	3.17	3.21	2.78	2.67	

Final Balances and Presented Data- Subwatershed of Interest

Sulphur Watershed - Water Balance					
	S-5	S-6	S-7	S-8	AVERAGE
AREA (ha)	**82**	**99**	**26**	**148**	355
SUPPLY (mm)	646	645	644	643	645
RO (mm)	21	29	257	108	103
ET (mm)	338	337	241	318	308
INFIL (mm)	254	249	132	200	209

Welland											
	W-14	W-15	W-16	W-17	W-18	W-19	W-20	W-21	W-22	W-24	AVERAGE
AREA (ha)	106	215	87	394	61	90	101	132	110	61	1356
SUPPLY (mm)	646	645	645	645	646	646	646	646	646	644	645
RO (mm)	24	40	50	92	71	63	75	75	88	114	69
ET (mm)	353	349	347	336	353	345	345	340	332	323	342
INFIL (mm)	241	232	225	200	205	216	207	211	206	192	213

Twenty-Mile									
	T-25	T-27	T-28	T-29	T-30	T-32	T-33	T-37	AVERAGE
AREA (ha)	108	99	59	101	126	312	255	71	1131
SUPPLY (mm)	645	644	646	645	645	644	645	645	645
RO (mm)	71	96	54	75	93	87	82	108	83
ET (mm)	338	331	352	342	334	338	346	325	338
INFIL (mm)	215	202	219	209	200	203	201	195	205

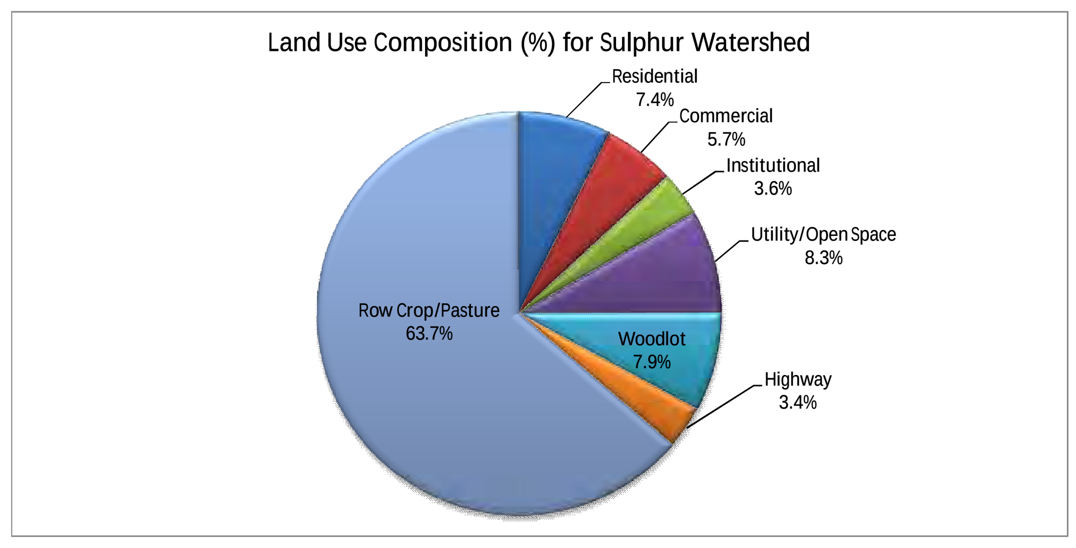
LAND USE COMPOSITION

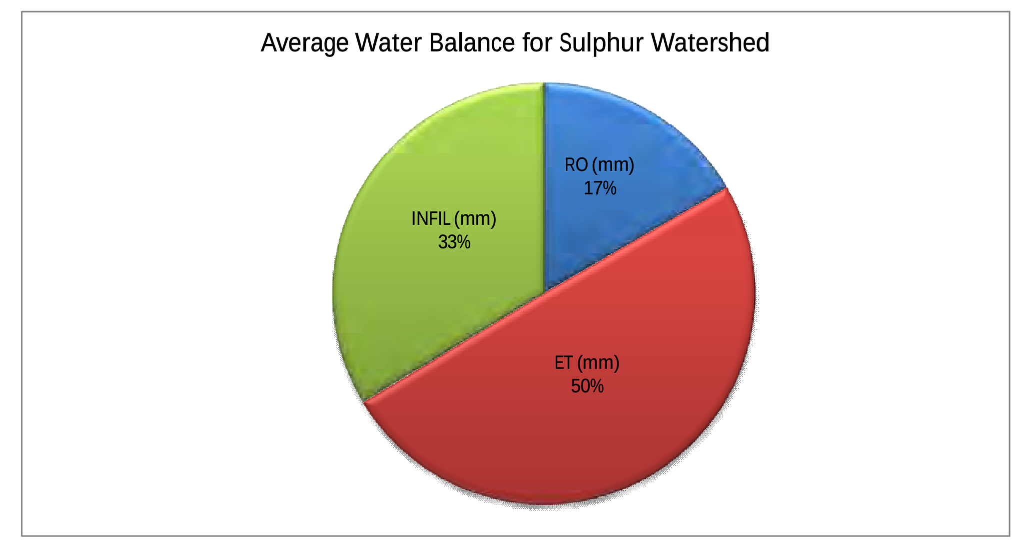
		SULFUR	WELLAND	TWENTY-MILE
Res Low Density	RLD5ab	14.17	11.17	8.49
Res Low Density	RLD5bc	8.61	21.35	25.20
Res Low Density	RLD5cd	3.44	19.28	49.69
Res Med Denisty	RMD5ab	0.00	0.00	0.11
Res Med Denisty	RMD5bc	0.00	0.00	0.47
Res Med Denisty	RMD5cd	0.00	0.00	0.54
Res High Density	RHD5ab	0.00	0.01	0.09
Res High Density	RHD5bc	0.00	0.07	0.36
Res High Density	RHD5cd	0.00	0.08	0.45
Commercial	CSM1bc	20.32	5.50	17.14
Institutional	EIS1ab	6.55	0.90	0.46
Institutional	EIS1bc	4.11	1.45	1.09
Institutional	EIS1cd	2.05	1.25	1.49
Utility/Transport/Parks	OPL0ab	18.80	47.67	31.70
Utility/Transport/Parks	OPL0bc	8.30	111.72	106.72
Utility/Transport/Parks	OPL0cd	2.31	128.31	159.73
Valley Segment	OVL0ab	15.99	56.20	17.79
Valley Segment	OVL0bc	8.58	88.40	52.39
Valley Segment	OVL0cd	3.30	78.41	76.18
Roads	THC0ab	12.19	0.00	0.00
Roads and ROW	THC0cd	0.00	58.36	26.38
Agricultural Tilled	AGT0ab	143.27	186.74	66.43
Agricultural Tilled	AGT0bc	70.55	284.19	186.85
Agricultural Tilled	AGT0cd	12.42	255.00	301.72
Agricultural Pasture/forest	AGPab	0.00	0.00	0.00
Agricultural Pasture/forest	AGPbc	0.00	0.00	0.00
Agricultural Pasture/forest	AGPcd	0.00	0.00	0.00

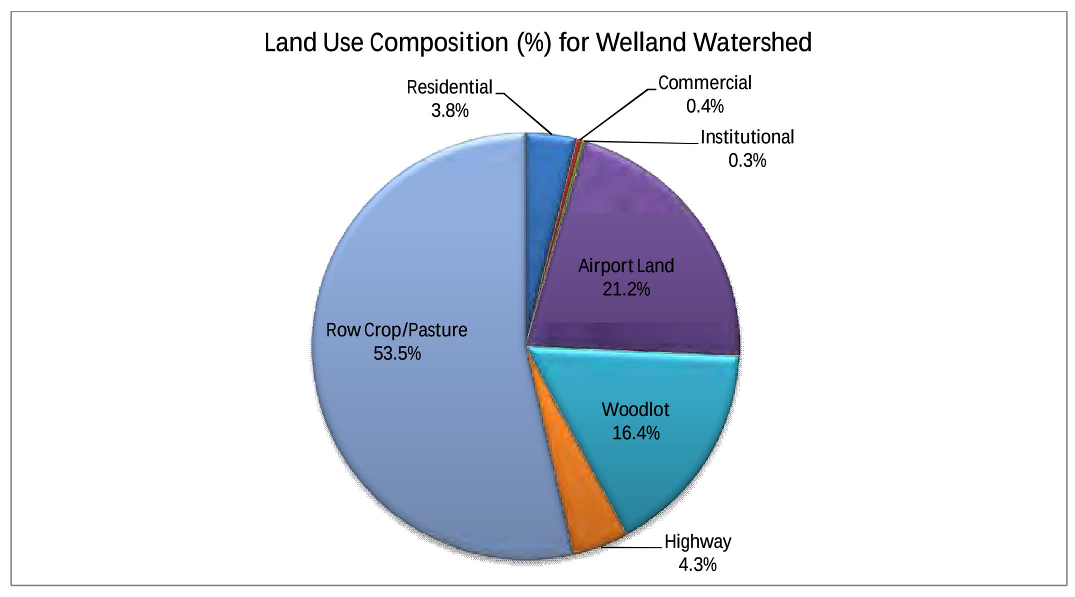
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Res. Low Density	26.22	51.80	83.38
Res. Med Denisty	0.00	0.00	1.12
Res. High Density	0.00	0.17	0.90
Commercial	20.32	5.50	17.14
Institutional	12.71	3.60	3.03
Utility/Transport/Parks	29.41	287.70	298.14
Valley Segment	27.87	223.01	146.36
Roads	12.19	58.36	26.38
Agricultural Tilled	226.24	725.93	555.01
Agricultural Pasture/forest	0.00	0.00	0.00
TOTAL	354.96	1356.07	1131.47

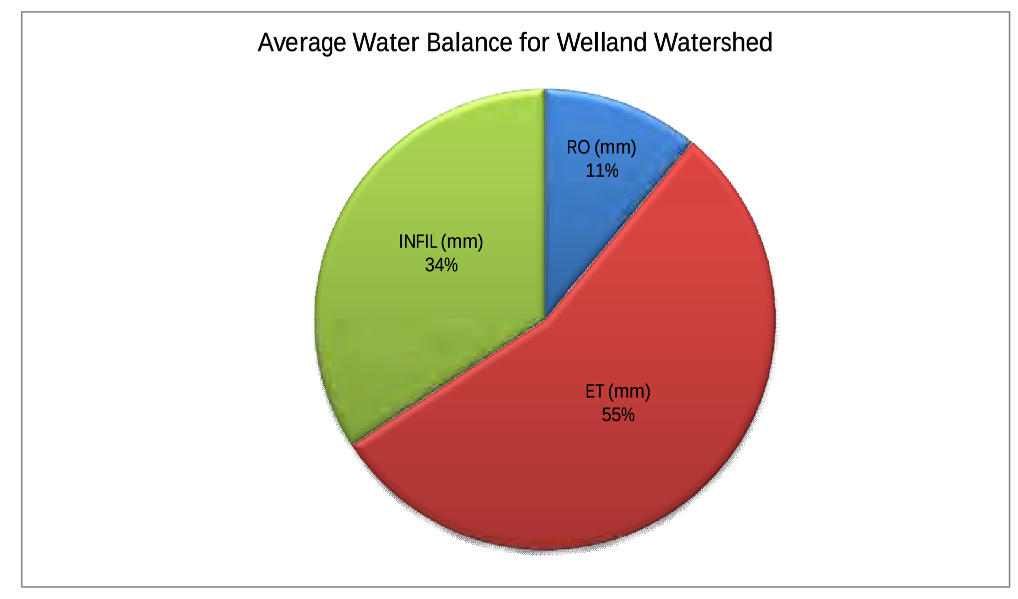
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Residential	26.2	52.0	85.4
Commercial	20.3	5.5	17.1
Institutional	12.7	3.6	3.0
Airport Land	29.4	287.7	298.1
Woodlot	27.9	223.0	146.4
Highway	12.2	58.4	26.4
Row Crop/Pasture	226.2	725.9	555.0
TOTAL	354.96	1356.07	1131.47

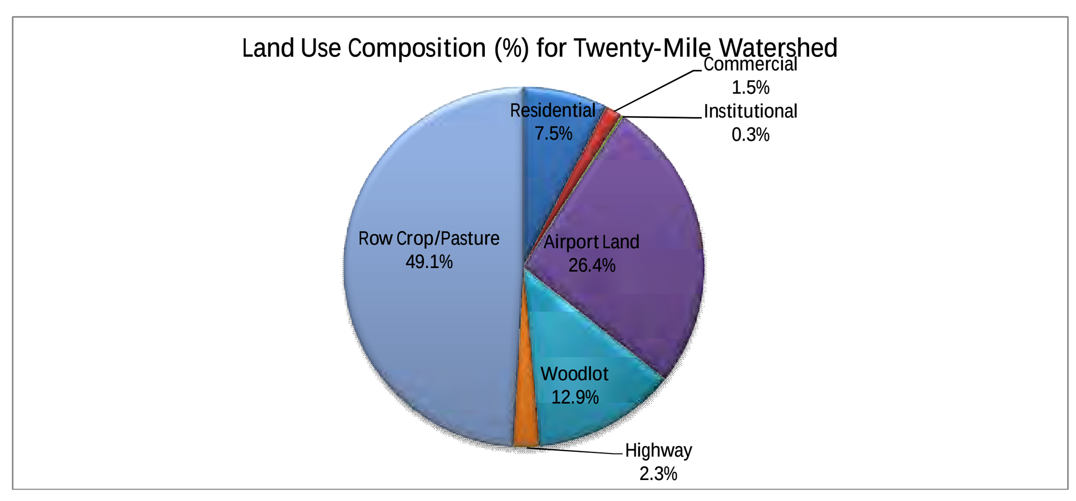
LAND USE COMP	**Land Use Composition (ha) for Sulfur Watershed**	**Land Use Composition (ha) for Welland Watershed**	**Land Use Composition (ha) for Twenty-Mile Watershed**
Residential	26.2	52.0	85.4
Commercial	20.3	5.5	17.1
Institutional	12.7	3.6	3.0
Utility/Open Space	29.4	287.7	298.1
Woodlot	27.9	223.0	146.4
Highway	12.2	58.4	26.4
Row Crop/Pasture	226.2	725.9	555.0

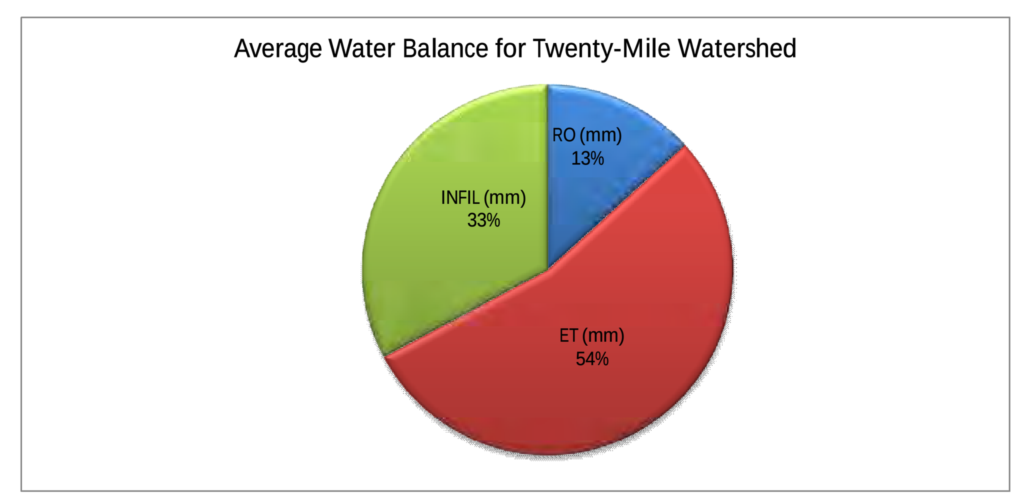












Appendix H: LID Conveyance/ROW Analysis (under separate cover)

LID Conveyance and ROW Analysis Results

In **Figure 1,** runoff flow rates from each roadway are displayed as surface water elevations. Each water surface elevation is based upon the volume of runoff accumulated from a single kilometer of roadway subjected to a 1 in 5 year storm event. Modeling results indicated that the LID conveyance systems would be able to convey runoff volumes contributing from a minimum of 1 km of any road type during such event.

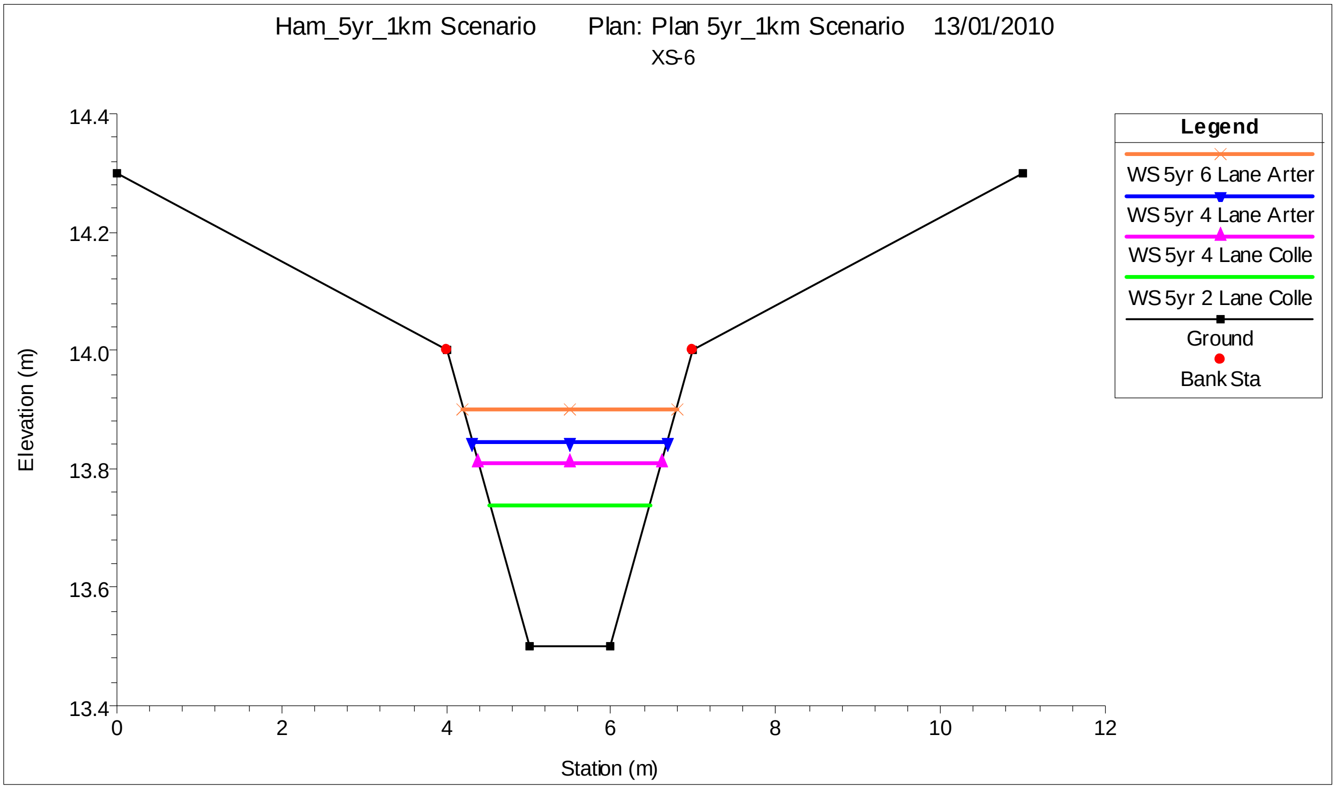


Figure 1 - Surface water elevations for 1km of 6 lane arterial, 4 lane arterial, 4 lane collectors, and 2 lane collectors. (1 in 5 year storm event)

Figure 2 demonstrates runoff flow rates from each roadway as surface water elevations. Each water surface elevation is based upon the volume of runoff accumulated from 2 km of roadway during a 1 in 5 year storm event. Results show that the LID conveyance systems would be able to convey runoff volumes from 2 km of 4 lane arterial, 4 lane collectors, and 2 lane collector roadways during a 1 in 5 year event. Runoff volumes from 2 consecutive kilometers of 6 lane arterial roadways would exceed the capacity of the LID conveyance systems. These results suggest the use of a perforated pipe system (**see Section 3.3**) (or a hybrid grassed-swale, bio-swale and perforated pipe system) may be appropriate for a 6 lane arterial roadways application greater than 2 km.

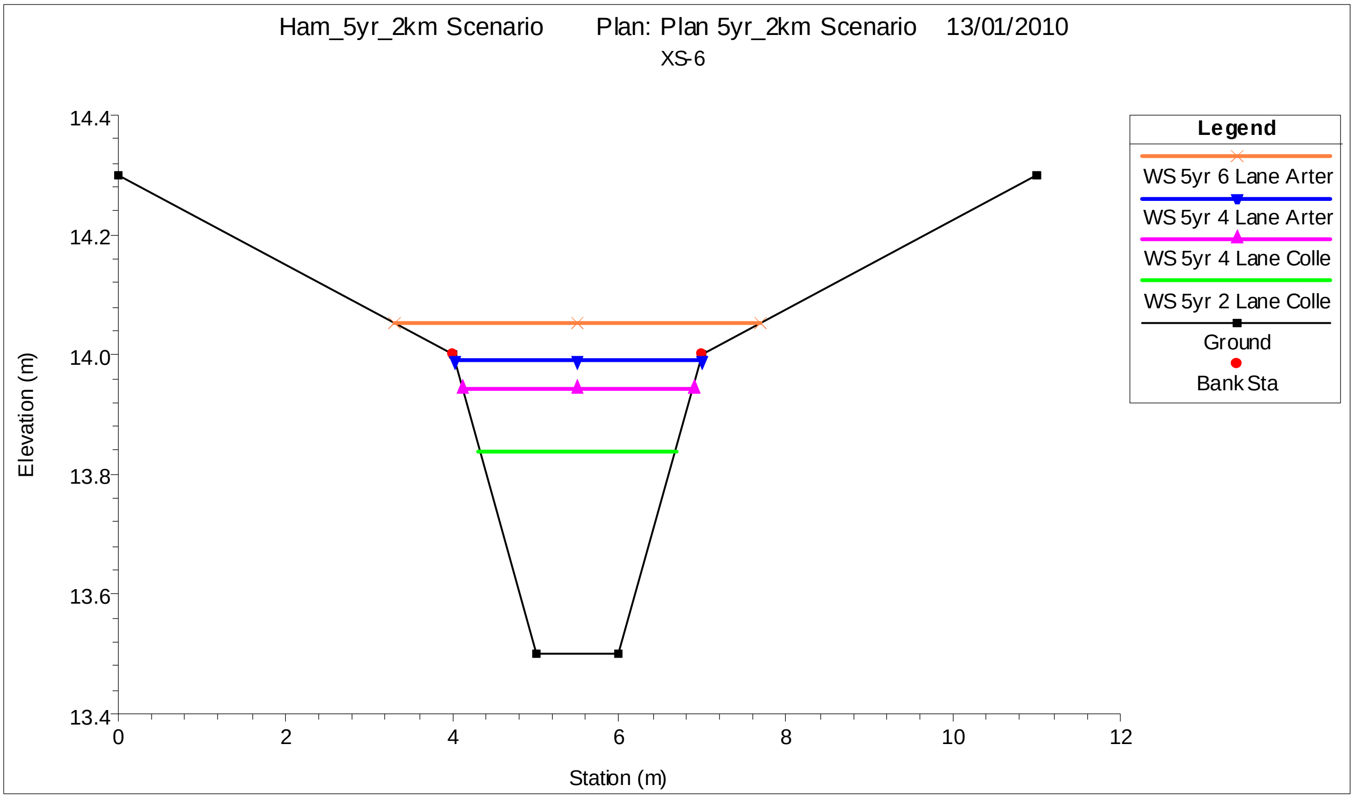


Figure 2 - Surface water elevations for 2km of 6 lane arterial, 4 lane arterial, 4 lane collectors, and 2 lane collectors. (1 in 5 year storm event)

Figure 3 demonstrates runoff from a 1 in 5 year event as surface water elevations from 2.5 km of 4 lane arterial, 4 lane collectors, and 2 lane collectors. Results demonstrated that the LID conveyance systems would be able to convey runoff volumes from 2.5 km of 4 lane collectors and 2 lane collector roadways during a 1 in 5 year event. Runoff volumes from 2.5 consecutive kilometers of 4 lane arterial roadway would exceed the capacity of the LID conveyance systems. These results suggest the use of a perforated pipe system (**see Section 3.3**) (or a hybrid grassed-swale, bio-swale and perforated pipe system) may be appropriate for a 4 lane arterial roadways application greater than 2.5 km.

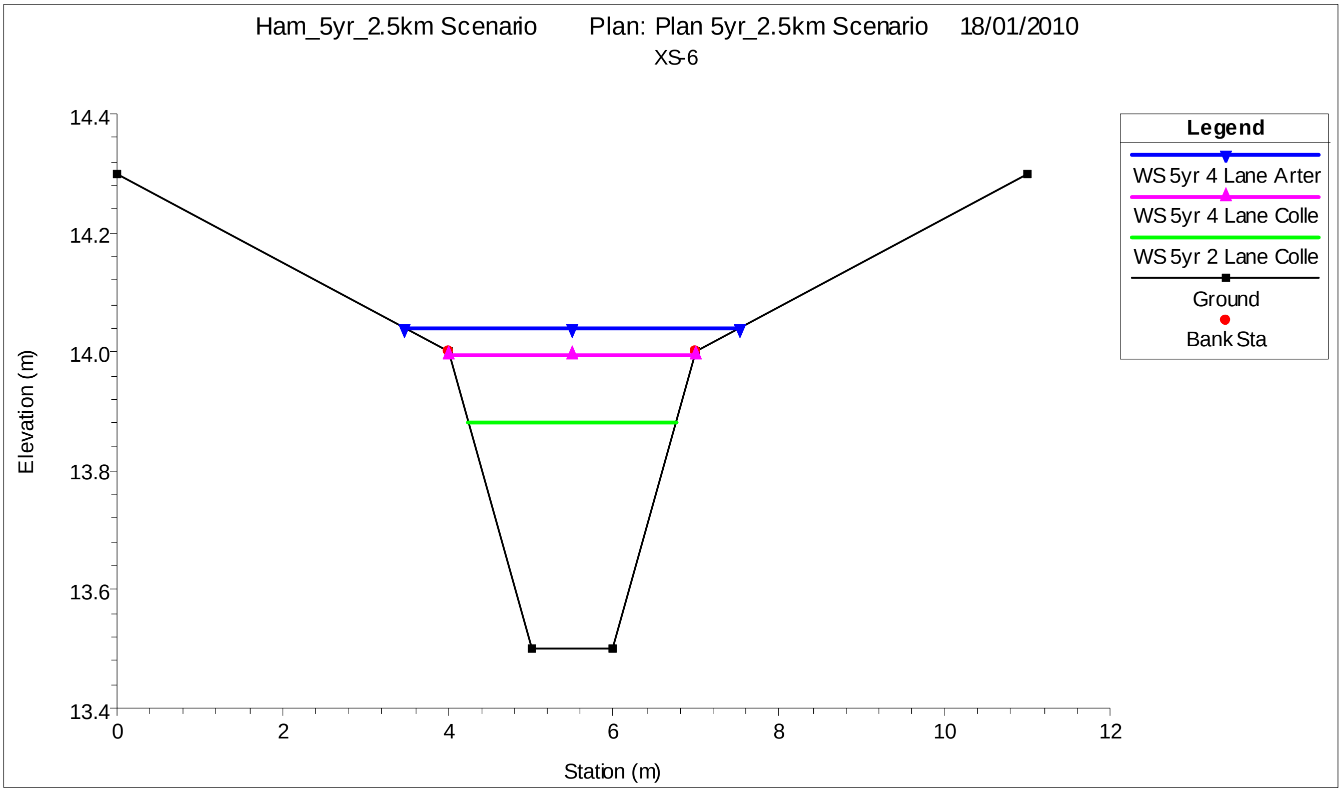


Figure 3 - Surface water elevations for 2.5km of 4 Lane Arterial, 4 Lane Collectors, and 2 Lane Collectors. (1 in 5 year storm event)

Figure 4 demonstrates 1 in 5 year event runoff volumes as surface water elevations from 3 km of 4 lane collector and 2 lane collector roadways. Results conclude that the LID conveyance swales would be able to convey runoff volumes from 3 km of 2 lane collector roadway during a 1 in 5 year event. Runoff volumes from 3 consecutive kilometers of 4 lane collector roadway would exceed the capacity of the LID conveyance systems. These results suggest the use of a perforated pipe system (**see Section 3.3**) (or a hybrid grassed-swale, bio-swale and perforated pipe system) may be appropriate for a 4 lane collector roadways application greater than 3 km.

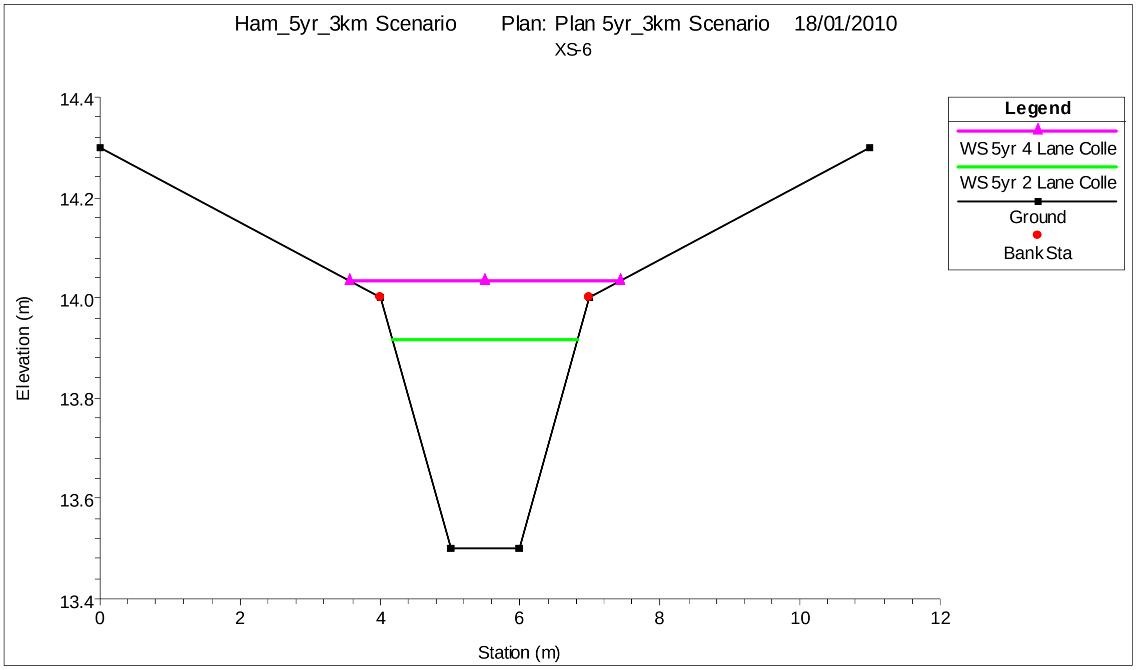


Figure 4 - Surface water elevations for 3 km of 4 lane collectors and 2 lane collectors. (1 in 5 year storm event)

Figure 5 demonstrates the 1 in 5 year event runoff volumes as surface water elevations from 4.5 km of 2 lane collector roadway. Runoff flows from 4.5 consecutive kilometres of 2 lane collector roadway would exceed the capacity of the LID conveyance systems. These results suggest the use of a perforated pipe system (**see Section 3.3**) (or a hybrid grassed-swale, bio-swale and perforated pipe system) may be appropriate for a 2 lane collector roadways application greater than 4.5 km.

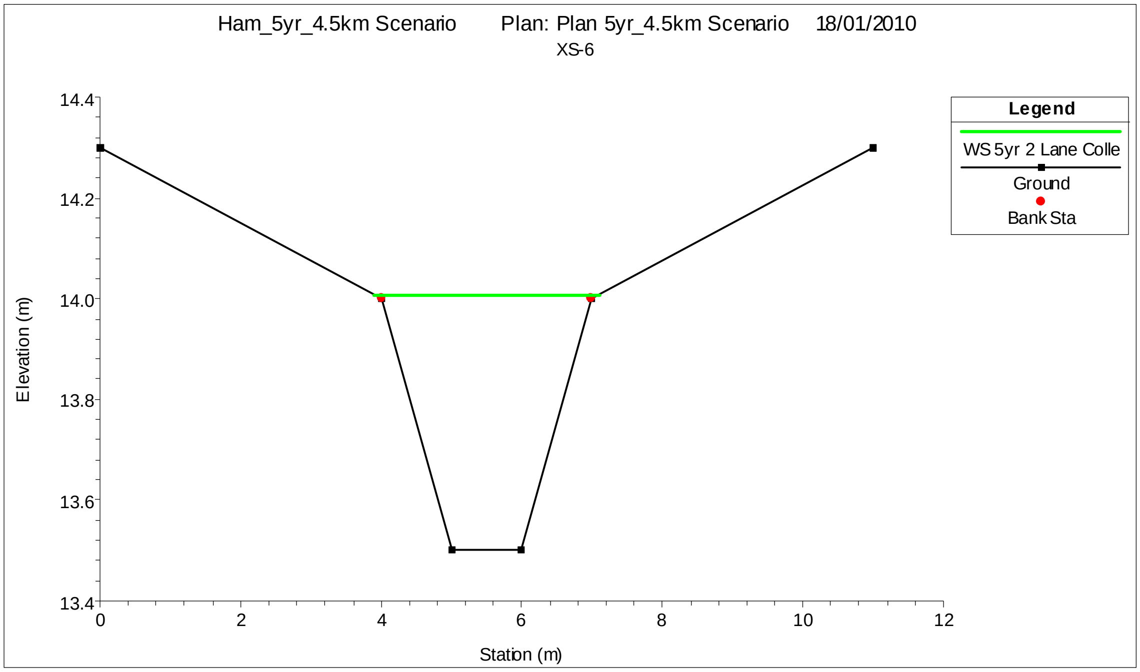


Figure 5 - Surface water elevations for 4.5 km of 2 lane collectors. (1 in 5 year storm event)

Appendix I: Benthic Macroinvertebrate Sampling Results (under separate cover)

	Sites							
	1	2	3	4	5	6	7	8
Family								
AMPHIPODA								
Gammaridae	30	1		11	47	11	138	3
COLECOPTERA								
Dytiscidae (larvae)		2	3	3	7	1	7	
Elmidae (larvae)	1	1						
Haliplidae (larvae)				1	1			
Hydrophilidae (larvae)		1			1			
Hydrophilidae (adult)				1				
DIPTERA								
Ceratopogonidae			1					
Chironomidae (larvae)	23	5	4	4	33	32	11	6
Chironomidae (pupae)	11				5	20		
Empididae (larvae)	1				4	1		
Empididae (pupae)	3				4			
Simuliidae (larvae)	18		9	1	6	11		
Simuliidae (pupae)		1			15	7		
EPHEMEROPTERA								
Leptophlebiidae				2			7	
ISOPODA								
Asellidae						1		
HIRUDINEA					3	2	7	
ODONATA								
Aeshnidae		1						
OLIGOCHAETA	2	8	2					
NEMATODE			20	6	6	1	1	
TRICOPTERA								
Hydropsychidae (larvae)			1		13	5		

Hydroptilidae					6			
Philopotamidae	1							
Leptoceridae	1							
VENEROIDA								
Sphaeriidae					3	1	2	
PLECOPTERA								
Nemouridae	1					6		
Total	92	20	40	29	154	99	173	9
# organisms (identified/sq m)	330.096	71.76	143.52	104.052	552.552	355.212	620.724	32.292
Density Estimates (low)	825.24	179.4	358.8	260.13	1381.38	888.03	1551.81	80.73
Density Estimates (high)	1089.317	236.808	473.616	343.3716	1823.422	1172.2	2048.389	106.5636

Appendix J: Summary of Water Quality Sampling Results (under separate cover)

Table J1: Summary of Water Quality Results for Summer Season (Wet and Dry Events)

Summer																
Contaminates	Site 7 - Reference		Site 1		Site 2		Site 3		Site 4		Site 5		Site 6		Site 8	
	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)	Run 1 (Dry)	Run 9 (Wet)
Copper	1.39	1.6	1.03	2.9	1.19	2.7	1.61	3.3	1.36	1.8	1.66	2.7	1.3	2.7	1.17	2.3
Lead	<0.50	<0.5	<0.50	0.6	<0.50	0.6	<0.50	<0.5	0.64	<0.5	0.73	1.1	<0.50	1.9	<0.50	<0.5
Zinc	15.3	<5.0	252	10.1	19.9	32.5	44.2	29.9	40.1	<5.0	<5.00	12.3	53.4	10.2	<5.00	<5.0
TSS	<10	11	<10	42	<10	10	12	<10	11	<10	12	28	<10	40	65	<10
BOD5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloride	58.1	41.9	47.9	28.3	97	507	779	74	271	189	56.7	42.3	45	29.8	28.1	18.1
Nitrate as N	0.83	1.45	<0.05	1.66	0.56	1.94	0.49	2.51	0.07	2.11	0.15	1.12	0.36	1.12	<0.05	<0.05
Nitrite as N	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Phosphorus	0.06	0.07	0.14	0.13	<0.05	0.05	<0.05	<0.05	0.09	0.16	0.07	0.13	0.07	0.18	0.07	0.06
Ammonia as N	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	<0.02
Total Kjeldahl Nitrogen	0.78	0.66	0.93	1.13	0.39	0.56	0.18	0.6	0.61	0.77	0.61	0.34	0.53	1.01	0.83	0.95

Table J2: Summary of Water Quality Results for Fall Season (Wet Events)

Fall																
Contaminates	Site 7 - Reference		Site 1		Site 2		Site 3		Site 4		Site 5		Site 6		Site 8	
	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)	Run 2 (Wet)	Run 3 (Wet)
Copper	1.86	1.13	<0.80	0.9	1.37	1.01	5.98	1.67	2.51	0.98	1.37	1.17	0.82	0.84	0	1.23
Lead	1.37	<0.50	0.78	<0.50	0.79	<0.50	1.06	0.51	0.86	<0.50	1.3	<0.50	1.04	<0.50	0	<0.50
Zinc	203	<5.00	14.3	6.79	15	18.8	71.1	68.9	30.9	<5.00	7.71	12.7	88.7	8.05	0	<5.00
TSS	20	<10	<10	<10	<10	10	11	<10	23	<10	<10	<10	<10	<10	0	<10
BOD5	<5	<5	<5	<5	<5	<5	7	<5	7	<5	<5	<5	<5	<5	0	<5
Chloride	192	74.3	35.3	88	150	119	695	963	722	335	63.4	68.6	34.8	53.8	0	41.2
Nitrate as N	0.06	0.55	0.23	0.18	0.39	0.87	0.8	0.53	<0.05	<0.05	0.06	0.27	0.06	0.3	0	<0.05
Nitrite as N	<0.05	0.98	<0.05	1.15	<0.05	1.59	<0.05	<0.05	<0.05	4.4	<0.05	0.93	<0.05	0.7	0	0.56
Total Phosphorus	0.08	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	0.08	<0.05	0.11	0.06	0	<0.05
Ammonia as N	0.13	<0.02	0.07	<0.02	0.06	<0.02	0.07	<0.02	0.51	<0.02	0.07	<0.02	0.07	<0.02	0	<0.02
Total Kjeldahl Nitrogen	0.7	0.63	0.46	0.69	0.47	0.47	1.05	0.43	1.48	0.62	0.73	0.64	0.42	0.77	0	0.79

Table J3: Summary of Water Quality Results for Winter Season (Wet and Melt Events)

Winter																
Contaminates	Site 7 - Reference		Site 1		Site 2		Site 3		Site 4		Site 5		Site 6		Site 8	
	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)	Run 4 (Melt/Wet)	Run 5 (Melt)
Copper	0.91	3.99	<0.80	3.43	4.68	4.62	7.07	3.86	1.58	4.89	1.07	5.32	0.98	5.23	1.01	4.85
Lead	<0.50	2.82	<0.50	1.92	1.06	2.2	0.51	2.13	<0.50	4.05	<0.50	3.64	<0.50	4.3	<0.50	1.85
Zinc	25	15	<5.00	11.3	51.4	38.4	127	54.3	16	96.4	<5.00	16.4	5.61	16	5.11	12.5
TSS	<10	116	<10	95	28	58	14	13	<10	94	<10	86	<10	97	<10	69
BOD5	<5	<5	<5	19	58	<5	11	<5	<5	7	<5	10	<5	6	<5	<5
Chloride	81.4	44.6	50.3	60.9	879	73.9	5500	817	479	154	68.7	41.9	42.7	32	42.6	14.2
Nitrate as N	0.23	0.39	0.57	0.79	1.06	0.59	<5.0	0.52	<0.5	0.73	0.32	0.34	0.27	0.36	0.09	0.32
Nitrite as N	<0.05	<0.05	<0.05	<0.05	<0.5	<0.05	<5.0	<0.05	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Phosphorus	<0.05	0.28	<0.05	0.2	0.07	0.12	<0.05	0.09	0.16	0.36	<0.05	0.34	<0.05	0.35	<0.05	0.22
Ammonia as N	0.05	0.16	0.03	0.15	20.5	1.01	3.86	0.41	0.26	0.3	0.11	0.27	0.13	0.17	0.11	0.24
Total Kjeldahl Nitrogen	0.11	1.64	<0.10	2.03	108	4.33	18.7	2.29	0.99	1.94	0.5	2.03	0.41	1.69	0.54	1.63

Table J4: Summary of Water Quality Results for Spring Season (Melt and Dry Events)

Spring																								
Contaminates	Site 7 - Reference			Site 1			Site 2			Site 3			Site 4			Site 5			Site 6			Site 8		
	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)	Run 6 (Melt)	Run 7 (Melt)	Run 8 (Dry)
Copper	1.84	2.5	1.5	2.07	2.9	<1.0	7.38	4	2	4.3	3	1.8	3.79	2.8	1.2	3.79	3.6	1.7	4.22	3.7	1.1	4.29	2.8	1.4
Lead	<0.50	1	<0.5	<0.50	0.6	<0.5	1.33	1.6	<0.5	0.6	<0.5	<0.5	<0.50	<0.5	<0.5	0.57	1.5	0.8	0.75	2.4	<0.5	<0.50	<0.5	<0.5
Zinc	5.48	13.4	162	<5.00	10	37.5	52.7	62.1	55.5	55.1	78.3	25.9	10.6	7.9	<5.0	6.6	8.3	<5.0	8.57	11.2	25.9	9.1	6.8	95.4
TSS	<10	43	<10	22	19	<10	15	63	<10	<10	<10	<10	<10	<10	<10	<10	61	16	10	63	<10	<10	<10	<10
BOD5	27	<5	<5	<5	<5	<5	75	12	<5	<5	<5	<5	7	<5	<5	8	<5	<5	10	<5	<5	5	<5	<5
Chloride	93.8	47.7	75	363	99	58.3	432	238	1750	2420	1420	207	748	441	386	101	66.3	77	32.9	33.2	54.2	42.8	27.5	35.3
Nitrate as N	0.27	0.25	0.38	0.54	0.56	0.43	0.71	0.82	8.13	2.36	1.92	2.85	<0.05	0.9	<0.05	3.64	0.4	0.65	0.28	0.33	<0.05	0.29	0.3	<0.05
Nitrite as N	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.50	<0.50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Phosphorus	0.08	0.16	0.08	0.09	0.12	0.05	0.14	0.23	<0.05	<0.05	<0.05	<0.05	0.43	0.21	<0.05	0.11	0.23	0.07	0.12	0.24	0.1	0.12	0.09	0.07
Ammonia as N	0.14	0.17	<0.02	1.97	0.37	<0.02	4.81	9.77	<0.02	1.71	0.6	0.05	0.93	0.85	<0.02	0.09	0.17	0.05	0.08	0.18	0.03	0.3	0.2	<0.02
Total Kjeldahl Nitrogen	0.6	0.97	0.55	2.96	1.29	0.57	33.5	13.5	0.33	2.84	0.96	0.39	1.86	1.56	0.29	0.87	1.36	1.08	0.66	1.59	0.8	1.37	1.04	0.66