

APPENDIX G
HELP MODEL RESULTS

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MEMORANDUM

TO: Joe Miller
Ambrose McCready

FROM: Julian Kayne

SUBJECT: **HELP Model Evaluation** – Landfill Containment Systems, Sonoma County Central Disposal Site

The proposed engineered alternative and prescriptive landfill liner containment systems for the future development of Landfill-2 (LF-2) and the Rock Extraction Area (REA) were evaluated using the Hydrologic Evaluation of Landfill Performance (HELP) Model. Specifically, the model was used for purpose of sizing the leachate collection and control systems (LCRS) for new cells, and to estimate potential infiltration through bottom liner systems for purpose of a liner equivalency demonstration.

HELP MODEL DESCRIPTION

The HELP model was used to evaluate and compare the proposed landfill containment system hydraulic conductivity and estimated leachate percolation rates with those of the system prescribed by CCR Title 27 Sections 20310 through 20330. The HELP model version 3.07 was used; this version was released in November 1997 and was developed by the EPA under Interagency Agreement No. DW21931425 to the U.S. Army Engineer Waterways Experiment Station (WES).

The HELP model adequately simulates unsaturated vertical flow through a liner system when considering climate, runoff and other features of a site-specific design. It is often used to compare performance such as the rate of infiltration through a system of liner and leachate collection layers or the amount of percolation collected in the leachate collection layer typically found in a model landfill environment. It determines the water balance or amount of leachate movement through the soil/liner profile, whether it is for the bottom liner system or for the final cover system.

The majority of the information presented in this section is taken from the latest HELP Model version 3.07 Engineering Documentation and User Manual (P.R. Schroeder, et. Al), which contains a detailed description of the model's underlying theory.

The HELP model computer program was developed in response to requirements expressed in the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, better known as Superfund) as identified by the EPA

Office of Solid Waste, Washington, DC. The primary purpose of the model is to assist in the comparison of landfill design alternatives as judged by their water balances.

The HELP model was developed to assist municipal and hazardous waste landfill designers and regulators evaluate the hydrologic performance of proposed landfill designs. The model accepts weather, soil and design data and uses solution techniques that account for the effects of surface storage, snowmelt (where applicable), runoff, infiltration, evapotranspiration, vegetative growth, soil moisture storage, lateral subsurface drainage, leachate recirculation, unsaturated vertical drainage, and leakage through soil, geomembrane or composite liners. Landfill systems including various combinations of vegetation, cover soils, waste cells, lateral drain layers, low permeability barrier soils, and synthetic geomembrane liners may be modeled. Results can be expressed as daily, monthly, annual and long-term average water budgets.

LANDFILL BASE LINER AND FINAL COVER SYSTEMS

Separate scenarios for landfill containment system design at the Sonoma County Central Disposal Site were modeled. They include the following:

- Minimum “prescriptive” cell bottom and sideslope bottom liner systems, as required under California Code of Regulations Title 27 (27 CCR) Sections 20310 and 20330, respectively, and a corresponding cover system to “mirror” the bottom liner permeability as required under 27 CCR Section 21090.
- An engineered alternative cell bottom and sideslope bottom liner systems and cover system as proposed by SCS.

Each system was modeled with the final cover in place for a 30-year post-closure period. In addition, HELP analyses were performed for a one-year operational period. This one-year operational period represents a worst-case scenario for leachate production, with one lift of waste in place over the bottom liner system. The systems are described below; the layer systems with their corresponding HELP model layer numbers are included as *Table 1*.

Prescriptive Bottom Liner and Cover Systems

Per CCR Title 27 Sections 20310 through 20330, the prescriptive standard for a landfill bottom liner system consists of the following (from top to bottom):

Base Liner – Cell Bottom

- Waste layer (modeled at a thickness of 100 ft.);
- 24-inch thick soil operations layer;
- 12-inch leachate collection and removal system (LCRS) layer (or a geocomposite drainage net on sideslope);
- 60-mil thick high density polyethylene (HDPE) geomembrane;
- 24-inch low-permeability soil liner layer with a maximum permeability of 1×10^{-7} cm/s.

For the purposes of the HELP model, the slope of the bottom liner system was set at 2.5% to reflect proposed cell excavation grades in LF-2 and the REA.

Base Liner – Cell Sideslopes

Proposed new waste cell excavation sideslopes will be at slopes of 3:1 (H:V) or less. In our experience, the 2-ft thick low permeability soil layer of the prescriptive base liner system is impractical to construct and in California, industry convention is to utilize a GCL in lieu of the soil layer. Therefore, for the purposes of our analyses, we assume the prescriptive standards for base liner on cell sideslopes would consist of the following, from top to bottom:

- Waste layer (modeled at a thickness of 100 ft.);
- 24-inch thick soil operations layer;
- Geocomposite drainage layer;
- 60-mil HDPE geomembrane; and
- GCL.

Final Cover System

For landfill cover systems, the minimum prescriptive requirement under 27 CCR Section 21090 entails a 2-ft thick soil foundation layer over waste, overlain by a 1-foot thick low-permeability soil layer, overlain by a minimum 12-inch thick vegetative soil layer. However, the regulations also require that the cover system equal the hydraulic conductivity of the bottom liner system. Therefore, for purposes of our analyses, we view the “prescriptive” cover for a landfill with composite base liner as described above to consist of the following (top to bottom):

- 18-inch vegetative soil cover layer;
- Geocomposite drainage layer;
- 60-mil HDPE geomembrane;
- Geosynthetic clay layer (GCL);
- 24-inch compacted foundation layer.

For our analysis we assume an 18-inch thick vegetative layer, which technically exceeds the minimum standards. However, in practice, an 18-inch thick vegetative soil layer is the minimum thickness recommended to protect a cover system with HDPE and GCL components from damage due to normal post-closure maintenance activities (mowing, pick-up truck or utility vehicle access for well monitoring, etc.).

Engineered Alternative Bottom Liner and Cover Systems

The currently-proposed engineered alternative base liner and cover system configurations for LF-2 and the REA consist of the following, from top to bottom:

Base Liner – Cell Bottom

- Waste layer (modeled at a thickness of 100 ft.);
- 24-inch thick soil operations layer;
- 12-inch LCRS;
- 60-mil HDPE geomembrane.
- Geocomposite drainage layer;
- 60-mil HDPE geomembrane;
- GCL;
- 12-inch low-permeability soil liner layer with a maximum permeability of 1×10^{-7} cm/s.

Base Liner – Cell Sideslopes

- Waste layer (modeled at a thickness of 100 ft.);
- 24-inch thick soil operations layer
- Geocomposite drainage layer;
- 60-mil thick HDPE geomembrane;
- Geocomposite drainage layer;
- 60-mil HDPE geomembrane; and
- GCL.

Final Cover System

- 18-inch vegetative soil cover layer;
- Geocomposite drainage layer;
- 60-mil HDPE geomembrane;
- GCL;
- 24-inch compacted foundation layer;

LANDFILL BASE LINER SYSTEMS WITH SINGLE 10-FT LIFT AND 6-INCH DAILY COVER

The systems described above were also modeled for a one-year operational period which included a 100-yr storm event. For each system, the final cover was removed and replaced with a 6-inch daily cover. The waste thickness was reduced to a single 10-ft lift. The bottom liner parameters remained the same. This is considered a worst-case scenario, where the expected infiltration rates into the LCRS system (or potential infiltration through the base liner) would be the highest with only one lift in place.

PERFORMANCE EQUIVALENCY COMPARISON

HELP modeling was performed for the following two scenarios for both the prescribed and proposed engineered alternative liner systems: (1) Over a 30-year post closure period with the final cover in place; and (2) over a 1-year operational period with one lift of waste and daily cover.

Design Parameters / Model Input Assumptions

- 2.5% average bottom liner base slope and 500 ft. drainage length on cell floor.
- 33% base side slope (3:1 H:V) and 563 ft. drainage length on cell side slopes.
- Final cover surface slope of 25% (4:1 H:V) with slope length of 800 feet for 2.5% bottom liner model.
- Final cover surface slope of 31% with slope length of 563 feet for 3:1 side slope model.
- Daily cover surface slopes equivalent to bottom slope (i.e. either 2.5% or 3:1).
- 30-year simulation period for final cap.
- 1-year simulated operational period that included a 100-year 24-hour storm event of 5.77 inches for the 10-foot lift of waste model runs.
- Synthetically-generated climate data (evapotranspiration, precipitation, temperature, humidity, and solar radiation) was developed using HELP model weather generation coefficients for San Francisco, California, and climate data for Cotati, California. An annual average precipitation of 30.96 inches was used as a basis for rain-event generation.
- Bare ground condition for bottom liner with one 10-foot lift of waste and a 6-inch daily cover.
- Fair grass ground condition for the final cap liner system.
- Initial moisture content of the layers specified was determined by the program for the waste and synthetic layers. Optimum moisture contents for compacted on-site soils were used as initial moisture contents of the soil layers.
- Geomembrane pinhole density of one defect (hole diameter = 1mm) per acre. This value has been accepted by California agencies for use in the HELP model and is considered by SCS to be reasonable when comparing leakage rates between alternate liner configurations.
- Geomembrane installation defect density of five defects (each hole size = 1 cm²) per acre. Based on our experience, this value has been accepted by California agencies for use in the HELP model.
- Good geomembrane placement quality = 3 (on a scale of 1 to 5, with 5 being the best)
- As the HELP model does not permit impermeable barriers to be placed on top of one another, the 60-mil HDPE geomembrane on top of the GCL was modeled as one layer, using the formula $K_{\text{effective}} = (T_1 + T_2) / (T_1/K_1 + T_2/K_2)$, with K = hydraulic conductivity and T = layer thickness. This gave a $K_{\text{effective}}$ of 7×10^{-14} for the combined 60-mil HDPE/GCL layer.

The following assumptions were made in using the HELP model, and are based on SCS's best judgment and industry practice for this application:

- Since the surface area of each cell will vary, the slope used in the analysis is calculated as an approximate average value, but considered to be on the conservative side in terms of leachate generation (flatter slopes result in greater stormwater infiltration generating more leachate).
- 30-year simulation was used for the final cap system to obtain results in equilibrium condition and to meet the typical 30-year post-closure care requirements.
- Drainage length on the final slope surfaces of the Landfill is conservatively assumed and without considering the location of future access roads which would shorten this length.
- All leachate generated is assumed to be collected at the low area (2.5% cell floor) or sump in the base liner.

RESULTS OF HELP MODEL ANALYSIS

The quantitative performance of the landfill bottom liner to control generated leachate and of the final cover systems to control leachate generation into the waste mass were evaluated using the HELP Model, Version 3.07. The results of HELP modeling are presented in **Table 2** (Final cover with 30-year precipitation) and **Table 3** (Ten-foot lift of with one-year precipitation). Printouts of the HELP model output data are included in **Attachment A**.

Anticipated average annual leachate generation during site operations can be used as a basis for LCRS sizing. The average volume of leachate expected to be captured in the new LCRS systems at LF-2 and the REA for the engineered alternative designs are as follows:

- Cell sideslope areas: 121,000 gallons/acre-year.
- Cell floor areas: 36,375 gallons/acre-year.

Results of modeling can also be used for comparing containment features between the engineered alternative and prescriptive liner systems. For the 30-year final closure simulations, the estimated percolation/leakage rate through the cell floor low-permeability soil layer were an order of magnitude less for the proposed engineered alternative liner system (annual average of 0.003 cubic feet/acre-year) than for the prescribed liner system (annual average of 0.024 cubic feet/acre-year).

For the 1-year 10-ft waste simulations, the estimated percolation/leakage rate through the cell floor low-permeability soil layer was also an order of magnitude less for the proposed engineered alternative base liner system (annual average of 0.03 cubic feet/acre-year) than for the prescriptive liner system (annual average of 0.33 cubic feet/acre-year). These values convert to 1×10^{-5} inches/year and 1×10^{-4} inches/year respectively; these percolation rates are for use as the infiltration rates for the companion MULTIMED contaminant dispersion modeling.

For the 30-year final closure simulations, the estimated percolation/leakage rate through the engineered alternative slope liner system were five times less (annual average of 8.44 cubic feet/acre-year) than for the prescribed sideslope liner system (annual average of 47.64 cubic feet/acre-year). These averages are greatly influenced by the first year values: the results were 248.1 cubic feet/acre and 1,443.7 cubic feet/acre in the proposed and prescribed liner systems, respectively. This is largely a function of the model set-up, which was initialized with 100 feet of waste. The excess moisture from the waste completely drained in the first year, artificially raising these values. As this placement of waste is not a realistic scenario, this surge of leachate is not likely to occur. The modeled average percolation/leakage rate through the engineered alternative side slope liner system for years 2 through 30 were 0.18 cubic feet/acre-year and 0.19 cubic feet/acre-year, respectively; these values are for all purposes equivalent.

For the 1-year 10-ft waste simulations, the estimated percolation/leakage rate through the engineered alternative sideslope liner system was five times less than for the prescribed sideslope liner system (211.41 cubic feet/acre).

Percolation through the synthetic liners is a function of the number of defects attributed to the liner (pinholes and placement). Conservative values were chosen for this modeling; if a “perfect” liner is assumed (i.e. no pinholes and excellent placement), there is virtually no leachate flow through the synthetic liners.

LIMITATIONS

Results of HELP modeling, and in particular, estimated infiltration and leakage rates presented herein are offered for comparison purposes, to show differences between bottom liner prescriptive standards and engineered alternatives. The model outputs presented are not intended to be interpreted as actual liquids volumes that will be released to the environment. A comprehensive water quality monitoring program is currently in effect and will be continued to detect potential releases from existing landfill cells and new cells at the Central Disposal Site, in accordance with requirements issued by the North Coast Regional Water Quality Control Board.

REFERENCE

U.S. Environmental Protection Agency (November 1997). The Hydrologic Evaluation of Landfill Performance (HELP) Model – User’s Guide and Engineering Documentation For Version 3, by Paul R. Schroeder, Tamsen S. Dozier, Paul A. Zappi, Bruce M. McEnroe, John W. Sjoström and R. Lee Peyton, Environmental Laboratory, U.S. Army Corps of Engineers, Waterways Experimental Station, Interagency Agreement No. DW21931425.

TABLES

Table 1. HELP model layer numbering and description

2.5 % Bottom with Final Cover

LAYER #	PROPOSED 2.5%	THICKNESS (INCHES)	LAYER #	PRESCRIBED 2.5%	THICKNESS (INCHES)
1	VEGETATIVE COVER	18	1	VEGETATIVE COVER	18
2	GEOCOMPOSITE DRAINAGE LAYER	0.2	2	GEOCOMPOSITE DRAINAGE LAYER	0.2
3	60 mil HDPE + GCL LAYER	0.1	3	60 mil HDPE + GCL LAYER	0.1
4	FOUNDATION LAYER	24	4	FOUNDATION LAYER	24
5	WASTE	1200	5	WASTE	1200
6	OPERATIONS LAYER	24	6	OPERATIONS LAYER	24
7	LCRS GRANULAR LAYER	12	7	LCRS GRANULAR LAYER	0.2
8	60 mil HDPE LAYER	0.06	8	60 mil HDPE LAYER	0.06
9	GEOCOMPOSITE DRAINAGE LAYER	0.2			
10	60 mil HDPE + GCL LAYER	0.1			
11	LOW-PERM SOIL LAYER	12	9	LOW-PERM SOIL LAYER	24

3:1 Side Slopes with Final Cover

LAYER #	PROPOSED 3:1	THICKNESS (INCHES)	LAYER #	PRESCRIBED 3:1	THICKNESS (INCHES)
1	VEGETATIVE COVER	18	1	VEGETATIVE COVER	18
2	GEOCOMPOSITE DRAINAGE LAYER	0.2	2	GEOCOMPOSITE DRAINAGE LAYER	0.2
3	60 mil HDPE + GCL LAYER	0.1	3	60 mil HDPE + GCL LAYER	0.1
4	FOUNDATION LAYER	24	4	FOUNDATION LAYER	24
5	WASTE	1200	5	WASTE	1200
6	OPERATIONS LAYER	24	6	OPERATIONS LAYER	24
7	GEOCOMPOSITE DRAINAGE LAYER	0.2	7	GEOCOMPOSITE DRAINAGE LAYER	0.2
8	60 mil HDPE LAYER	0.06			
9	GEOCOMPOSITE DRAINAGE LAYER	0.2			
10	60 mil HDPE + GCL LAYER	0.1	8	60 mil HDPE + GCL LAYER	0.1

2.5 % Bottom with Daily Cover

LAYER #	PROPOSED 2.5%	THICKNESS (INCHES)	LAYER #	PRESCRIBED 2.5%	THICKNESS (INCHES)
1	DAILY COVER	6	1	DAILY COVER	6
2	WASTE	120	2	WASTE	120
3	OPERATIONS LAYER	24	3	OPERATIONS LAYER	24
4	LCRS GRANULAR LAYER	12	4	LCRS GRANULAR LAYER	12
5	60 mil HDPE LAYER	0.06	5	60 mil HDPE LAYER	0.06
6	GEOCOMPOSITE DRAINAGE LAYER	0.2			
7	60 mil HDPE + GCL LAYER	0.1			
8	LOW-PERM SOIL LAYER	12	6	LOW-PERM SOIL LAYER	24

3:1 Side Slopes with Final Cover

LAYER #	PROPOSED 3:1	THICKNESS (INCHES)	LAYER #	PRESCRIBED 3:1	THICKNESS (INCHES)
1	DAILY COVER	6	1	DAILY COVER	6
2	WASTE	120	2	WASTE	120
3	OPERATIONS LAYER	24	3	OPERATIONS LAYER	24
4	GEOCOMPOSITE DRAINAGE LAYER	0.2	4	GEOCOMPOSITE DRAINAGE LAYER	0.2
5	60 mil HDPE LAYER	0.06			
6	GEOCOMPOSITE DRAINAGE LAYER	0.2			
7	60 mil HDPE + GCL LAYER	0.1	5	60 mil HDPE + GCL LAYER	0.1

**TABLE 2. FINAL CLOSURE - 30 YEARS
AVERAGE ANNUAL TOTALS IN CUBIC FEET/ACRE**

	2.5% BOTTOM	
	Proposed Liner	Prescribed Liner
PRECIPITATION	113484.70	113484.70
RUNOFF	12747.70	12747.70
EVAPOTRANSPIRATION	48116.30	48116.30
VEGETATIVE COVER		
GEOCOMPOSITE DRAINAGE LAYER		
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	52628.38	52628.38
60 mil HDPE LAYER		
GEOSYNTHETIC CLAY LAYER		
FOUNDATION LAYER		
PERCOLATION/LEAKAGE THROUGH FOUNDATION LAYER	0.32	0.32
WASTE - 100 FT		
OPERATIONS LAYER		
PERCOLATION/LEAKAGE THROUGH OPERATIONS LAYER	1161.93	1161.93
LCRS GRANULAR LAYER		
LATERAL DRAINAGE COLLECTED FROM LCRS GRANULAR LAYER	360.22	1158.99
60 mil HDPE LAYER		
PERCOLATION/LEAKAGE THROUGH 60 mil HDPE LAYER	798.80	NA
GEOCOMPOSITE DRAINAGE LAYER		
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	798.80	NA
60 mil HDPE LAYER		
GEOSYNTHETIC CLAY LAYER		
LOW-PERM SOIL LAYER		
PERCOLATION/LEAKAGE THROUGH LOW-PERM SOIL LAYER	0.003	0.024

	3:1 SIDE SLOPE		
	Proposed Liner	Prescribed Liner	
PRECIPITATION	113484.70	113484.70	
RUNOFF	13491.69	13491.69	
EVAPOTRANSPIRATION	48080.53	48080.53	
VEGETATIVE COVER			
GEOCOMPOSITE DRAINAGE LAYER			
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	51920.25	51920.25	
60 mil HDPE LAYER			
GEOSYNTHETIC CLAY LAYER			
FOUNDATION LAYER			
PERCOLATION/LEAKAGE THROUGH FOUNDATION LAYER	0.21	0.21	
WASTE - 100 FT			
OPERATIONS LAYER			
PERCOLATION/LEAKAGE THROUGH OPERATIONS LAYER	1161.81	1161.81	
GEOCOMPOSITE DRAINAGE LAYER			
LATERAL DRAINAGE COLLECTED GEOCOMPOSITE DRAINAGE LAYER	1114.11	1161.80	
60 mil HDPE LAYER			
PERCOLATION/LEAKAGE THROUGH 60 mil HDPE LAYER	47.70	NA	
GEOCOMPOSITE DRAINAGE LAYER			
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	39.25	NA	
60 mil HDPE LAYER			
GEOSYNTHETIC CLAY LAYER			
PERCOLATION/LEAKAGE THROUGH 60 mil HDPE + GCL LAYER	8.44	47.64	
	FIRST YEAR	248.10	1423.65
	AVERAGE OF YEARS TWO THROUGH THIRTY	0.18	0.19

TABLE 3. 10-FT WASTE PLACEMENT - ONE YEAR
 AVERAGE ANNUAL TOTALS IN CUBIC FEET/ACRE

	2.5% Bottom	
	Proposed Liner	Prescribed Liner
PRECIPITATION	156053.70	156053.70
RUNOFF	89550.10	89550.10
EVAPOTRANSPIRATION	47265.15	47265.15
DAILY COVER		
WASTE - 10 FT		
OPERATIONS LAYER		
PERCOLATION/LEAKAGE THROUGH OPERATIONS LAYER	17572.13	17572.13
LCRS GRANULAR LAYER		
LATERAL DRAINAGE COLLECTED FROM LCRS GRANULAR LAYER	4822.59	17411.62
60 mil HDPE LAYER		
PERCOLATION/LEAKAGE THROUGH 60 mil HDPE LAYER	12644.39	NA
GEOCOMPOSITE DRAINAGE LAYER		
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	12619.94	NA
60 mil HDPE LAYER		
GEOSYNTHETIC CLAY LAYER		
LOW-PERM SOIL LAYER		
PERCOLATION/LEAKAGE THROUGH LOW-PERM SOIL LAYER	0.03	0.33

	3:1 SLOPE	
	Proposed Liner	Prescribed Liner
PRECIPITATION	156053.70	156053.70
RUNOFF	91733.14	91733.14
EVAPOTRANSPIRATION	46058.09	46058.09
DAILY COVER		
WASTE - 10 FT		
OPERATIONS LAYER		
PERCOLATION/LEAKAGE THROUGH OPERATIONS LAYER	17240.65	17240.65
GEOCOMPOSITE DRAINAGE LAYER		
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	16246.97	16247.74
60 mil HDPE LAYER		
PERCOLATION/LEAKAGE THROUGH 60 mil HDPE LAYER	1000.95	NA
GEOCOMPOSITE DRAINAGE LAYER		
LATERAL DRAINAGE COLLECTED FROM GEOCOMPOSITE DRAINAGE LAYER	796.80	NA
60 mil HDPE LAYER		
GEOSYNTHETIC CLAY LAYER		
PERCOLATION/LEAKAGE THROUGH 60 mil HDPE + GCL LAYER	211.41	1000.18

ATTACHMENT A
HELP MODEL PRINTOUTS

LAYER 2

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS	=	120.00	INCHES
POROSITY	=	0.6710	VOL/VOL
FIELD CAPACITY	=	0.2920	VOL/VOL
WILTING POINT	=	0.0770	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000005000E-02	CM/SEC

LAYER 3

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 4

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	12.00	INCHES
POROSITY	=	0.3970	VOL/VOL
FIELD CAPACITY	=	0.0320	VOL/VOL
WILTING POINT	=	0.0130	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0300	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	1.000000000000	CM/SEC
SLOPE	=	2.50	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 5

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 35

THICKNESS	=	0.06	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL

WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.199999996000E-12	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 6

TYPE 3 - BARRIER SOIL LINER
MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.4510	VOL/VOL
FIELD CAPACITY	=	0.4190	VOL/VOL
WILTING POINT	=	0.3320	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4510	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000001000E-06	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #24 WITH BARE GROUND CONDITIONS, A SURFACE SLOPE OF 2.% AND A SLOPE LENGTH OF 500. FEET.

SCS RUNOFF CURVE NUMBER	=	96.70	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	5.100	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.242	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.136	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	57.444	INCHES
TOTAL INITIAL WATER	=	57.444	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM COTATI CALIFORNIA

STATION LATITUDE	=	38.33	DEGREES
MAXIMUM LEAF AREA INDEX	=	2.00	

START OF GROWING SEASON (JULIAN DATE) = 78
 END OF GROWING SEASON (JULIAN DATE) = 328
 EVAPORATIVE ZONE DEPTH = 18.0 INCHES
 AVERAGE ANNUAL WIND SPEED = 5.50 MPH
 AVERAGE 1ST QUARTER RELATIVE HUMIDITY = 75.00 %
 AVERAGE 2ND QUARTER RELATIVE HUMIDITY = 71.00 %
 AVERAGE 3RD QUARTER RELATIVE HUMIDITY = 73.00 %
 AVERAGE 4TH QUARTER RELATIVE HUMIDITY = 74.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA
 AND STATION LATITUDE = 38.33 DEGREES

MONTHLY TOTALS (IN INCHES) FOR YEAR 1

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	14.40	7.75	3.79	2.98	1.01	0.34
	0.00	0.00	0.00	0.99	4.83	6.90
RUNOFF	10.382	5.204	1.617	0.824	0.108	0.029
	0.000	0.000	0.000	0.241	2.572	3.692

EVAPOTRANSPIRATION	1.275	1.624	2.820	2.348	2.772	0.077
	0.235	0.000	0.000	0.068	0.595	1.208
PERCOLATION/LEAKAGE THROUGH LAYER 3	2.0458	1.5959	1.1316	0.0058	0.0044	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0574
LATERAL DRAINAGE COLLECTED FROM LAYER 4	1.9340	1.6321	1.1831	0.0058	0.0044	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0372
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON TOP OF LAYER 3	0.021	0.013	0.009	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.001
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 3	0.022	0.011	0.013	0.001	0.001	0.000
	0.000	0.000	0.000	0.000	0.000	0.002
AVERAGE DAILY HEAD ON TOP OF LAYER 5	0.317	0.296	0.194	0.001	0.001	0.000
	0.000	0.000	0.000	0.000	0.000	0.006
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 5	0.137	0.201	0.226	0.002	0.002	0.000
	0.000	0.000	0.000	0.000	0.000	0.008

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	24.669	89550.102	57.38
EVAPOTRANSPIRATION	13.021	47265.152	30.29
PERC./LEAKAGE THROUGH LAYER 3	4.840807	17572.129	11.26
AVG. HEAD ON TOP OF LAYER 3	0.0037		
DRAINAGE COLLECTED FROM LAYER 4	4.7966	17411.621	11.16
PERC./LEAKAGE THROUGH LAYER 6	0.000090	0.328	0.00
AVG. HEAD ON TOP OF LAYER 5	0.0679		

LATERAL DRAINAGE COLLECTED FROM LAYER 4

TOTALS	1.9340	1.6321	1.1831	0.0058	0.0044	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0372
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 6

TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0205	0.0135	0.0094	0.0001	0.0001	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0007
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 5

AVERAGES	0.3171	0.2963	0.1940	0.0010	0.0007	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0061
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - ONE LIFT PRESCRIBED 2.5% BOTTOM

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	42.99 (0.000)	156053.7	100.00
RUNOFF	24.669 (0.0000)	89550.10	57.384
EVAPOTRANSPIRATION	13.021 (0.0000)	47265.15	30.288
PERCOLATION/LEAKAGE THROUGH LAYER 3	4.84081 (0.00000)	17572.129	11.26031
AVERAGE HEAD ON TOP OF LAYER 3	0.004 (0.000)		
LATERAL DRAINAGE COLLECTED FROM LAYER 4	4.79659 (0.00000)	17411.621	11.15745
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.00009 (0.00000)	0.328	0.00021
AVERAGE HEAD ON TOP OF LAYER 5	0.068 (0.000)		
CHANGE IN WATER STORAGE	0.503 (0.0000)	1826.51	1.170

PEAK DAILY VALUES FOR YEARS	1 THROUGH	1
	(INCHES)	(CU. FT.)
PRECIPITATION	5.77	20945.100
RUNOFF	5.441	19751.1914
PERCOLATION/LEAKAGE THROUGH LAYER 3	0.136729	496.32715
AVERAGE HEAD ON TOP OF LAYER 3	0.123	
DRAINAGE COLLECTED FROM LAYER 4	0.12027	436.57095
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.000002	0.00774
AVERAGE HEAD ON TOP OF LAYER 5	0.611	
MAXIMUM HEAD ON TOP OF LAYER 5	1.194	
LOCATION OF MAXIMUM HEAD IN LAYER 4 (DISTANCE FROM DRAIN)	16.5 FEET	
SNOW WATER	0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.3424
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.1187

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 1

LAYER	(INCHES)	(VOL/VOL)
1	2.1156	0.3526
2	35.8434	0.2987
3	8.7600	0.3650
4	0.4041	0.0337
5	0.0000	0.0000
6	10.8240	0.4510
SNOW WATER	0.000	

LAYER 2

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	25.00	PERCENT
DRAINAGE LENGTH	=	800.0	FEET

LAYER 3

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 4

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 5

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS = 1200.00 INCHES
POROSITY = 0.6710 VOL/VOL
FIELD CAPACITY = 0.2920 VOL/VOL
WILTING POINT = 0.0770 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.100000005000E-02 CM/SEC

LAYER 6

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 24.00 INCHES
POROSITY = 0.3650 VOL/VOL
FIELD CAPACITY = 0.3050 VOL/VOL
WILTING POINT = 0.2020 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3650 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.600000021000E-05 CM/SEC

LAYER 7

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 12.00 INCHES
POROSITY = 0.3970 VOL/VOL
FIELD CAPACITY = 0.0320 VOL/VOL
WILTING POINT = 0.0130 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0300 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 1.000000000000 CM/SEC
SLOPE = 2.50 PERCENT
DRAINAGE LENGTH = 720.0 FEET

LAYER 8

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 35

THICKNESS = 0.06 INCHES
POROSITY = 0.0000 VOL/VOL
FIELD CAPACITY = 0.0000 VOL/VOL
WILTING POINT = 0.0000 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.199999996000E-12 CM/SEC
FML PINHOLE DENSITY = 1.00 HOLES/ACRE
FML INSTALLATION DEFECTS = 5.00 HOLES/ACRE

FML PLACEMENT QUALITY = 3 - GOOD

LAYER 9

TYPE 3 - BARRIER SOIL LINER
MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.4510	VOL/VOL
FIELD CAPACITY	=	0.4190	VOL/VOL
WILTING POINT	=	0.3320	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4510	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000001000E-06	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT
SOIL DATA BASE USING SOIL TEXTURE #10 WITH A
FAIR STAND OF GRASS, A SURFACE SLOPE OF 25.%,
AND A SLOPE LENGTH OF 800. FEET.

SCS RUNOFF CURVE NUMBER	=	85.90	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	4.500	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.164	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.448	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	393.208	INCHES
TOTAL INITIAL WATER	=	393.208	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
COTATI CALIFORNIA

STATION LATITUDE	=	38.33	DEGREES
MAXIMUM LEAF AREA INDEX	=	2.00	
START OF GROWING SEASON (JULIAN DATE)	=	78	
END OF GROWING SEASON (JULIAN DATE)	=	328	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	5.50	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	75.00	%

AVERAGE 2ND QUARTER RELATIVE HUMIDITY = 71.00 %
 AVERAGE 3RD QUARTER RELATIVE HUMIDITY = 73.00 %
 AVERAGE 4TH QUARTER RELATIVE HUMIDITY = 74.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA
 AND STATION LATITUDE = 38.33 DEGREES

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.02	90822.609	100.00
RUNOFF	3.328	12079.622	13.30
EVAPOTRANSPIRATION	9.544	34645.895	38.15
DRAINAGE COLLECTED FROM LAYER 2	12.1977	44277.531	48.75
PERC./LEAKAGE THROUGH LAYER 4	0.000073	0.265	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	9.600089	34848.324	38.37

AVG. HEAD ON TOP OF LAYER 6	0.0066		
DRAINAGE COLLECTED FROM LAYER 7	9.5759	34760.590	38.27
PERC./LEAKAGE THROUGH LAYER 9	0.000173	0.627	0.00
AVG. HEAD ON TOP OF LAYER 8	0.1353		
CHANGE IN WATER STORAGE	-9.626	-34941.629	-38.47
SOIL WATER AT START OF YEAR	393.208	1427345.120	
SOIL WATER AT END OF YEAR	383.582	1392403.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.028	0.00

ANNUAL TOTALS FOR YEAR 2

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	35.53	128973.883	100.00
RUNOFF	4.154	15079.125	11.69
EVAPOTRANSPIRATION	13.313	48326.402	37.47
DRAINAGE COLLECTED FROM LAYER 2	16.9681	61594.242	47.76
PERC./LEAKAGE THROUGH LAYER 4	0.000100	0.364	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000100	0.364	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.356	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.095	3973.747	3.08
SOIL WATER AT START OF YEAR	383.582	1392403.500	

SOIL WATER AT END OF YEAR	384.677	1396377.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

ANNUAL TOTALS FOR YEAR 3

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	23.71	86067.297	100.00
RUNOFF	1.123	4075.348	4.74
EVAPOTRANSPIRATION	12.739	46241.027	53.73
DRAINAGE COLLECTED FROM LAYER 2	10.7562	39045.160	45.37
PERC./LEAKAGE THROUGH LAYER 4	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.243	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.908	-3294.451	-3.83
SOIL WATER AT START OF YEAR	384.677	1396377.120	
SOIL WATER AT END OF YEAR	383.769	1393082.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.035	0.00

ANNUAL TOTALS FOR YEAR 4

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.94	94162.227	100.00
RUNOFF	2.326	8444.968	8.97
EVAPOTRANSPIRATION	13.849	50271.344	53.39
DRAINAGE COLLECTED FROM LAYER 2	9.2770	33675.422	35.76
PERC./LEAKAGE THROUGH LAYER 4	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0015		
PERC./LEAKAGE THROUGH LAYER 6	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.200	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.488	1770.245	1.88
SOIL WATER AT START OF YEAR	383.769	1393082.750	
SOIL WATER AT END OF YEAR	384.257	1394853.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.048	0.00

ANNUAL TOTALS FOR YEAR 5

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.02	119862.570	100.00
RUNOFF	2.676	9712.868	8.10
EVAPOTRANSPIRATION	16.032	58196.062	48.55

DRAINAGE COLLECTED FROM LAYER 2	14.7913	53692.504	44.80
PERC./LEAKAGE THROUGH LAYER 4	0.000090	0.325	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0024		
PERC./LEAKAGE THROUGH LAYER 6	0.000090	0.325	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.331	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.479	-1739.116	-1.45
SOIL WATER AT START OF YEAR	384.257	1394853.000	
SOIL WATER AT END OF YEAR	383.778	1393113.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.078	0.00

ANNUAL TOTALS FOR YEAR 6

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	23.63	85776.914	100.00
RUNOFF	1.763	6400.874	7.46
EVAPOTRANSPIRATION	11.167	40536.996	47.26
DRAINAGE COLLECTED FROM LAYER 2	10.8293	39310.301	45.83
PERC./LEAKAGE THROUGH LAYER 4	0.000064	0.233	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000064	0.233	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.230	0.00

PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.002	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.130	-471.585	-0.55
SOIL WATER AT START OF YEAR	383.778	1393113.870	
SOIL WATER AT END OF YEAR	383.648	1392642.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.095	0.00

ANNUAL TOTALS FOR YEAR 7

	INCHES	CU. FEET	PERCENT
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	8.215	29818.727	19.11
EVAPOTRANSPIRATION	14.029	50925.637	32.63
DRAINAGE COLLECTED FROM LAYER 2	19.4311	70534.930	45.20
PERC./LEAKAGE THROUGH LAYER 4	0.000115	0.416	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0032		
PERC./LEAKAGE THROUGH LAYER 6	0.000115	0.416	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.404	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.315	4774.013	3.06
SOIL WATER AT START OF YEAR	383.648	1392642.250	
SOIL WATER AT END OF YEAR	384.963	1397416.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.005	0.00

ANNUAL TOTALS FOR YEAR 8

	INCHES	CU. FEET	PERCENT
PRECIPITATION	41.82	151806.594	100.00
RUNOFF	5.519	20034.719	13.20
EVAPOTRANSPIRATION	15.691	56959.312	37.52
DRAINAGE COLLECTED FROM LAYER 2	21.0574	76438.414	50.35
PERC./LEAKAGE THROUGH LAYER 4	0.000142	0.516	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0043		
PERC./LEAKAGE THROUGH LAYER 6	0.000142	0.516	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.522	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.448	-1626.344	-1.07
SOIL WATER AT START OF YEAR	384.963	1397416.250	
SOIL WATER AT END OF YEAR	384.515	1395790.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.030	0.00

ANNUAL TOTALS FOR YEAR 9

	INCHES	CU. FEET	PERCENT
PRECIPITATION	24.22	87918.609	100.00
RUNOFF	3.871	14053.185	15.98
EVAPOTRANSPIRATION	8.312	30174.352	34.32
DRAINAGE COLLECTED FROM LAYER 2	12.3939	44989.742	51.17
PERC./LEAKAGE THROUGH LAYER 4	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.269	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.358	-1298.882	-1.48
SOIL WATER AT START OF YEAR	384.515	1395790.000	
SOIL WATER AT END OF YEAR	384.157	1394491.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.057	0.00

ANNUAL TOTALS FOR YEAR 10

	INCHES	CU. FEET	PERCENT
PRECIPITATION	36.89	133910.719	100.00
RUNOFF	5.117	18575.980	13.87
EVAPOTRANSPIRATION	14.974	54357.301	40.59
DRAINAGE COLLECTED FROM LAYER 2	16.7750	60893.133	45.47

PERC./LEAKAGE THROUGH LAYER 4	0.000105	0.382	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0030		
PERC./LEAKAGE THROUGH LAYER 6	0.000105	0.381	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.370	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.023	83.860	0.06
SOIL WATER AT START OF YEAR	384.157	1394491.120	
SOIL WATER AT END OF YEAR	384.180	1394574.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.082	0.00

ANNUAL TOTALS FOR YEAR 11

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	34.79	126287.734	100.00
RUNOFF	3.124	11339.646	8.98
EVAPOTRANSPIRATION	13.871	50350.734	39.87
DRAINAGE COLLECTED FROM LAYER 2	17.1098	62108.395	49.18
PERC./LEAKAGE THROUGH LAYER 4	0.000102	0.371	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000102	0.372	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.365	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00

AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.686	2488.535	1.97
SOIL WATER AT START OF YEAR	384.180	1394574.870	
SOIL WATER AT END OF YEAR	384.866	1397063.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.052	0.00

ANNUAL TOTALS FOR YEAR 12

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	29.97	108791.094	100.00
RUNOFF	2.828	10267.266	9.44
EVAPOTRANSPIRATION	11.860	43051.770	39.57
DRAINAGE COLLECTED FROM LAYER 2	17.0028	61720.039	56.73
PERC./LEAKAGE THROUGH LAYER 4	0.000103	0.372	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000103	0.372	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.382	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.721	-6248.368	-5.74
SOIL WATER AT START OF YEAR	384.866	1397063.500	
SOIL WATER AT END OF YEAR	383.145	1390815.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

ANNUAL WATER BUDGET BALANCE 0.0000 0.004 0.00

ANNUAL TOTALS FOR YEAR 13

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	27.79	100877.703	100.00
RUNOFF	2.362	8574.205	8.50
EVAPOTRANSPIRATION	12.652	45925.582	45.53
DRAINAGE COLLECTED FROM LAYER 2	11.3302	41128.727	40.77
PERC./LEAKAGE THROUGH LAYER 4	0.000071	0.259	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0019		
PERC./LEAKAGE THROUGH LAYER 6	0.000071	0.259	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.237	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.446	5248.921	5.20
SOIL WATER AT START OF YEAR	383.145	1390815.120	
SOIL WATER AT END OF YEAR	384.591	1396064.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.028	0.00

ANNUAL TOTALS FOR YEAR 14

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	32.80	119064.023	100.00
RUNOFF	5.034	18274.594	15.35
EVAPOTRANSPIRATION	12.482	45308.133	38.05
DRAINAGE COLLECTED FROM LAYER 2	16.5231	59978.695	50.38
PERC./LEAKAGE THROUGH LAYER 4	0.000098	0.354	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000098	0.354	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.369	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.239	-4497.730	-3.78
SOIL WATER AT START OF YEAR	384.591	1396064.000	
SOIL WATER AT END OF YEAR	383.352	1391566.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.035	0.00

ANNUAL TOTALS FOR YEAR 15

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.74	93436.203	100.00
RUNOFF	1.601	5810.086	6.22
EVAPOTRANSPIRATION	12.072	43820.574	46.90
DRAINAGE COLLECTED FROM LAYER 2	12.3237	44735.160	47.88
PERC./LEAKAGE THROUGH LAYER 4	0.000078	0.284	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		

PERC./LEAKAGE THROUGH LAYER 6	0.000078	0.284	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.279	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.256	-929.877	-1.00
SOIL WATER AT START OF YEAR	383.352	1391566.250	
SOIL WATER AT END OF YEAR	383.095	1390636.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.021	0.00

ANNUAL TOTALS FOR YEAR 16

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	26.49	96158.703	100.00
RUNOFF	1.861	6756.787	7.03
EVAPOTRANSPIRATION	14.625	53089.187	55.21
DRAINAGE COLLECTED FROM LAYER 2	8.8024	31952.891	33.23
PERC./LEAKAGE THROUGH LAYER 4	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.187	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.002	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.201	4359.589	4.53

SOIL WATER AT START OF YEAR	383.095	1390636.370	
SOIL WATER AT END OF YEAR	384.296	1394996.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.065	0.00

ANNUAL TOTALS FOR YEAR 17

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	26.33	95577.883	100.00
RUNOFF	2.083	7562.613	7.91
EVAPOTRANSPIRATION	12.489	45333.508	47.43
DRAINAGE COLLECTED FROM LAYER 2	11.6734	42374.316	44.33
PERC./LEAKAGE THROUGH LAYER 4	0.000072	0.263	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000072	0.263	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.260	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.085	307.190	0.32
SOIL WATER AT START OF YEAR	384.296	1394996.000	
SOIL WATER AT END OF YEAR	384.381	1395303.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.011	0.00

ANNUAL TOTALS FOR YEAR 18

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	32.00	116160.016	100.00
RUNOFF	5.285	19185.789	16.52
EVAPOTRANSPIRATION	12.051	43745.707	37.66
DRAINAGE COLLECTED FROM LAYER 2	13.6039	49382.234	42.51
PERC./LEAKAGE THROUGH LAYER 4	0.000086	0.313	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0025		
PERC./LEAKAGE THROUGH LAYER 6	0.000086	0.314	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.290	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.059	3845.908	3.31
SOIL WATER AT START OF YEAR	384.381	1395303.120	
SOIL WATER AT END OF YEAR	385.441	1399149.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.084	0.00

ANNUAL TOTALS FOR YEAR 19

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.22	102438.602	100.00

RUNOFF	2.184	7928.140	7.74
EVAPOTRANSPIRATION	14.090	51145.715	49.93
DRAINAGE COLLECTED FROM LAYER 2	13.5369	49139.062	47.97
PERC./LEAKAGE THROUGH LAYER 4	0.000088	0.320	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0024		
PERC./LEAKAGE THROUGH LAYER 6	0.000088	0.320	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.333	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.591	-5774.567	-5.64
SOIL WATER AT START OF YEAR	385.441	1399149.120	
SOIL WATER AT END OF YEAR	383.850	1393374.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.082	0.00

ANNUAL TOTALS FOR YEAR 20

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.68	93218.398	100.00
RUNOFF	1.708	6200.997	6.65
EVAPOTRANSPIRATION	16.117	58504.953	62.76
DRAINAGE COLLECTED FROM LAYER 2	8.4453	30656.295	32.89
PERC./LEAKAGE THROUGH LAYER 4	0.000055	0.199	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000055	0.199	0.00

AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.199	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.591	-2144.124	-2.30
SOIL WATER AT START OF YEAR	383.850	1393374.500	
SOIL WATER AT END OF YEAR	383.259	1391230.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.076	0.00

ANNUAL TOTALS FOR YEAR 21

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	29.64	107593.195	100.00
RUNOFF	3.842	13947.329	12.96
EVAPOTRANSPIRATION	11.129	40398.434	37.55
DRAINAGE COLLECTED FROM LAYER 2	12.7229	46184.187	42.92
PERC./LEAKAGE THROUGH LAYER 4	0.000075	0.272	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		
PERC./LEAKAGE THROUGH LAYER 6	0.000075	0.272	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.251	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.946	7063.035	6.56
SOIL WATER AT START OF YEAR	383.259	1391230.370	

SOIL WATER AT END OF YEAR	385.205	1398293.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.039	0.00

ANNUAL TOTALS FOR YEAR 22

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	33.55	121786.508	100.00
RUNOFF	3.657	13275.800	10.90
EVAPOTRANSPIRATION	10.751	39027.906	32.05
DRAINAGE COLLECTED FROM LAYER 2	20.4923	74387.047	61.08
PERC./LEAKAGE THROUGH LAYER 4	0.000122	0.444	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0034		
PERC./LEAKAGE THROUGH LAYER 6	0.000122	0.444	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.455	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.351	-4904.732	-4.03
SOIL WATER AT START OF YEAR	385.205	1398293.370	
SOIL WATER AT END OF YEAR	383.854	1393388.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.027	0.00

ANNUAL TOTALS FOR YEAR 23

	INCHES	CU. FEET	PERCENT
PRECIPITATION	31.45	114163.516	100.00
RUNOFF	3.472	12604.649	11.04
EVAPOTRANSPIRATION	11.707	42495.504	37.22
DRAINAGE COLLECTED FROM LAYER 2	15.3883	55859.672	48.93
PERC./LEAKAGE THROUGH LAYER 4	0.000110	0.398	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0033		
PERC./LEAKAGE THROUGH LAYER 6	0.000110	0.398	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.388	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.882	3203.280	2.81
SOIL WATER AT START OF YEAR	383.854	1393388.750	
SOIL WATER AT END OF YEAR	384.736	1396592.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.019	0.00

ANNUAL TOTALS FOR YEAR 24

	INCHES	CU. FEET	PERCENT
PRECIPITATION	28.54	103600.195	100.00
RUNOFF	2.879	10452.098	10.09
EVAPOTRANSPIRATION	15.556	56467.719	54.51

DRAINAGE COLLECTED FROM LAYER 2	11.9698	43450.324	41.94
PERC./LEAKAGE THROUGH LAYER 4	0.000071	0.258	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000071	0.258	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.267	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.865	-6770.136	-6.53
SOIL WATER AT START OF YEAR	384.736	1396592.000	
SOIL WATER AT END OF YEAR	382.871	1389821.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.078	0.00

ANNUAL TOTALS FOR YEAR 25

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	34.75	126142.516	100.00
RUNOFF	4.747	17229.979	13.66
EVAPOTRANSPIRATION	12.678	46019.871	36.48
DRAINAGE COLLECTED FROM LAYER 2	17.3216	62877.582	49.85
PERC./LEAKAGE THROUGH LAYER 4	0.000109	0.394	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0032		
PERC./LEAKAGE THROUGH LAYER 6	0.000109	0.394	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.390	0.00

PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.004	14.623	0.01
SOIL WATER AT START OF YEAR	382.871	1389821.870	
SOIL WATER AT END OF YEAR	382.875	1389836.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.067	0.00

ANNUAL TOTALS FOR YEAR 26

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.87	104798.102	100.00
RUNOFF	1.744	6330.828	6.04
EVAPOTRANSPIRATION	15.743	57148.461	54.53
DRAINAGE COLLECTED FROM LAYER 2	9.7350	35337.879	33.72
PERC./LEAKAGE THROUGH LAYER 4	0.000062	0.223	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0016		
PERC./LEAKAGE THROUGH LAYER 6	0.000062	0.223	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.202	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.648	5980.727	5.71
SOIL WATER AT START OF YEAR	382.875	1389836.500	
SOIL WATER AT END OF YEAR	384.523	1395817.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.003	0.00

ANNUAL TOTALS FOR YEAR 27

	INCHES	CU. FEET	PERCENT
PRECIPITATION	38.81	140880.297	100.00
RUNOFF	6.190	22471.395	15.95
EVAPOTRANSPIRATION	13.020	47263.695	33.55
DRAINAGE COLLECTED FROM LAYER 2	18.8654	68481.414	48.61
PERC./LEAKAGE THROUGH LAYER 4	0.000108	0.393	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0031		
PERC./LEAKAGE THROUGH LAYER 6	0.000108	0.393	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.386	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.734	2663.455	1.89
SOIL WATER AT START OF YEAR	384.523	1395817.250	
SOIL WATER AT END OF YEAR	385.256	1398480.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.060	0.00

ANNUAL TOTALS FOR YEAR 28

	INCHES	CU. FEET	PERCENT
PRECIPITATION	38.15	138484.500	100.00
RUNOFF	4.946	17954.131	12.96
EVAPOTRANSPIRATION	16.577	60173.512	43.45
DRAINAGE COLLECTED FROM LAYER 2	17.9684	65225.211	47.10
PERC./LEAKAGE THROUGH LAYER 4	0.000108	0.392	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0029		
PERC./LEAKAGE THROUGH LAYER 6	0.000108	0.392	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.406	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.341	-4868.729	-3.52
SOIL WATER AT START OF YEAR	385.256	1398480.620	
SOIL WATER AT END OF YEAR	383.915	1393611.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.031	0.00

ANNUAL TOTALS FOR YEAR 29

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.86	122911.828	100.00
RUNOFF	4.702	17068.969	13.89
EVAPOTRANSPIRATION	10.723	38923.719	31.67
DRAINAGE COLLECTED FROM LAYER 2	19.2405	69842.844	56.82

PERC./LEAKAGE THROUGH LAYER 4	0.000112	0.408	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0033		
PERC./LEAKAGE THROUGH LAYER 6	0.000112	0.408	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.407	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.003	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.806	-2924.117	-2.38
SOIL WATER AT START OF YEAR	383.915	1393611.870	
SOIL WATER AT END OF YEAR	383.110	1390687.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.002	0.00

ANNUAL TOTALS FOR YEAR 30

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	37.69	136814.703	100.00
RUNOFF	3.010	10928.112	7.99
EVAPOTRANSPIRATION	17.813	64660.180	47.26
DRAINAGE COLLECTED FROM LAYER 2	16.4127	59577.922	43.55
PERC./LEAKAGE THROUGH LAYER 4	0.000100	0.361	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0027		
PERC./LEAKAGE THROUGH LAYER 6	0.000099	0.361	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0001	0.356	0.00
PERC./LEAKAGE THROUGH LAYER 9	0.000001	0.004	0.00

AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.454	1648.056	1.20
SOIL WATER AT START OF YEAR	383.110	1390687.750	
SOIL WATER AT END OF YEAR	383.564	1392335.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.079	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 30

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION						
TOTALS	6.11 0.03	5.10 0.13	3.98 0.27	2.06 1.52	1.04 3.96	0.21 6.87
STD. DEVIATIONS	2.75 0.05	3.41 0.19	1.95 0.45	1.40 1.51	0.96 2.43	0.27 3.45
RUNOFF						
TOTALS	0.946 0.000	0.759 0.000	0.147 0.003	0.046 0.084	0.010 0.419	0.000 1.098
STD. DEVIATIONS	1.046 0.000	0.880 0.000	0.197 0.016	0.125 0.151	0.029 0.562	0.000 0.936
EVAPOTRANSPIRATION						
TOTALS	1.248 0.049	1.722 0.120	2.825 0.136	2.744 0.604	1.422 0.953	0.299 1.134
STD. DEVIATIONS	0.066 0.083	0.156 0.183	0.420 0.207	1.208 0.626	0.972 0.389	0.401 0.115
LATERAL DRAINAGE COLLECTED FROM LAYER 2						
TOTALS	4.0186 0.0000	2.9459 0.0000	1.4835 0.0000	0.3072 0.0978	0.0229 1.3968	0.0001 4.2254

STD. DEVIATIONS	1.9409	2.1261	1.2769	0.4621	0.1023	0.0003
	0.0000	0.0000	0.0000	0.2314	1.5459	2.2281

PERCOLATION/LEAKAGE THROUGH LAYER 4

TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 6

TOTALS	0.1192	0.0997	0.1012	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.6525	0.5458	0.5545	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

LATERAL DRAINAGE COLLECTED FROM LAYER 7

TOTALS	0.1114	0.1001	0.1030	0.0048	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.6098	0.5482	0.5640	0.0263	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 9

TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0080	0.0066	0.0029	0.0006	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0002	0.0029	0.0086

STD. DEVIATIONS	0.0039	0.0048	0.0025	0.0009	0.0002	0.0000
	0.0000	0.0000	0.0000	0.0004	0.0032	0.0044

DAILY AVERAGE HEAD ON TOP OF LAYER 6

AVERAGES	0.0010	0.0007	0.0010	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0052	0.0037	0.0056	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 8

AVERAGES	0.0183	0.0182	0.0169	0.0008	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.1000	0.0995	0.0925	0.0045	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - PRESCRIBED LINER - FINAL COVER -

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 30

	INCHES		CU. FEET	PERCENT
PRECIPITATION	31.26	(5.468)	113484.7	100.00
RUNOFF	3.512	(1.6304)	12747.96	11.233
EVAPOTRANSPIRATION	13.255	(2.2062)	48116.30	42.399
LATERAL DRAINAGE COLLECTED FROM LAYER 2	14.49818	(3.65828)	52628.383	46.37487
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.00009	(0.00002)	0.323	0.00028
AVERAGE HEAD ON TOP OF LAYER 3	0.002	(0.001)		
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.32009	(1.75271)	1161.925	1.02386
AVERAGE HEAD ON TOP OF LAYER 6	0.000	(0.001)		
LATERAL DRAINAGE COLLECTED FROM LAYER 7	0.31928	(1.74830)	1158.998	1.02128
PERCOLATION/LEAKAGE THROUGH LAYER 9	0.00001	(0.00003)	0.024	0.00002
AVERAGE HEAD ON TOP OF LAYER 8	0.005	(0.025)		
CHANGE IN WATER STORAGE	-0.321	(2.0550)	-1166.97	-1.028

PEAK DAILY VALUES FOR YEARS	1 THROUGH	30
	(INCHES)	(CU. FT.)
PRECIPITATION	5.77	20945.100
RUNOFF	4.415	16026.6279
DRAINAGE COLLECTED FROM LAYER 2	1.35580	4921.56396
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.000016	0.05828
AVERAGE HEAD ON TOP OF LAYER 3	0.250	
MAXIMUM HEAD ON TOP OF LAYER 3	0.312	
LOCATION OF MAXIMUM HEAD IN LAYER 2 (DISTANCE FROM DRAIN)	0.0 FEET	
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.140086	508.51361
AVERAGE HEAD ON TOP OF LAYER 6	0.096	
DRAINAGE COLLECTED FROM LAYER 7	0.12202	442.94162
PERCOLATION/LEAKAGE THROUGH LAYER 9	0.000002	0.00785
AVERAGE HEAD ON TOP OF LAYER 8	0.620	
MAXIMUM HEAD ON TOP OF LAYER 8	1.211	
LOCATION OF MAXIMUM HEAD IN LAYER 7 (DISTANCE FROM DRAIN)	17.0 FEET	
SNOW WATER	0.01	37.4433
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.3480
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.1360

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 30

LAYER	(INCHES)	(VOL/VOL)
1	4.4322	0.2462
2	0.0034	0.0170
3	0.0000	0.0000
4	8.7600	0.3650
5	350.4000	0.2920
6	8.7600	0.3650
7	0.3840	0.0320
8	0.0000	0.0000
9	10.8240	0.4510
SNOW WATER	0.000	

LAYER 2

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	25.00	PERCENT
DRAINAGE LENGTH	=	800.0	FEET

LAYER 3

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 4

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 5

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS = 1200.00 INCHES
POROSITY = 0.6710 VOL/VOL
FIELD CAPACITY = 0.2920 VOL/VOL
WILTING POINT = 0.0770 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.100000005000E-02 CM/SEC

LAYER 6

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 24.00 INCHES
POROSITY = 0.3650 VOL/VOL
FIELD CAPACITY = 0.3050 VOL/VOL
WILTING POINT = 0.2020 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3650 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.600000021000E-05 CM/SEC

LAYER 7

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 12.00 INCHES
POROSITY = 0.3970 VOL/VOL
FIELD CAPACITY = 0.0320 VOL/VOL
WILTING POINT = 0.0130 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0300 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 1.000000000000 CM/SEC
SLOPE = 2.50 PERCENT
DRAINAGE LENGTH = 720.0 FEET

LAYER 8

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 35

THICKNESS = 0.06 INCHES
POROSITY = 0.0000 VOL/VOL
FIELD CAPACITY = 0.0000 VOL/VOL
WILTING POINT = 0.0000 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.199999996000E-12 CM/SEC
FML PINHOLE DENSITY = 1.00 HOLES/ACRE
FML INSTALLATION DEFECTS = 5.00 HOLES/ACRE

FML PLACEMENT QUALITY = 3 - GOOD

LAYER 9

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0100	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	2.50	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 10

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3 - GOOD	

LAYER 11

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	12.00	INCHES
POROSITY	=	0.4510	VOL/VOL
FIELD CAPACITY	=	0.4190	VOL/VOL
WILTING POINT	=	0.3320	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4510	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000001000E-06	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT
 SOIL DATA BASE USING SOIL TEXTURE #10 WITH A
 FAIR STAND OF GRASS, A SURFACE SLOPE OF 25. %
 AND A SLOPE LENGTH OF 800. FEET.

SCS RUNOFF CURVE NUMBER = 85.90
 FRACTION OF AREA ALLOWING RUNOFF = 100.0 PERCENT
 AREA PROJECTED ON HORIZONTAL PLANE = 1.000 ACRES
 EVAPORATIVE ZONE DEPTH = 18.0 INCHES
 INITIAL WATER IN EVAPORATIVE ZONE = 4.500 INCHES
 UPPER LIMIT OF EVAPORATIVE STORAGE = 7.164 INCHES
 LOWER LIMIT OF EVAPORATIVE STORAGE = 2.448 INCHES
 INITIAL SNOW WATER = 0.000 INCHES
 INITIAL WATER IN LAYER MATERIALS = 387.798 INCHES
 TOTAL INITIAL WATER = 387.798 INCHES
 TOTAL SUBSURFACE INFLOW = 0.00 INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
 COTATI CALIFORNIA

STATION LATITUDE = 38.33 DEGREES
 MAXIMUM LEAF AREA INDEX = 2.00
 START OF GROWING SEASON (JULIAN DATE) = 78
 END OF GROWING SEASON (JULIAN DATE) = 328
 EVAPORATIVE ZONE DEPTH = 18.0 INCHES
 AVERAGE ANNUAL WIND SPEED = 5.50 MPH
 AVERAGE 1ST QUARTER RELATIVE HUMIDITY = 75.00 %
 AVERAGE 2ND QUARTER RELATIVE HUMIDITY = 71.00 %
 AVERAGE 3RD QUARTER RELATIVE HUMIDITY = 73.00 %
 AVERAGE 4TH QUARTER RELATIVE HUMIDITY = 74.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA
 AND STATION LATITUDE = 38.33 DEGREES

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.02	90822.609	100.00
RUNOFF	3.328	12079.622	13.30
EVAPOTRANSPIRATION	9.544	34645.895	38.15
DRAINAGE COLLECTED FROM LAYER 2	12.1977	44277.531	48.75
PERC./LEAKAGE THROUGH LAYER 4	0.000073	0.265	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	9.600089	34848.324	38.37
AVG. HEAD ON TOP OF LAYER 6	0.0066		
DRAINAGE COLLECTED FROM LAYER 7	2.9771	10806.706	11.90
PERC./LEAKAGE THROUGH LAYER 8	6.599040	23954.514	26.38
AVG. HEAD ON TOP OF LAYER 8	0.0421		
DRAINAGE COLLECTED FROM LAYER 9	6.5990	23954.451	26.37
PERC./LEAKAGE THROUGH LAYER 11	0.000015	0.055	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0093		
CHANGE IN WATER STORAGE	-9.626	-34941.629	-38.47
SOIL WATER AT START OF YEAR	388.158	1409013.500	
SOIL WATER AT END OF YEAR	378.532	1374071.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.024	0.00

ANNUAL TOTALS FOR YEAR 2

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	35.53	128973.883	100.00
RUNOFF	4.154	15079.125	11.69
EVAPOTRANSPIRATION	13.313	48326.402	37.47
DRAINAGE COLLECTED FROM LAYER 2	16.9681	61594.242	47.76
PERC./LEAKAGE THROUGH LAYER 4	0.000100	0.364	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000100	0.364	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000100	0.363	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.361	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.095	3973.747	3.08
SOIL WATER AT START OF YEAR	378.532	1374071.870	
SOIL WATER AT END OF YEAR	379.627	1378045.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.001	0.00

ANNUAL TOTALS FOR YEAR 3

	INCHES	CU. FEET	PERCENT
PRECIPITATION	23.71	86067.297	100.00
RUNOFF	1.123	4075.348	4.74
EVAPOTRANSPIRATION	12.739	46241.027	53.73
DRAINAGE COLLECTED FROM LAYER 2	10.7562	39045.160	45.37
PERC./LEAKAGE THROUGH LAYER 4	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.242	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.908	-3294.451	-3.83
SOIL WATER AT START OF YEAR	379.627	1378045.620	
SOIL WATER AT END OF YEAR	378.719	1374751.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.032	0.00

ANNUAL TOTALS FOR YEAR 4

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.94	94162.227	100.00
RUNOFF	2.326	8444.968	8.97
EVAPOTRANSPIRATION	13.849	50271.344	53.39
DRAINAGE COLLECTED FROM LAYER 2	9.2770	33675.422	35.76
PERC./LEAKAGE THROUGH LAYER 4	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0015		
PERC./LEAKAGE THROUGH LAYER 6	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.208	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.488	1770.245	1.88
SOIL WATER AT START OF YEAR	378.719	1374751.120	
SOIL WATER AT END OF YEAR	379.207	1376521.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.042	0.00

ANNUAL TOTALS FOR YEAR 5

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.02	119862.570	100.00
RUNOFF	2.676	9712.868	8.10

EVAPOTRANSPIRATION		16.032	58196.062	48.55
DRAINAGE COLLECTED FROM LAYER 2	2	14.7913	53692.504	44.80
PERC./LEAKAGE THROUGH LAYER 4	4	0.000090	0.325	0.00
AVG. HEAD ON TOP OF LAYER 3	3	0.0024		
PERC./LEAKAGE THROUGH LAYER 6	6	0.000090	0.325	0.00
AVG. HEAD ON TOP OF LAYER 6	6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	8	0.000090	0.325	0.00
AVG. HEAD ON TOP OF LAYER 8	8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	9	0.0001	0.326	0.00
PERC./LEAKAGE THROUGH LAYER 11	11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	10	0.0000		
CHANGE IN WATER STORAGE		-0.479	-1739.116	-1.45
SOIL WATER AT START OF YEAR		379.207	1376521.370	
SOIL WATER AT END OF YEAR		378.728	1374782.250	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	-0.071	0.00

ANNUAL TOTALS FOR YEAR 6

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	23.63	85776.914	100.00
RUNOFF	1.763	6400.874	7.46
EVAPOTRANSPIRATION	11.167	40536.996	47.26
DRAINAGE COLLECTED FROM LAYER 2	10.8293	39310.301	45.83
PERC./LEAKAGE THROUGH LAYER 4	0.000064	0.233	0.00

AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000064	0.233	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000064	0.233	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.232	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.130	-471.585	-0.55
SOIL WATER AT START OF YEAR	378.728	1374782.250	
SOIL WATER AT END OF YEAR	378.598	1374310.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.094	0.00

ANNUAL TOTALS FOR YEAR 7

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	8.215	29818.727	19.11
EVAPOTRANSPIRATION	14.029	50925.637	32.63
DRAINAGE COLLECTED FROM LAYER 2	19.4311	70534.930	45.20
PERC./LEAKAGE THROUGH LAYER 4	0.000115	0.416	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0032		
PERC./LEAKAGE THROUGH LAYER 6	0.000115	0.416	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		

DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000115	0.416	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.412	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.315	4774.013	3.06
SOIL WATER AT START OF YEAR	378.598	1374310.750	
SOIL WATER AT END OF YEAR	379.913	1379084.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.002	0.00

ANNUAL TOTALS FOR YEAR 8

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	41.82	151806.594	100.00
RUNOFF	5.519	20034.719	13.20
EVAPOTRANSPIRATION	15.691	56959.312	37.52
DRAINAGE COLLECTED FROM LAYER 2	21.0574	76438.414	50.35
PERC./LEAKAGE THROUGH LAYER 4	0.000142	0.516	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0043		
PERC./LEAKAGE THROUGH LAYER 6	0.000142	0.516	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000142	0.515	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		

DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.517	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.448	-1626.344	-1.07
SOIL WATER AT START OF YEAR	379.913	1379084.750	
SOIL WATER AT END OF YEAR	379.465	1377458.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.023	0.00

ANNUAL TOTALS FOR YEAR 9

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	24.22	87918.609	100.00
RUNOFF	3.871	14053.185	15.98
EVAPOTRANSPIRATION	8.312	30174.352	34.32
DRAINAGE COLLECTED FROM LAYER 2	12.3939	44989.742	51.17
PERC./LEAKAGE THROUGH LAYER 4	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.269	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		

CHANGE IN WATER STORAGE	-0.358	-1298.882	-1.48
SOIL WATER AT START OF YEAR	379.465	1377458.370	
SOIL WATER AT END OF YEAR	379.107	1376159.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.056	0.00

ANNUAL TOTALS FOR YEAR 10

	INCHES	CU. FEET	PERCENT
PRECIPITATION	36.89	133910.719	100.00
RUNOFF	5.117	18575.980	13.87
EVAPOTRANSPIRATION	14.974	54357.301	40.59
DRAINAGE COLLECTED FROM LAYER 2	16.7750	60893.133	45.47
PERC./LEAKAGE THROUGH LAYER 4	0.000105	0.382	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0030		
PERC./LEAKAGE THROUGH LAYER 6	0.000105	0.381	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000105	0.381	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.379	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.023	83.860	0.06
SOIL WATER AT START OF YEAR	379.107	1376159.500	
SOIL WATER AT END OF YEAR	379.130	1376243.370	

SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.075	0.00

ANNUAL TOTALS FOR YEAR 11

	INCHES	CU. FEET	PERCENT
PRECIPITATION	34.79	126287.734	100.00
RUNOFF	3.124	11339.646	8.98
EVAPOTRANSPIRATION	13.871	50350.734	39.87
DRAINAGE COLLECTED FROM LAYER 2	17.1098	62108.395	49.18
PERC./LEAKAGE THROUGH LAYER 4	0.000102	0.371	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000102	0.372	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000102	0.372	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.370	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.686	2488.535	1.97
SOIL WATER AT START OF YEAR	379.130	1376243.370	
SOIL WATER AT END OF YEAR	379.816	1378731.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.049	0.00

ANNUAL TOTALS FOR YEAR 12

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	29.97	108791.094	100.00
RUNOFF	2.828	10267.266	9.44
EVAPOTRANSPIRATION	11.860	43051.770	39.57
DRAINAGE COLLECTED FROM LAYER 2	17.0028	61720.039	56.73
PERC./LEAKAGE THROUGH LAYER 4	0.000103	0.372	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000103	0.372	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000102	0.372	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.373	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.721	-6248.368	-5.74
SOIL WATER AT START OF YEAR	379.816	1378731.870	
SOIL WATER AT END OF YEAR	378.095	1372483.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

ANNUAL TOTALS FOR YEAR 13

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	27.79	100877.703	100.00
RUNOFF	2.362	8574.205	8.50
EVAPOTRANSPIRATION	12.652	45925.582	45.53
DRAINAGE COLLECTED FROM LAYER 2	11.3302	41128.727	40.77
PERC./LEAKAGE THROUGH LAYER 4	0.000071	0.259	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0019		
PERC./LEAKAGE THROUGH LAYER 6	0.000071	0.259	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000071	0.258	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.250	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.446	5248.921	5.20
SOIL WATER AT START OF YEAR	378.095	1372483.500	
SOIL WATER AT END OF YEAR	379.541	1377732.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.016	0.00

ANNUAL TOTALS FOR YEAR 14

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	32.80	119064.023	100.00
RUNOFF	5.034	18274.594	15.35
EVAPOTRANSPIRATION	12.482	45308.133	38.05
DRAINAGE COLLECTED FROM LAYER 2	16.5231	59978.695	50.38
PERC./LEAKAGE THROUGH LAYER 4	0.000098	0.354	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0028		
PERC./LEAKAGE THROUGH LAYER 6	0.000098	0.354	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000097	0.354	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.359	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.239	-4497.730	-3.78
SOIL WATER AT START OF YEAR	379.541	1377732.500	
SOIL WATER AT END OF YEAR	378.302	1373234.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.023	0.00

ANNUAL TOTALS FOR YEAR 15

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.74	93436.203	100.00
RUNOFF	1.601	5810.086	6.22
EVAPOTRANSPIRATION	12.072	43820.574	46.90

DRAINAGE COLLECTED FROM LAYER 2	12.3237	44735.160	47.88
PERC./LEAKAGE THROUGH LAYER 4	0.000078	0.284	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		
PERC./LEAKAGE THROUGH LAYER 6	0.000078	0.284	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000078	0.284	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.282	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.256	-929.877	-1.00
SOIL WATER AT START OF YEAR	378.302	1373234.750	
SOIL WATER AT END OF YEAR	378.045	1372304.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.021	0.00

ANNUAL TOTALS FOR YEAR 16

	INCHES	CU. FEET	PERCENT
PRECIPITATION	26.49	96158.703	100.00
RUNOFF	1.861	6756.787	7.03
EVAPOTRANSPIRATION	14.625	53089.187	55.21
DRAINAGE COLLECTED FROM LAYER 2	8.8024	31952.891	33.23
PERC./LEAKAGE THROUGH LAYER 4	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		

PERC./LEAKAGE THROUGH LAYER 6	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.189	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.201	4359.589	4.53
SOIL WATER AT START OF YEAR	378.045	1372304.870	
SOIL WATER AT END OF YEAR	379.246	1376664.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.064	0.00

ANNUAL TOTALS FOR YEAR 17

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	26.33	95577.883	100.00
RUNOFF	2.083	7562.613	7.91
EVAPOTRANSPIRATION	12.489	45333.508	47.43
DRAINAGE COLLECTED FROM LAYER 2	11.6734	42374.316	44.33
PERC./LEAKAGE THROUGH LAYER 4	0.000072	0.263	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000072	0.263	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00

PERC./LEAKAGE THROUGH LAYER 8	0.000072	0.263	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.261	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.085	307.190	0.32
SOIL WATER AT START OF YEAR	379.246	1376664.370	
SOIL WATER AT END OF YEAR	379.331	1376971.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.010	0.00

ANNUAL TOTALS FOR YEAR 18

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	32.00	116160.016	100.00
RUNOFF	5.285	19185.789	16.52
EVAPOTRANSPIRATION	12.051	43745.707	37.66
DRAINAGE COLLECTED FROM LAYER 2	13.6039	49382.234	42.51
PERC./LEAKAGE THROUGH LAYER 4	0.000086	0.313	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0025		
PERC./LEAKAGE THROUGH LAYER 6	0.000086	0.314	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000086	0.313	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.302	0.00

PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.059	3845.908	3.31
SOIL WATER AT START OF YEAR	379.331	1376971.620	
SOIL WATER AT END OF YEAR	380.391	1380817.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.074	0.00

ANNUAL TOTALS FOR YEAR 19

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.22	102438.602	100.00
RUNOFF	2.184	7928.140	7.74
EVAPOTRANSPIRATION	14.090	51145.715	49.93
DRAINAGE COLLECTED FROM LAYER 2	13.5369	49139.062	47.97
PERC./LEAKAGE THROUGH LAYER 4	0.000088	0.320	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0024		
PERC./LEAKAGE THROUGH LAYER 6	0.000088	0.320	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000088	0.320	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.329	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.591	-5774.567	-5.64

SOIL WATER AT START OF YEAR	380.391	1380817.500	
SOIL WATER AT END OF YEAR	378.800	1375043.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.076	0.00

ANNUAL TOTALS FOR YEAR 20

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.68	93218.398	100.00
RUNOFF	1.708	6200.997	6.65
EVAPOTRANSPIRATION	16.117	58504.953	62.76
DRAINAGE COLLECTED FROM LAYER 2	8.4453	30656.295	32.89
PERC./LEAKAGE THROUGH LAYER 4	0.000055	0.199	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000055	0.199	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000055	0.199	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.198	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.591	-2144.124	-2.30
SOIL WATER AT START OF YEAR	378.800	1375043.000	
SOIL WATER AT END OF YEAR	378.209	1372898.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.080	0.00

ANNUAL TOTALS FOR YEAR 21

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	29.64	107593.195	100.00
RUNOFF	3.842	13947.329	12.96
EVAPOTRANSPIRATION	11.129	40398.434	37.55
DRAINAGE COLLECTED FROM LAYER 2	12.7229	46184.187	42.92
PERC./LEAKAGE THROUGH LAYER 4	0.000075	0.272	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		
PERC./LEAKAGE THROUGH LAYER 6	0.000075	0.272	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000075	0.272	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.267	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.946	7063.035	6.56
SOIL WATER AT START OF YEAR	378.209	1372898.870	
SOIL WATER AT END OF YEAR	380.155	1379961.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.053	0.00

ANNUAL TOTALS FOR YEAR 22

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.55	121786.508	100.00
RUNOFF	3.657	13275.800	10.90
EVAPOTRANSPIRATION	10.751	39027.906	32.05
DRAINAGE COLLECTED FROM LAYER 2	20.4923	74387.047	61.08
PERC./LEAKAGE THROUGH LAYER 4	0.000122	0.444	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0034		
PERC./LEAKAGE THROUGH LAYER 6	0.000122	0.444	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000122	0.444	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.446	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.351	-4904.732	-4.03
SOIL WATER AT START OF YEAR	380.155	1379961.870	
SOIL WATER AT END OF YEAR	378.804	1375057.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.038	0.00

ANNUAL TOTALS FOR YEAR 23

	INCHES	CU. FEET	PERCENT
PRECIPITATION	31.45	114163.516	100.00
RUNOFF	3.472	12604.649	11.04
EVAPOTRANSPIRATION	11.707	42495.504	37.22
DRAINAGE COLLECTED FROM LAYER 2	15.3883	55859.672	48.93
PERC./LEAKAGE THROUGH LAYER 4	0.000110	0.398	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0033		
PERC./LEAKAGE THROUGH LAYER 6	0.000110	0.398	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000110	0.397	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.394	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.882	3203.280	2.81
SOIL WATER AT START OF YEAR	378.804	1375057.120	
SOIL WATER AT END OF YEAR	379.686	1378260.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

ANNUAL TOTALS FOR YEAR 24

	INCHES	CU. FEET	PERCENT
PRECIPITATION	28.54	103600.195	100.00
RUNOFF	2.879	10452.098	10.09

EVAPOTRANSPIRATION		15.556	56467.719	54.51
DRAINAGE COLLECTED FROM LAYER	2	11.9698	43450.324	41.94
PERC./LEAKAGE THROUGH LAYER	4	0.000071	0.258	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0020		
PERC./LEAKAGE THROUGH LAYER	6	0.000071	0.258	0.00
AVG. HEAD ON TOP OF LAYER	6	0.0000		
DRAINAGE COLLECTED FROM LAYER	7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER	8	0.000071	0.258	0.00
AVG. HEAD ON TOP OF LAYER	8	0.0000		
DRAINAGE COLLECTED FROM LAYER	9	0.0001	0.260	0.00
PERC./LEAKAGE THROUGH LAYER	11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER	10	0.0000		
CHANGE IN WATER STORAGE		-1.865	-6770.136	-6.53
SOIL WATER AT START OF YEAR		379.686	1378260.370	
SOIL WATER AT END OF YEAR		377.821	1371490.250	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	-0.070	0.00

ANNUAL TOTALS FOR YEAR 25

	INCHES	CU. FEET	PERCENT	
	-----	-----	-----	
PRECIPITATION	34.75	126142.516	100.00	
RUNOFF	4.747	17229.979	13.66	
EVAPOTRANSPIRATION	12.678	46019.871	36.48	
DRAINAGE COLLECTED FROM LAYER	2	17.3216	62877.582	49.85
PERC./LEAKAGE THROUGH LAYER	4	0.000109	0.394	0.00

AVG. HEAD ON TOP OF LAYER	3	0.0032		
PERC./LEAKAGE THROUGH LAYER	6	0.000109	0.394	0.00
AVG. HEAD ON TOP OF LAYER	6	0.0000		
DRAINAGE COLLECTED FROM LAYER	7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER	8	0.000108	0.393	0.00
AVG. HEAD ON TOP OF LAYER	8	0.0000		
DRAINAGE COLLECTED FROM LAYER	9	0.0001	0.392	0.00
PERC./LEAKAGE THROUGH LAYER	11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER	10	0.0000		
CHANGE IN WATER STORAGE		0.004	14.623	0.01
SOIL WATER AT START OF YEAR		377.821	1371490.250	
SOIL WATER AT END OF YEAR		377.825	1371504.870	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	0.067	0.00

ANNUAL TOTALS FOR YEAR 26

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.87	104798.102	100.00
RUNOFF	1.744	6330.828	6.04
EVAPOTRANSPIRATION	15.743	57148.461	54.53
DRAINAGE COLLECTED FROM LAYER 2	9.7350	35337.879	33.72
PERC./LEAKAGE THROUGH LAYER 4	0.000062	0.223	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0016		
PERC./LEAKAGE THROUGH LAYER 6	0.000062	0.223	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		

DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000061	0.223	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.217	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.648	5980.727	5.71
SOIL WATER AT START OF YEAR	377.825	1371504.870	
SOIL WATER AT END OF YEAR	379.473	1377485.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.009	0.00

ANNUAL TOTALS FOR YEAR 27

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	38.81	140880.297	100.00
RUNOFF	6.190	22471.395	15.95
EVAPOTRANSPIRATION	13.020	47263.695	33.55
DRAINAGE COLLECTED FROM LAYER 2	18.8654	68481.414	48.61
PERC./LEAKAGE THROUGH LAYER 4	0.000108	0.393	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0031		
PERC./LEAKAGE THROUGH LAYER 6	0.000108	0.393	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000108	0.392	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		

DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.389	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.734	2663.455	1.89
SOIL WATER AT START OF YEAR	379.473	1377485.620	
SOIL WATER AT END OF YEAR	380.206	1380149.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.062	0.00

ANNUAL TOTALS FOR YEAR 28

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	38.15	138484.500	100.00
RUNOFF	4.946	17954.131	12.96
EVAPOTRANSPIRATION	16.577	60173.512	43.45
DRAINAGE COLLECTED FROM LAYER 2	17.9684	65225.211	47.10
PERC./LEAKAGE THROUGH LAYER 4	0.000108	0.392	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0029		
PERC./LEAKAGE THROUGH LAYER 6	0.000108	0.392	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000108	0.391	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.397	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		

CHANGE IN WATER STORAGE	-1.341	-4868.729	-3.52
SOIL WATER AT START OF YEAR	380.206	1380149.120	
SOIL WATER AT END OF YEAR	378.865	1375280.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.020	0.00

ANNUAL TOTALS FOR YEAR 29

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.86	122911.828	100.00
RUNOFF	4.702	17068.969	13.89
EVAPOTRANSPIRATION	10.723	38923.719	31.67
DRAINAGE COLLECTED FROM LAYER 2	19.2405	69842.844	56.82
PERC./LEAKAGE THROUGH LAYER 4	0.000112	0.408	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0033		
PERC./LEAKAGE THROUGH LAYER 6	0.000112	0.408	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.001	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000112	0.407	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.407	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.806	-2924.117	-2.38
SOIL WATER AT START OF YEAR	378.865	1375280.370	
SOIL WATER AT END OF YEAR	378.060	1372356.250	

SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.004	0.00

ANNUAL TOTALS FOR YEAR 30

	INCHES	CU. FEET	PERCENT
PRECIPITATION	37.69	136814.703	100.00
RUNOFF	3.010	10928.112	7.99
EVAPOTRANSPIRATION	17.813	64660.180	47.26
DRAINAGE COLLECTED FROM LAYER 2	16.4127	59577.922	43.55
PERC./LEAKAGE THROUGH LAYER 4	0.000100	0.361	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0027		
PERC./LEAKAGE THROUGH LAYER 6	0.000099	0.361	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.000	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000099	0.361	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0001	0.359	0.00
PERC./LEAKAGE THROUGH LAYER 11	0.000000	0.001	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.454	1648.056	1.20
SOIL WATER AT START OF YEAR	378.060	1372356.250	
SOIL WATER AT END OF YEAR	378.514	1374004.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.078	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 30

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
	-----	-----	-----	-----	-----	-----
PRECIPITATION						

TOTALS	6.11	5.10	3.98	2.06	1.04	0.21
	0.03	0.13	0.27	1.52	3.96	6.87
STD. DEVIATIONS	2.75	3.41	1.95	1.40	0.96	0.27
	0.05	0.19	0.45	1.51	2.43	3.45
RUNOFF						

TOTALS	0.946	0.759	0.147	0.046	0.010	0.000
	0.000	0.000	0.003	0.084	0.419	1.098
STD. DEVIATIONS	1.046	0.880	0.197	0.125	0.029	0.000
	0.000	0.000	0.016	0.151	0.562	0.936
EVAPOTRANSPIRATION						

TOTALS	1.248	1.722	2.825	2.744	1.422	0.299
	0.049	0.120	0.136	0.604	0.953	1.134
STD. DEVIATIONS	0.066	0.156	0.420	1.208	0.972	0.401
	0.083	0.183	0.207	0.626	0.389	0.115
LATERAL DRAINAGE COLLECTED FROM LAYER 2						

TOTALS	4.0186	2.9459	1.4835	0.3072	0.0229	0.0001
	0.0000	0.0000	0.0000	0.0978	1.3968	4.2254
STD. DEVIATIONS	1.9409	2.1261	1.2769	0.4621	0.1023	0.0003
	0.0000	0.0000	0.0000	0.2314	1.5459	2.2281
PERCOLATION/LEAKAGE THROUGH LAYER 4						

TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 6

TOTALS	0.1192	0.0997	0.1012	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.6525	0.5458	0.5545	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

LATERAL DRAINAGE COLLECTED FROM LAYER 7

TOTALS	0.0374	0.0311	0.0306	0.0002	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.2047	0.1704	0.1676	0.0009	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 8

TOTALS	0.0788	0.0688	0.0718	0.0007	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.4314	0.3767	0.3930	0.0038	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

LATERAL DRAINAGE COLLECTED FROM LAYER 9

TOTALS	0.0777	0.0689	0.0719	0.0015	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.4253	0.3771	0.3940	0.0084	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 11

TOTALS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0080	0.0066	0.0029	0.0006	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0002	0.0029	0.0086

STD. DEVIATIONS	0.0039	0.0048	0.0025	0.0009	0.0002	0.0000
	0.0000	0.0000	0.0000	0.0004	0.0032	0.0044

DAILY AVERAGE HEAD ON TOP OF LAYER 6

AVERAGES	0.0010	0.0007	0.0010	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0052	0.0037	0.0056	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 8

AVERAGES	0.0061	0.0056	0.0050	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0336	0.0309	0.0275	0.0002	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 10

AVERAGES	0.0013	0.0013	0.0012	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0070	0.0068	0.0065	0.0001	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - FINAL COVER 2.5% BOTTOM

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 30

	INCHES		CU. FEET	PERCENT
	-----	-----	-----	-----
PRECIPITATION	31.26	(5.468)	113484.7	100.00
RUNOFF	3.512	(1.6304)	12747.96	11.233
EVAPOTRANSPIRATION	13.255	(2.2062)	48116.30	42.399
LATERAL DRAINAGE COLLECTED FROM LAYER 2	14.49818	(3.65828)	52628.383	46.37487
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.00009	(0.00002)	0.323	0.00028
AVERAGE HEAD ON TOP OF LAYER 3	0.002	(0.001)		
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.32009	(1.75271)	1161.925	1.02386
AVERAGE HEAD ON TOP OF LAYER 6	0.000	(0.001)		
LATERAL DRAINAGE COLLECTED FROM LAYER 7	0.09924	(0.54353)	360.224	0.31742
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.22005	(1.20480)	798.798	0.70388
AVERAGE HEAD ON TOP OF LAYER 8	0.001	(0.008)		
LATERAL DRAINAGE COLLECTED FROM LAYER 9	0.22005	(1.20479)	798.795	0.70388
PERCOLATION/LEAKAGE THROUGH LAYER 11	0.00000	(0.00000)	0.003	0.00000
AVERAGE HEAD ON TOP OF LAYER 10	0.000	(0.002)		
CHANGE IN WATER STORAGE	-0.321	(2.0550)	-1166.97	-1.028

	1 THROUGH	30
PEAK DAILY VALUES FOR YEARS	(INCHES)	(CU. FT.)
PRECIPITATION	5.77	20945.100
RUNOFF	4.415	16026.6279
DRAINAGE COLLECTED FROM LAYER 2	1.35580	4921.56396
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.000016	0.05828
AVERAGE HEAD ON TOP OF LAYER 3	0.250	
MAXIMUM HEAD ON TOP OF LAYER 3	0.312	
LOCATION OF MAXIMUM HEAD IN LAYER 2 (DISTANCE FROM DRAIN)	0.0 FEET	
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.140086	508.51361
AVERAGE HEAD ON TOP OF LAYER 6	0.096	
DRAINAGE COLLECTED FROM LAYER 7	0.04391	159.38878
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.084735	307.58942
AVERAGE HEAD ON TOP OF LAYER 8	0.223	
MAXIMUM HEAD ON TOP OF LAYER 8	0.442	
LOCATION OF MAXIMUM HEAD IN LAYER 7 (DISTANCE FROM DRAIN)	6.2 FEET	
DRAINAGE COLLECTED FROM LAYER 9	0.08407	305.19183
PERCOLATION/LEAKAGE THROUGH LAYER 11	0.000000	0.00069
AVERAGE HEAD ON TOP OF LAYER 10	0.043	
MAXIMUM HEAD ON TOP OF LAYER 10	0.083	
LOCATION OF MAXIMUM HEAD IN LAYER 9 (DISTANCE FROM DRAIN)	23.3 FEET	
SNOW WATER	0.01	37.4433
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.3480
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.1360

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 30

LAYER	(INCHES)	(VOL/VOL)
1	4.4322	0.2462
2	0.0034	0.0170
3	0.0000	0.0000
4	8.7600	0.3650
5	350.4000	0.2920
6	8.7600	0.3650
7	0.3840	0.0320
8	0.0000	0.0000
9	0.0020	0.0100
10	0.0000	0.0000
11	5.4120	0.4510
SNOW WATER	0.000	

LAYER 2

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS	=	120.00	INCHES
POROSITY	=	0.6710	VOL/VOL
FIELD CAPACITY	=	0.2920	VOL/VOL
WILTING POINT	=	0.0770	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000005000E-02	CM/SEC

LAYER 3

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 4

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	12.00	INCHES
POROSITY	=	0.3970	VOL/VOL
FIELD CAPACITY	=	0.0320	VOL/VOL
WILTING POINT	=	0.0130	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0300	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	1.000000000000	CM/SEC
SLOPE	=	2.50	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 5

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 35

THICKNESS	=	0.06	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL

WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.199999996000E-12	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 6

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0100	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	2.50	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 7

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 8

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	12.00	INCHES
POROSITY	=	0.4510	VOL/VOL
FIELD CAPACITY	=	0.4190	VOL/VOL
WILTING POINT	=	0.3320	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.4510	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000001000E-06	CM/SEC

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #24 WITH BARE GROUND CONDITIONS, A SURFACE SLOPE OF 2.% AND A SLOPE LENGTH OF 500. FEET.

SCS RUNOFF CURVE NUMBER	=	96.70	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	5.100	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.242	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.136	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	52.034	INCHES
TOTAL INITIAL WATER	=	52.034	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM COTATI CALIFORNIA

STATION LATITUDE	=	38.33	DEGREES
MAXIMUM LEAF AREA INDEX	=	2.00	
START OF GROWING SEASON (JULIAN DATE)	=	78	
END OF GROWING SEASON (JULIAN DATE)	=	328	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	5.50	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	75.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	71.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	73.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	74.00	%

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA
 AND STATION LATITUDE = 38.33 DEGREES

MONTHLY TOTALS (IN INCHES) FOR YEAR 1

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	14.40	7.75	3.79	2.98	1.01	0.34
	0.00	0.00	0.00	0.99	4.83	6.90
RUNOFF	10.382	5.204	1.617	0.824	0.108	0.029
	0.000	0.000	0.000	0.241	2.572	3.692
EVAPOTRANSPIRATION	1.275	1.624	2.820	2.348	2.772	0.077
	0.235	0.000	0.000	0.068	0.595	1.208
PERCOLATION/LEAKAGE THROUGH LAYER 3	2.0458	1.5959	1.1316	0.0058	0.0044	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0574
LATERAL DRAINAGE COLLECTED FROM LAYER 4	0.5378	0.4442	0.3418	0.0004	0.0003	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0041
PERCOLATION/LEAKAGE THROUGH LAYER 5	1.4827	1.1339	0.8089	0.0054	0.0042	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0483
LATERAL DRAINAGE COLLECTED FROM LAYER 6	1.4704	1.1339	0.8211	0.0054	0.0042	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0416
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON TOP OF LAYER 3	0.021 0.000	0.013 0.000	0.009 0.000	0.000 0.000	0.000 0.000	0.000 0.001
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 3	0.022 0.000	0.011 0.000	0.013 0.000	0.001 0.000	0.001 0.000	0.000 0.002
AVERAGE DAILY HEAD ON TOP OF LAYER 5	0.088 0.000	0.081 0.000	0.056 0.000	0.000 0.000	0.000 0.000	0.000 0.001
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 5	0.051 0.000	0.077 0.000	0.078 0.000	0.000 0.000	0.000 0.000	0.000 0.002
AVERAGE DAILY HEAD ON TOP OF LAYER 7	0.024 0.000	0.021 0.000	0.013 0.000	0.000 0.000	0.000 0.000	0.000 0.001
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 7	0.011 0.000	0.015 0.000	0.017 0.000	0.000 0.000	0.000 0.000	0.000 0.001

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	24.669	89550.102	57.38
EVAPOTRANSPIRATION	13.021	47265.152	30.29
PERC./LEAKAGE THROUGH LAYER 3	4.840807	17572.129	11.26
AVG. HEAD ON TOP OF LAYER 3	0.0037		
DRAINAGE COLLECTED FROM LAYER 4	1.3285	4822.594	3.09
PERC./LEAKAGE THROUGH LAYER 5	3.483303	12644.391	8.10
AVG. HEAD ON TOP OF LAYER 5	0.0188		
DRAINAGE COLLECTED FROM LAYER 6	3.4766	12619.939	8.09
PERC./LEAKAGE THROUGH LAYER 8	0.000008	0.030	0.00
AVG. HEAD ON TOP OF LAYER 7	0.0049		
CHANGE IN WATER STORAGE	0.495	1795.905	1.15
SOIL WATER AT START OF YEAR	52.394	190190.000	

SOIL WATER AT END OF YEAR	52.889	191985.906	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.001	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 1

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC

PRECIPITATION						

TOTALS	14.40 0.00	7.75 0.00	3.79 0.00	2.98 0.99	1.01 4.83	0.34 6.90
STD. DEVIATIONS	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
RUNOFF						

TOTALS	10.382 0.000	5.204 0.000	1.617 0.000	0.824 0.241	0.108 2.572	0.029 3.692
STD. DEVIATIONS	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000
EVAPOTRANSPIRATION						

TOTALS	1.275 0.235	1.624 0.000	2.820 0.000	2.348 0.068	2.772 0.595	0.077 1.208
STD. DEVIATIONS	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000
PERCOLATION/LEAKAGE THROUGH LAYER 3						

TOTALS	2.0458 0.0000	1.5959 0.0000	1.1316 0.0000	0.0058 0.0000	0.0044 0.0000	0.0000 0.0574
STD. DEVIATIONS	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000
LATERAL DRAINAGE COLLECTED FROM LAYER 4						

TOTALS	0.5378	0.4442	0.3418	0.0004	0.0003	0.0000

0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - ONE LIFT - 2.5% BOTTOM

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	42.99 (0.000)	156053.7	100.00
RUNOFF	24.669 (0.0000)	89550.10	57.384
EVAPOTRANSPIRATION	13.021 (0.0000)	47265.15	30.288
PERCOLATION/LEAKAGE THROUGH LAYER 3	4.84081 (0.00000)	17572.129	11.26031
AVERAGE HEAD ON TOP OF LAYER 3	0.004 (0.000)		
LATERAL DRAINAGE COLLECTED FROM LAYER 4	1.32854 (0.00000)	4822.594	3.09034
PERCOLATION/LEAKAGE THROUGH LAYER 5	3.48330 (0.00000)	12644.391	8.10259
AVERAGE HEAD ON TOP OF LAYER 5	0.019 (0.000)		
LATERAL DRAINAGE COLLECTED FROM LAYER 6	3.47657 (0.00000)	12619.939	8.08692
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.00001 (0.00000)	0.030	0.00002
AVERAGE HEAD ON TOP OF LAYER 7	0.005 (0.000)		
CHANGE IN WATER STORAGE	0.495 (0.0000)	1795.90	1.151

PEAK DAILY VALUES FOR YEARS		1 THROUGH	1
		(INCHES)	(CU. FT.)
PRECIPITATION		5.77	20945.100
RUNOFF		5.441	19751.1914
PERCOLATION/LEAKAGE THROUGH LAYER	3	0.136729	496.32715
AVERAGE HEAD ON TOP OF LAYER	3	0.123	
DRAINAGE COLLECTED FROM LAYER	4	0.04282	155.45190
PERCOLATION/LEAKAGE THROUGH LAYER	5	0.083691	303.79922
AVERAGE HEAD ON TOP OF LAYER	5	0.218	
MAXIMUM HEAD ON TOP OF LAYER	5	0.431	
LOCATION OF MAXIMUM HEAD IN LAYER	4		
(DISTANCE FROM DRAIN)		6.4 FEET	
DRAINAGE COLLECTED FROM LAYER	6	0.08336	302.59457
PERCOLATION/LEAKAGE THROUGH LAYER	8	0.000000	0.00069
AVERAGE HEAD ON TOP OF LAYER	7	0.042	
MAXIMUM HEAD ON TOP OF LAYER	7	0.083	
LOCATION OF MAXIMUM HEAD IN LAYER	6		
(DISTANCE FROM DRAIN)		17.3 FEET	
SNOW WATER		0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)			0.3424
MINIMUM VEG. SOIL WATER (VOL/VOL)			0.1187

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
 by Bruce M. McEnroe, University of Kansas
 ASCE Journal of Environmental Engineering
 Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 1

LAYER	(INCHES)	(VOL/VOL)
1	2.1156	0.3526
2	35.8434	0.2987
3	8.7600	0.3650
4	0.3890	0.0324
5	0.0000	0.0000
6	0.0087	0.0436
7	0.0000	0.0000
8	5.4120	0.4510
SNOW WATER	0.000	

LAYER 2

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS	=	120.00	INCHES
POROSITY	=	0.6710	VOL/VOL
FIELD CAPACITY	=	0.2920	VOL/VOL
WILTING POINT	=	0.0770	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000005000E-02	CM/SEC

LAYER 3

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 4

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	33.00	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 5

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 35

THICKNESS	=	0.06	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL

WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.199999996000E-12	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 6

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	33.00	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 7

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #24 WITH BARE GROUND CONDITIONS, A SURFACE SLOPE OF 33.% AND A SLOPE LENGTH OF 563. FEET.

SCS RUNOFF CURVE NUMBER	=	96.90
FRACTION OF AREA ALLOWING RUNOFF	=	100.0 PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000 ACRES

EVAPORATIVE ZONE DEPTH = 18.0 INCHES
 INITIAL WATER IN EVAPORATIVE ZONE = 5.100 INCHES
 UPPER LIMIT OF EVAPORATIVE STORAGE = 10.242 INCHES
 LOWER LIMIT OF EVAPORATIVE STORAGE = 2.136 INCHES
 INITIAL SNOW WATER = 0.000 INCHES
 INITIAL WATER IN LAYER MATERIALS = 46.268 INCHES
 TOTAL INITIAL WATER = 46.268 INCHES
 TOTAL SUBSURFACE INFLOW = 0.00 INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
COTATI CALIFORNIA

STATION LATITUDE = 38.33 DEGREES
 MAXIMUM LEAF AREA INDEX = 2.00
 START OF GROWING SEASON (JULIAN DATE) = 78
 END OF GROWING SEASON (JULIAN DATE) = 328
 EVAPORATIVE ZONE DEPTH = 18.0 INCHES
 AVERAGE ANNUAL WIND SPEED = 5.50 MPH
 AVERAGE 1ST QUARTER RELATIVE HUMIDITY = 75.00 %
 AVERAGE 2ND QUARTER RELATIVE HUMIDITY = 71.00 %
 AVERAGE 3RD QUARTER RELATIVE HUMIDITY = 73.00 %
 AVERAGE 4TH QUARTER RELATIVE HUMIDITY = 74.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR COTATI CALIFORNIA

AND STATION LATITUDE = 38.33 DEGREES

MONTHLY TOTALS (IN INCHES) FOR YEAR 1

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	14.40 0.00	7.75 0.00	3.79 0.00	2.98 0.99	1.01 4.83	0.34 6.90
RUNOFF	10.557 0.000	5.292 0.000	1.683 0.000	0.878 0.259	0.121 2.646	0.034 3.800
EVAPOTRANSPIRATION	1.277 0.235	1.625 0.000	2.803 0.000	2.250 0.065	2.551 0.593	0.072 1.218
PERCOLATION/LEAKAGE THROUGH LAYER 3	2.0875 0.0000	1.4796 0.0000	1.0929 0.0000	0.0054 0.0000	0.0563 0.0000	0.0000 0.0277
LATERAL DRAINAGE COLLECTED FROM LAYER 4	1.9694 0.0000	1.3928 0.0000	1.0341 0.0000	0.0044 0.0000	0.0518 0.0000	0.0000 0.0232
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.1202 0.0000	0.0868 0.0000	0.0588 0.0000	0.0010 0.0000	0.0045 0.0000	0.0000 0.0045
LATERAL DRAINAGE COLLECTED FROM LAYER 6	0.0969 0.0000	0.0687 0.0000	0.0470 0.0000	0.0007 0.0000	0.0033 0.0000	0.0000 0.0029
PERCOLATION/LEAKAGE THROUGH LAYER 7	0.0250 0.0000	0.0184 0.0000	0.0117 0.0000	0.0004 0.0000	0.0012 0.0000	0.0000 0.0016

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON TOP OF LAYER 3	0.021 0.000	0.014 0.000	0.010 0.000	0.000 0.000	0.001 0.000	0.000 0.000
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 3	0.022 0.000	0.013 0.000	0.013 0.000	0.001 0.000	0.003 0.000	0.000 0.001
AVERAGE DAILY HEAD ON TOP OF LAYER 5	0.007 0.000	0.005 0.000	0.003 0.000	0.000 0.000	0.000 0.000	0.000 0.000
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 5	0.004 0.000	0.004 0.000	0.005 0.000	0.000 0.000	0.001 0.000	0.000 0.000

AVERAGE DAILY HEAD ON	0.000	0.000	0.000	0.000	0.000	0.000
TOP OF LAYER 7	0.000	0.000	0.000	0.000	0.000	0.000
STD. DEVIATION OF DAILY	0.000	0.000	0.000	0.000	0.000	0.000
HEAD ON TOP OF LAYER 7	0.000	0.000	0.000	0.000	0.000	0.000

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	25.271	91733.141	58.78
EVAPOTRANSPIRATION	12.688	46058.090	29.51
PERC./LEAKAGE THROUGH LAYER 3	4.749491	17240.652	11.05
AVG. HEAD ON TOP OF LAYER 3	0.0038		
DRAINAGE COLLECTED FROM LAYER 4	4.4757	16246.969	10.41
PERC./LEAKAGE THROUGH LAYER 5	0.275743	1000.948	0.64
AVG. HEAD ON TOP OF LAYER 5	0.0013		
DRAINAGE COLLECTED FROM LAYER 6	0.2195	796.800	0.51
PERC./LEAKAGE THROUGH LAYER 7	0.058239	211.408	0.14
AVG. HEAD ON TOP OF LAYER 7	0.0001		
CHANGE IN WATER STORAGE	0.277	1007.284	0.65
SOIL WATER AT START OF YEAR	46.276	167981.687	
SOIL WATER AT END OF YEAR	46.553	168988.969	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.028	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 1

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
	-----	-----	-----	-----	-----	-----
PRECIPITATION						

TOTALS	14.40	7.75	3.79	2.98	1.01	0.34
	0.00	0.00	0.00	0.99	4.83	6.90
STD. DEVIATIONS	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
RUNOFF						

TOTALS	10.557	5.292	1.683	0.878	0.121	0.034
	0.000	0.000	0.000	0.259	2.646	3.800
STD. DEVIATIONS	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
EVAPOTRANSPIRATION						

TOTALS	1.277	1.625	2.803	2.250	2.551	0.072
	0.235	0.000	0.000	0.065	0.593	1.218
STD. DEVIATIONS	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000
PERCOLATION/LEAKAGE THROUGH LAYER 3						

TOTALS	2.0875	1.4796	1.0929	0.0054	0.0563	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0277
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LATERAL DRAINAGE COLLECTED FROM LAYER 4						

TOTALS	1.9694	1.3928	1.0341	0.0044	0.0518	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0232
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PERCOLATION/LEAKAGE THROUGH LAYER 5						

TOTALS	0.1202	0.0868	0.0588	0.0010	0.0045	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LATERAL DRAINAGE COLLECTED FROM LAYER 6						

TOTALS	0.0969	0.0687	0.0470	0.0007	0.0033	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0029
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 7

TOTALS	0.0250	0.0184	0.0117	0.0004	0.0012	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0016
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0210	0.0139	0.0096	0.0001	0.0005	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0004
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 5

AVERAGES	0.0066	0.0052	0.0035	0.0000	0.0002	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 7

AVERAGES	0.0004	0.0003	0.0002	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - 1 LIFT - 3:1 SLOPES

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 1

	INCHES		CU. FEET	PERCENT
	-----	-----	-----	-----
PRECIPITATION	42.99	(0.000)	156053.7	100.00
RUNOFF	25.271	(0.0000)	91733.14	58.783
EVAPOTRANSPIRATION	12.688	(0.0000)	46058.09	29.514
PERCOLATION/LEAKAGE THROUGH LAYER 3	4.74949	(0.00000)	17240.652	11.04790
AVERAGE HEAD ON TOP OF LAYER 3	0.004	(0.000)		
LATERAL DRAINAGE COLLECTED FROM LAYER 4	4.47575	(0.00000)	16246.969	10.41114
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.27574	(0.00000)	1000.948	0.64141
AVERAGE HEAD ON TOP OF LAYER 5	0.001	(0.000)		
LATERAL DRAINAGE COLLECTED FROM LAYER 6	0.21950	(0.00000)	796.800	0.51059
PERCOLATION/LEAKAGE THROUGH LAYER 7	0.05824	(0.00000)	211.408	0.13547
AVERAGE HEAD ON TOP OF LAYER 7	0.000	(0.000)		
CHANGE IN WATER STORAGE	0.277	(0.0000)	1007.28	0.645

PEAK DAILY VALUES FOR YEARS	1 THROUGH	1
	(INCHES)	(CU. FT.)
PRECIPITATION	5.77	20945.100
RUNOFF	5.457	19810.4590
PERCOLATION/LEAKAGE THROUGH LAYER 3	0.144908	526.01447
AVERAGE HEAD ON TOP OF LAYER 3	0.123	
DRAINAGE COLLECTED FROM LAYER 4	0.13868	503.39874
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.007526	27.31897
AVERAGE HEAD ON TOP OF LAYER 5	0.014	
MAXIMUM HEAD ON TOP OF LAYER 5	0.011	
LOCATION OF MAXIMUM HEAD IN LAYER 4 (DISTANCE FROM DRAIN)	0.0 FEET	
DRAINAGE COLLECTED FROM LAYER 6	0.00701	25.44074
PERCOLATION/LEAKAGE THROUGH LAYER 7	0.001263	4.58506
AVERAGE HEAD ON TOP OF LAYER 7	0.001	
MAXIMUM HEAD ON TOP OF LAYER 7	0.001	
LOCATION OF MAXIMUM HEAD IN LAYER 6 (DISTANCE FROM DRAIN)	0.0 FEET	
SNOW WATER	0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.3372
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.1187

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 1

LAYER	(INCHES)	(VOL/VOL)
1	2.1220	0.3537
2	35.6594	0.2972
3	8.7600	0.3650
4	0.0020	0.0100
5	0.0000	0.0000
6	0.0020	0.0100
7	0.0000	0.0000
SNOW WATER	0.000	

LAYER 2

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	31.00	PERCENT
DRAINAGE LENGTH	=	600.0	FEET

LAYER 3

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 4

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 5

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS = 1200.00 INCHES
POROSITY = 0.6710 VOL/VOL
FIELD CAPACITY = 0.2920 VOL/VOL
WILTING POINT = 0.0770 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.100000005000E-02 CM/SEC

LAYER 6

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 24.00 INCHES
POROSITY = 0.3650 VOL/VOL
FIELD CAPACITY = 0.3050 VOL/VOL
WILTING POINT = 0.2020 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3650 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.600000021000E-05 CM/SEC

LAYER 7

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS = 0.20 INCHES
POROSITY = 0.8500 VOL/VOL
FIELD CAPACITY = 0.0100 VOL/VOL
WILTING POINT = 0.0050 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0100 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 10.0000000000 CM/SEC
SLOPE = 33.00 PERCENT
DRAINAGE LENGTH = 720.0 FEET

LAYER 8

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 35

THICKNESS = 0.06 INCHES
POROSITY = 0.0000 VOL/VOL
FIELD CAPACITY = 0.0000 VOL/VOL
WILTING POINT = 0.0000 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.199999996000E-12 CM/SEC
FML PINHOLE DENSITY = 1.00 HOLES/ACRE
FML INSTALLATION DEFECTS = 5.00 HOLES/ACRE

FML PLACEMENT QUALITY = 3 - GOOD

LAYER 9

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0100	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	33.00	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 10

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3 - GOOD	

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #10 WITH A FAIR STAND OF GRASS, A SURFACE SLOPE OF 31.% AND A SLOPE LENGTH OF 563. FEET.

SCS RUNOFF CURVE NUMBER	=	86.20	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	4.500	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.164	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.448	INCHES
INITIAL SNOW WATER	=	0.000	INCHES

INITIAL WATER IN LAYER MATERIALS = 382.028 INCHES
 TOTAL INITIAL WATER = 382.028 INCHES
 TOTAL SUBSURFACE INFLOW = 0.00 INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM
 COTATI CALIFORNIA

STATION LATITUDE = 38.33 DEGREES
 MAXIMUM LEAF AREA INDEX = 2.00
 START OF GROWING SEASON (JULIAN DATE) = 78
 END OF GROWING SEASON (JULIAN DATE) = 328
 EVAPORATIVE ZONE DEPTH = 18.0 INCHES
 AVERAGE ANNUAL WIND SPEED = 5.50 MPH
 AVERAGE 1ST QUARTER RELATIVE HUMIDITY = 75.00 %
 AVERAGE 2ND QUARTER RELATIVE HUMIDITY = 71.00 %
 AVERAGE 3RD QUARTER RELATIVE HUMIDITY = 73.00 %
 AVERAGE 4TH QUARTER RELATIVE HUMIDITY = 74.00 %

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA
 AND STATION LATITUDE = 38.33 DEGREES

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.02	90822.609	100.00
RUNOFF	3.492	12676.022	13.96
EVAPOTRANSPIRATION	9.542	34638.437	38.14
DRAINAGE COLLECTED FROM LAYER 2	12.0340	43683.250	48.10
PERC./LEAKAGE THROUGH LAYER 4	0.000047	0.172	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	9.600065	34848.238	38.37
AVG. HEAD ON TOP OF LAYER 6	0.0068		
DRAINAGE COLLECTED FROM LAYER 7	9.2074	33422.977	36.80
PERC./LEAKAGE THROUGH LAYER 8	0.392635	1425.264	1.57
AVG. HEAD ON TOP OF LAYER 8	0.0040		
DRAINAGE COLLECTED FROM LAYER 9	0.3243	1177.161	1.30
PERC./LEAKAGE THROUGH LAYER 10	0.068348	248.103	0.27
AVG. HEAD ON TOP OF LAYER 10	0.0002		
CHANGE IN WATER STORAGE	-9.648	-35023.387	-38.56
SOIL WATER AT START OF YEAR	382.032	1386776.370	
SOIL WATER AT END OF YEAR	372.384	1351753.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.042	0.00

ANNUAL TOTALS FOR YEAR 2

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	35.53	128973.883	100.00
RUNOFF	4.410	16007.570	12.41
EVAPOTRANSPIRATION	13.293	48254.238	37.41
DRAINAGE COLLECTED FROM LAYER 2	16.7179	60685.883	47.05
PERC./LEAKAGE THROUGH LAYER 4	0.000065	0.236	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000065	0.236	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000060	0.219	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000056	0.203	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.109	4026.034	3.12
SOIL WATER AT START OF YEAR	372.384	1351753.000	
SOIL WATER AT END OF YEAR	373.493	1355779.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.082	0.00

ANNUAL TOTALS FOR YEAR 3

	INCHES	CU. FEET	PERCENT
PRECIPITATION	23.71	86067.297	100.00
RUNOFF	1.242	4509.395	5.24
EVAPOTRANSPIRATION	12.747	46270.434	53.76

DRAINAGE COLLECTED FROM LAYER 2	10.6410	38626.965	44.88
PERC./LEAKAGE THROUGH LAYER 4	0.000043	0.158	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0011		
PERC./LEAKAGE THROUGH LAYER 6	0.000043	0.158	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000041	0.148	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.009	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000038	0.139	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.920	-3339.649	-3.88
SOIL WATER AT START OF YEAR	373.493	1355779.120	
SOIL WATER AT END OF YEAR	372.573	1352439.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.004	0.00

ANNUAL TOTALS FOR YEAR 4

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.94	94162.227	100.00
RUNOFF	2.447	8881.854	9.43
EVAPOTRANSPIRATION	13.849	50272.359	53.39
DRAINAGE COLLECTED FROM LAYER 2	9.1551	33233.090	35.29
PERC./LEAKAGE THROUGH LAYER 4	0.000038	0.137	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0009		

PERC./LEAKAGE THROUGH LAYER 6	0.000038	0.137	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.008	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000035	0.129	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.007	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000033	0.121	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.489	1774.677	1.88
SOIL WATER AT START OF YEAR	372.573	1352439.370	
SOIL WATER AT END OF YEAR	373.062	1354214.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.116	0.00

ANNUAL TOTALS FOR YEAR 5

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	33.02	119862.570	100.00
RUNOFF	2.892	10497.669	8.76
EVAPOTRANSPIRATION	16.044	58239.156	48.59
DRAINAGE COLLECTED FROM LAYER 2	14.5521	52824.250	44.07
PERC./LEAKAGE THROUGH LAYER 4	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0015		
PERC./LEAKAGE THROUGH LAYER 6	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.014	0.00

PERC./LEAKAGE THROUGH LAYER 8	0.000054	0.197	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.012	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.468	-1698.682	-1.42
SOIL WATER AT START OF YEAR	373.062	1354214.120	
SOIL WATER AT END OF YEAR	372.594	1352515.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.027	0.00

ANNUAL TOTALS FOR YEAR 6

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	23.63	85776.914	100.00
RUNOFF	1.902	6904.904	8.05
EVAPOTRANSPIRATION	11.172	40554.926	47.28
DRAINAGE COLLECTED FROM LAYER 2	10.6897	38803.730	45.24
PERC./LEAKAGE THROUGH LAYER 4	0.000042	0.151	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0011		
PERC./LEAKAGE THROUGH LAYER 6	0.000042	0.151	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000039	0.140	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.010	0.00

PERC./LEAKAGE THROUGH LAYER 10	0.000036	0.131	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.134	-486.762	-0.57
SOIL WATER AT START OF YEAR	372.594	1352515.370	
SOIL WATER AT END OF YEAR	372.460	1352028.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.035	0.00

ANNUAL TOTALS FOR YEAR 7

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	8.621	31292.947	20.05
EVAPOTRANSPIRATION	14.031	50932.891	32.64
DRAINAGE COLLECTED FROM LAYER 2	19.0038	68983.789	44.21
PERC./LEAKAGE THROUGH LAYER 4	0.000074	0.268	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000074	0.268	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000068	0.249	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000064	0.231	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.334	4843.803	3.10

SOIL WATER AT START OF YEAR	372.460	1352028.620	
SOIL WATER AT END OF YEAR	373.794	1356872.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.019	0.00

ANNUAL TOTALS FOR YEAR 8

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	41.82	151806.594	100.00
RUNOFF	5.872	21315.135	14.04
EVAPOTRANSPIRATION	15.668	56875.328	37.47
DRAINAGE COLLECTED FROM LAYER 2	20.7558	75343.719	49.63
PERC./LEAKAGE THROUGH LAYER 4	0.000080	0.291	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		
PERC./LEAKAGE THROUGH LAYER 6	0.000080	0.291	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.021	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.019	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000069	0.251	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.476	-1727.928	-1.14
SOIL WATER AT START OF YEAR	373.794	1356872.500	
SOIL WATER AT END OF YEAR	373.318	1355144.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.051	0.00

ANNUAL TOTALS FOR YEAR 9

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	24.22	87918.609	100.00
RUNOFF	4.050	14701.921	16.72
EVAPOTRANSPIRATION	8.314	30178.246	34.33
DRAINAGE COLLECTED FROM LAYER 2	12.2174	44349.023	50.44
PERC./LEAKAGE THROUGH LAYER 4	0.000048	0.175	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	0.000048	0.175	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.012	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000045	0.163	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000042	0.152	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.361	-1310.735	-1.49
SOIL WATER AT START OF YEAR	373.318	1355144.500	
SOIL WATER AT END OF YEAR	372.957	1353833.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.018	0.00

ANNUAL TOTALS FOR YEAR 10

	INCHES	CU. FEET	PERCENT
PRECIPITATION	36.89	133910.719	100.00
RUNOFF	5.390	19565.381	14.61
EVAPOTRANSPIRATION	14.960	54304.148	40.55
DRAINAGE COLLECTED FROM LAYER 2	16.4998	59894.148	44.73
PERC./LEAKAGE THROUGH LAYER 4	0.000065	0.235	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000065	0.235	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000060	0.218	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000056	0.204	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.040	146.782	0.11
SOIL WATER AT START OF YEAR	372.957	1353833.750	
SOIL WATER AT END OF YEAR	372.997	1353980.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.030	0.00

ANNUAL TOTALS FOR YEAR 11

	INCHES	CU. FEET	PERCENT
PRECIPITATION	34.79	126287.734	100.00
RUNOFF	3.358	12189.345	9.65
EVAPOTRANSPIRATION	13.870	50349.270	39.87
DRAINAGE COLLECTED FROM LAYER 2	16.8714	61243.191	48.49
PERC./LEAKAGE THROUGH LAYER 4	0.000066	0.240	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000066	0.240	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000062	0.224	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000057	0.209	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.690	2505.595	1.98
SOIL WATER AT START OF YEAR	372.997	1353980.620	
SOIL WATER AT END OF YEAR	373.688	1356486.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.089	0.00

ANNUAL TOTALS FOR YEAR 12

	INCHES	CU. FEET	PERCENT
PRECIPITATION	29.97	108791.094	100.00
RUNOFF	3.008	10920.648	10.04

EVAPOTRANSPIRATION		11.861	43057.008	39.58
DRAINAGE COLLECTED FROM LAYER 2	2	16.8422	61137.164	56.20
PERC./LEAKAGE THROUGH LAYER 4	4	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 3	3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	6	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 6	6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	7	0.0000	0.016	0.00
PERC./LEAKAGE THROUGH LAYER 8	8	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 8	8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	9	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 10	10	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 10	10	0.0000		
CHANGE IN WATER STORAGE		-1.742	-6323.919	-5.81
SOIL WATER AT START OF YEAR		373.688	1356486.120	
SOIL WATER AT END OF YEAR		371.946	1350162.250	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	-0.046	0.00

ANNUAL TOTALS FOR YEAR 13

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	27.79	100877.703	100.00
RUNOFF	2.491	9041.617	8.96
EVAPOTRANSPIRATION	12.654	45933.012	45.53
DRAINAGE COLLECTED FROM LAYER 2	11.1871	40609.070	40.26
PERC./LEAKAGE THROUGH LAYER 4	0.000046	0.168	0.00

AVG. HEAD ON TOP OF LAYER 3	0.0011		
PERC./LEAKAGE THROUGH LAYER 6	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000043	0.158	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.009	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000041	0.149	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.458	5293.787	5.25
SOIL WATER AT START OF YEAR	371.946	1350162.250	
SOIL WATER AT END OF YEAR	373.404	1355456.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.047	0.00

ANNUAL TOTALS FOR YEAR 14

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	32.80	119064.023	100.00
RUNOFF	5.263	19105.373	16.05
EVAPOTRANSPIRATION	12.483	45314.066	38.06
DRAINAGE COLLECTED FROM LAYER 2	16.3082	59198.734	49.72
PERC./LEAKAGE THROUGH LAYER 4	0.000063	0.230	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000063	0.230	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		

DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000059	0.213	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000055	0.198	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.255	-4554.449	-3.83
SOIL WATER AT START OF YEAR	373.404	1355456.000	
SOIL WATER AT END OF YEAR	372.149	1350901.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.068	0.00

ANNUAL TOTALS FOR YEAR 15

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	25.74	93436.203	100.00
RUNOFF	1.720	6243.871	6.68
EVAPOTRANSPIRATION	12.075	43831.465	46.91
DRAINAGE COLLECTED FROM LAYER 2	12.1956	44270.137	47.38
PERC./LEAKAGE THROUGH LAYER 4	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0013		
PERC./LEAKAGE THROUGH LAYER 6	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000048	0.174	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		

DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.009	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000045	0.165	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.251	-909.383	-0.97
SOIL WATER AT START OF YEAR	372.149	1350901.620	
SOIL WATER AT END OF YEAR	371.899	1349992.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.067	0.00

ANNUAL TOTALS FOR YEAR 16

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	26.49	96158.703	100.00
RUNOFF	2.016	7317.434	7.61
EVAPOTRANSPIRATION	14.626	53091.227	55.21
DRAINAGE COLLECTED FROM LAYER 2	8.6412	31367.643	32.62
PERC./LEAKAGE THROUGH LAYER 4	0.000034	0.123	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0009		
PERC./LEAKAGE THROUGH LAYER 6	0.000034	0.123	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.009	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000031	0.114	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.008	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000029	0.106	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		

CHANGE IN WATER STORAGE	1.207	4382.299	4.56
SOIL WATER AT START OF YEAR	371.899	1349992.250	
SOIL WATER AT END OF YEAR	373.106	1354374.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.017	0.00

ANNUAL TOTALS FOR YEAR 17

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	26.33	95577.883	100.00
RUNOFF	2.187	7940.051	8.31
EVAPOTRANSPIRATION	12.472	45271.633	47.37
DRAINAGE COLLECTED FROM LAYER 2	11.5937	42085.105	44.03
PERC./LEAKAGE THROUGH LAYER 4	0.000047	0.171	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	0.000047	0.171	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000044	0.161	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000042	0.151	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.077	280.935	0.29
SOIL WATER AT START OF YEAR	373.106	1354374.500	
SOIL WATER AT END OF YEAR	373.183	1354655.500	

SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.016	0.00

ANNUAL TOTALS FOR YEAR 18

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	32.00	116160.016	100.00
RUNOFF	5.494	19944.500	17.17
EVAPOTRANSPIRATION	12.040	43703.430	37.62
DRAINAGE COLLECTED FROM LAYER 2	13.2916	48248.391	41.54
PERC./LEAKAGE THROUGH LAYER 4	0.000052	0.189	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.013	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000049	0.176	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.012	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000045	0.165	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.174	4263.433	3.67
SOIL WATER AT START OF YEAR	373.183	1354655.500	
SOIL WATER AT END OF YEAR	374.358	1358918.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.068	0.00

ANNUAL TOTALS FOR YEAR 19

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	28.22	102438.602	100.00
RUNOFF	2.308	8379.149	8.18
EVAPOTRANSPIRATION	14.057	51025.398	49.81
DRAINAGE COLLECTED FROM LAYER 2	13.5602	49223.426	48.05
PERC./LEAKAGE THROUGH LAYER 4	0.000055	0.198	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000055	0.198	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.013	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000048	0.174	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.705	-6189.544	-6.04
SOIL WATER AT START OF YEAR	374.358	1358918.870	
SOIL WATER AT END OF YEAR	372.653	1352729.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.022	0.00

ANNUAL TOTALS FOR YEAR 20

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	25.68	93218.398	100.00
RUNOFF	1.811	6572.631	7.05
EVAPOTRANSPIRATION	16.116	58500.082	62.76
DRAINAGE COLLECTED FROM LAYER 2	8.3467	30298.348	32.50
PERC./LEAKAGE THROUGH LAYER 4	0.000036	0.129	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0009		
PERC./LEAKAGE THROUGH LAYER 6	0.000036	0.129	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.007	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000034	0.122	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.006	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000032	0.116	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.593	-2152.765	-2.31
SOIL WATER AT START OF YEAR	372.653	1352729.370	
SOIL WATER AT END OF YEAR	372.060	1350576.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.021	0.00

ANNUAL TOTALS FOR YEAR 21

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	29.64	107593.195	100.00
RUNOFF	4.118	14949.810	13.89
EVAPOTRANSPIRATION	11.123	40377.711	37.53
DRAINAGE COLLECTED FROM LAYER 2	12.4556	45213.812	42.02
PERC./LEAKAGE THROUGH LAYER 4	0.000048	0.176	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0013		
PERC./LEAKAGE THROUGH LAYER 6	0.000048	0.176	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.013	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000045	0.163	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000042	0.151	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.943	7051.736	6.55
SOIL WATER AT START OF YEAR	372.060	1350576.620	
SOIL WATER AT END OF YEAR	374.002	1357628.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.049	0.00

ANNUAL TOTALS FOR YEAR 22

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.55	121786.508	100.00
RUNOFF	3.870	14049.055	11.54
EVAPOTRANSPIRATION	10.749	39018.094	32.04

DRAINAGE COLLECTED FROM LAYER 2	20.2758	73601.062	60.43
PERC./LEAKAGE THROUGH LAYER 4	0.000080	0.289	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		
PERC./LEAKAGE THROUGH LAYER 6	0.000080	0.289	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000074	0.269	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.018	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000069	0.251	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.345	-4882.022	-4.01
SOIL WATER AT START OF YEAR	374.002	1357628.250	
SOIL WATER AT END OF YEAR	372.657	1352746.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.036	0.00

ANNUAL TOTALS FOR YEAR 23

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	31.45	114163.516	100.00
RUNOFF	3.622	13147.468	11.52
EVAPOTRANSPIRATION	11.637	42242.668	37.00
DRAINAGE COLLECTED FROM LAYER 2	15.2834	55478.621	48.60
PERC./LEAKAGE THROUGH LAYER 4	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0016		

PERC./LEAKAGE THROUGH LAYER 6	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.014	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000059	0.212	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.012	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000055	0.200	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.908	3294.451	2.89
SOIL WATER AT START OF YEAR	372.657	1352746.250	
SOIL WATER AT END OF YEAR	373.565	1356040.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.085	0.00

ANNUAL TOTALS FOR YEAR 24

	INCHES	CU. FEET	PERCENT
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PRECIPITATION	28.54	103600.195	100.00
RUNOFF	3.035	11017.598	10.63
EVAPOTRANSPIRATION	15.551	56449.504	54.49
DRAINAGE COLLECTED FROM LAYER 2	11.8437	42992.477	41.50
PERC./LEAKAGE THROUGH LAYER 4	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.012	0.00

PERC./LEAKAGE THROUGH LAYER 8	0.000043	0.156	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000040	0.146	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.890	-6859.535	-6.62
SOIL WATER AT START OF YEAR	373.565	1356040.750	
SOIL WATER AT END OF YEAR	371.675	1349181.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.013	0.00

ANNUAL TOTALS FOR YEAR 25

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	34.75	126142.516	100.00
RUNOFF	5.062	18376.039	14.57
EVAPOTRANSPIRATION	12.679	46026.207	36.49
DRAINAGE COLLECTED FROM LAYER 2	17.0055	61729.887	48.94
PERC./LEAKAGE THROUGH LAYER 4	0.000067	0.243	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000067	0.243	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.015	0.00

PERC./LEAKAGE THROUGH LAYER 10	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.003	10.192	0.01
SOIL WATER AT START OF YEAR	371.675	1349181.250	
SOIL WATER AT END OF YEAR	371.678	1349191.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.051	0.00

ANNUAL TOTALS FOR YEAR 26

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.87	104798.102	100.00
RUNOFF	1.884	6839.747	6.53
EVAPOTRANSPIRATION	15.710	57025.996	54.42
DRAINAGE COLLECTED FROM LAYER 2	9.6341	34971.937	33.37
PERC./LEAKAGE THROUGH LAYER 4	0.000040	0.146	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0010		
PERC./LEAKAGE THROUGH LAYER 6	0.000040	0.146	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.008	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000038	0.137	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.008	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000036	0.130	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	1.642	5960.232	5.69

SOIL WATER AT START OF YEAR	371.678	1349191.370	
SOIL WATER AT END OF YEAR	373.320	1355151.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.044	0.00

ANNUAL TOTALS FOR YEAR 27

	INCHES	CU. FEET	PERCENT
PRECIPITATION	38.81	140880.297	100.00
RUNOFF	6.541	23744.951	16.85
EVAPOTRANSPIRATION	13.008	47220.676	33.52
DRAINAGE COLLECTED FROM LAYER 2	18.5077	67182.812	47.69
PERC./LEAKAGE THROUGH LAYER 4	0.000070	0.253	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0019		
PERC./LEAKAGE THROUGH LAYER 6	0.000070	0.253	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000064	0.233	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.018	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000059	0.215	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.753	2731.584	1.94
SOIL WATER AT START OF YEAR	373.320	1355151.620	
SOIL WATER AT END OF YEAR	374.073	1357883.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

ANNUAL TOTALS FOR YEAR 28

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	38.15	138484.500	100.00
RUNOFF	5.175	18784.908	13.56
EVAPOTRANSPIRATION	16.541	60043.082	43.36
DRAINAGE COLLECTED FROM LAYER 2	17.7890	64574.160	46.63
PERC./LEAKAGE THROUGH LAYER 4	0.000070	0.255	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000070	0.255	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.018	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000065	0.237	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.016	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000061	0.221	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-1.355	-4917.915	-3.55
SOIL WATER AT START OF YEAR	374.073	1357883.250	
SOIL WATER AT END OF YEAR	372.718	1352965.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

ANNUAL TOTALS FOR YEAR 29

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.86	122911.828	100.00
RUNOFF	4.983	18086.584	14.72
EVAPOTRANSPIRATION	10.694	38819.625	31.58
DRAINAGE COLLECTED FROM LAYER 2	18.9965	68957.172	56.10
PERC./LEAKAGE THROUGH LAYER 4	0.000073	0.265	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000073	0.265	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000067	0.245	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.018	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000063	0.227	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	-0.813	-2951.812	-2.40
SOIL WATER AT START OF YEAR	372.718	1352965.250	
SOIL WATER AT END OF YEAR	371.905	1350013.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

ANNUAL TOTALS FOR YEAR 30

	INCHES	CU. FEET	PERCENT
PRECIPITATION	37.69	136814.703	100.00
RUNOFF	3.236	11747.268	8.59
EVAPOTRANSPIRATION	17.795	64595.316	47.21
DRAINAGE COLLECTED FROM LAYER 2	16.1974	58796.539	42.98
PERC./LEAKAGE THROUGH LAYER 4	0.000065	0.234	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000065	0.234	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000060	0.219	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
DRAINAGE COLLECTED FROM LAYER 9	0.0000	0.014	0.00
PERC./LEAKAGE THROUGH LAYER 10	0.000057	0.205	0.00
AVG. HEAD ON TOP OF LAYER 10	0.0000		
CHANGE IN WATER STORAGE	0.462	1675.308	1.22
SOIL WATER AT START OF YEAR	371.905	1350013.500	
SOIL WATER AT END OF YEAR	372.366	1351688.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.043	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 30

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
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PRECIPITATION

TOTALS	6.11 0.03	5.10 0.13	3.98 0.27	2.06 1.52	1.04 3.96	0.21 6.87
STD. DEVIATIONS	2.75 0.05	3.41 0.19	1.95 0.45	1.40 1.51	0.96 2.43	0.27 3.45

RUNOFF

TOTALS	0.996 0.000	0.801 0.000	0.160 0.003	0.051 0.090	0.011 0.442	0.000 1.162
STD. DEVIATIONS	1.089 0.000	0.926 0.000	0.211 0.018	0.133 0.160	0.032 0.583	0.000 0.984

EVAPOTRANSPIRATION

TOTALS	1.248 0.049	1.722 0.120	2.825 0.136	2.745 0.601	1.416 0.947	0.303 1.133
STD. DEVIATIONS	0.066 0.084	0.156 0.183	0.420 0.207	1.209 0.623	0.967 0.389	0.404 0.115

LATERAL DRAINAGE COLLECTED FROM LAYER 2

TOTALS	3.9714 0.0000	2.9010 0.0000	1.4765 0.0000	0.3053 0.0911	0.0239 1.3788	0.0001 4.1550
STD. DEVIATIONS	1.9046 0.0000	2.0771 0.0000	1.2655 0.0000	0.4572 0.2225	0.1023 1.5243	0.0003 2.1833

PERCOLATION/LEAKAGE THROUGH LAYER 4

TOTALS	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000
STD. DEVIATIONS	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 6

TOTALS	0.1190 0.0000	0.0998 0.0000	0.1012 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000
STD. DEVIATIONS	0.6517 0.0000	0.5465 0.0000	0.5545 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000

LATERAL DRAINAGE COLLECTED FROM LAYER 7

TOTALS	0.1143 0.0000	0.0957 0.0000	0.0969 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000
STD. DEVIATIONS	0.6260 0.0000	0.5241 0.0000	0.5309 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 8

STD. DEVIATIONS 0.0001 0.0001 0.0001 0.0000 0.0000 0.0000
 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - FINAL COVER 3:1 SLOPES

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 30

	INCHES		CU. FEET	PERCENT
	-----	-----	-----	-----
PRECIPITATION	31.26	(5.468)	113484.7	100.00
RUNOFF	3.717	(1.7032)	13491.69	11.889
EVAPOTRANSPIRATION	13.245	(2.2036)	48080.53	42.367
LATERAL DRAINAGE COLLECTED FROM LAYER 2	14.30310	(3.59708)	51920.254	45.75089
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.00006	(0.00001)	0.205	0.00018
AVERAGE HEAD ON TOP OF LAYER 3	0.001	(0.000)		
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.32006	(1.75271)	1161.808	1.02376
AVERAGE HEAD ON TOP OF LAYER 6	0.000	(0.001)		
LATERAL DRAINAGE COLLECTED FROM LAYER 7	0.30692	(1.68104)	1114.113	0.98173
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.01314	(0.07168)	47.695	0.04203
AVERAGE HEAD ON TOP OF LAYER 8	0.000	(0.001)		
LATERAL DRAINAGE COLLECTED FROM LAYER 9	0.01081	(0.05921)	39.251	0.03459
PERCOLATION/LEAKAGE THROUGH LAYER 10	0.00233	(0.01247)	8.444	0.00744
AVERAGE HEAD ON TOP OF LAYER 10	0.000	(0.000)		
CHANGE IN WATER STORAGE	-0.322	(2.0678)	-1169.59	-1.031

PEAK DAILY VALUES FOR YEARS		1 THROUGH	30
		(INCHES)	(CU. FT.)
PRECIPITATION		5.77	20945.100
RUNOFF		4.560	16553.5898
DRAINAGE COLLECTED FROM LAYER	2	1.25197	4544.63721
PERCOLATION/LEAKAGE THROUGH LAYER	4	0.000004	0.01486
AVERAGE HEAD ON TOP OF LAYER	3	0.047	
MAXIMUM HEAD ON TOP OF LAYER	3	0.235	
LOCATION OF MAXIMUM HEAD IN LAYER	2		
(DISTANCE FROM DRAIN)		0.0 FEET	
PERCOLATION/LEAKAGE THROUGH LAYER	6	0.140332	509.40646
AVERAGE HEAD ON TOP OF LAYER	6	0.096	
DRAINAGE COLLECTED FROM LAYER	7	0.13529	491.09045
PERCOLATION/LEAKAGE THROUGH LAYER	8	0.005046	18.31597
AVERAGE HEAD ON TOP OF LAYER	8	0.021	
MAXIMUM HEAD ON TOP OF LAYER	8	0.161	
LOCATION OF MAXIMUM HEAD IN LAYER	7		
(DISTANCE FROM DRAIN)		0.0 FEET	
DRAINAGE COLLECTED FROM LAYER	9	0.00422	15.31304
PERCOLATION/LEAKAGE THROUGH LAYER	10	0.000827	3.00293
AVERAGE HEAD ON TOP OF LAYER	10	0.001	
MAXIMUM HEAD ON TOP OF LAYER	10	0.000	
LOCATION OF MAXIMUM HEAD IN LAYER	9		
(DISTANCE FROM DRAIN)		0.0 FEET	
SNOW WATER		0.01	37.4433
MAXIMUM VEG. SOIL WATER (VOL/VOL)			0.3577
MINIMUM VEG. SOIL WATER (VOL/VOL)			0.1360

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 30

LAYER	(INCHES)	(VOL/VOL)
1	4.4351	0.2464
2	0.0029	0.0144
3	0.0000	0.0000
4	8.7600	0.3650
5	350.4000	0.2920
6	8.7600	0.3650
7	0.0020	0.0100
8	0.0000	0.0000
9	0.0020	0.0100
10	0.0000	0.0000
SNOW WATER	0.000	

LAYER 2

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS	=	120.00	INCHES
POROSITY	=	0.6710	VOL/VOL
FIELD CAPACITY	=	0.2920	VOL/VOL
WILTING POINT	=	0.0770	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.100000005000E-02	CM/SEC

LAYER 3

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 4

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	33.00	PERCENT
DRAINAGE LENGTH	=	720.0	FEET

LAYER 5

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL

WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #24 WITH BARE GROUND CONDITIONS, A SURFACE SLOPE OF 33.% AND A SLOPE LENGTH OF 563. FEET.

SCS RUNOFF CURVE NUMBER	=	96.90	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	5.100	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	10.242	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.136	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	46.264	INCHES
TOTAL INITIAL WATER	=	46.264	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM COTATI CALIFORNIA

STATION LATITUDE	=	38.33	DEGREES
MAXIMUM LEAF AREA INDEX	=	2.00	
START OF GROWING SEASON (JULIAN DATE)	=	78	
END OF GROWING SEASON (JULIAN DATE)	=	328	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	5.50	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	75.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	71.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	73.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	74.00	%

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
COEFFICIENTS FOR COTATI CALIFORNIA
AND STATION LATITUDE = 38.33 DEGREES

MONTHLY TOTALS (IN INCHES) FOR YEAR 1

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION	14.40	7.75	3.79	2.98	1.01	0.34
	0.00	0.00	0.00	0.99	4.83	6.90
RUNOFF	10.557	5.292	1.683	0.878	0.121	0.034
	0.000	0.000	0.000	0.259	2.646	3.800
EVAPOTRANSPIRATION	1.277	1.625	2.803	2.250	2.551	0.072
	0.235	0.000	0.000	0.065	0.593	1.218
PERCOLATION/LEAKAGE THROUGH LAYER 3	2.0875	1.4796	1.0929	0.0054	0.0563	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0277
LATERAL DRAINAGE COLLECTED FROM LAYER 4	1.9695	1.3929	1.0341	0.0044	0.0518	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0232
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.1201	0.0867	0.0587	0.0010	0.0045	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0045

MONTHLY SUMMARIES FOR DAILY HEADS (INCHES)

AVERAGE DAILY HEAD ON TOP OF LAYER 3	0.021 0.000	0.014 0.000	0.010 0.000	0.000 0.000	0.001 0.000	0.000 0.000
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 3	0.022 0.000	0.013 0.000	0.013 0.000	0.001 0.000	0.003 0.000	0.000 0.001
AVERAGE DAILY HEAD ON TOP OF LAYER 5	0.007 0.000	0.005 0.000	0.003 0.000	0.000 0.000	0.000 0.000	0.000 0.000
STD. DEVIATION OF DAILY HEAD ON TOP OF LAYER 5	0.004 0.000	0.004 0.000	0.005 0.000	0.000 0.000	0.001 0.000	0.000 0.000

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	42.99	156053.719	100.00
RUNOFF	25.271	91733.141	58.78
EVAPOTRANSPIRATION	12.688	46058.090	29.51
PERC./LEAKAGE THROUGH LAYER 3	4.749491	17240.652	11.05
AVG. HEAD ON TOP OF LAYER 3	0.0038		
DRAINAGE COLLECTED FROM LAYER 4	4.4760	16247.741	10.41
PERC./LEAKAGE THROUGH LAYER 5	0.275531	1000.176	0.64
AVG. HEAD ON TOP OF LAYER 5	0.0013		
CHANGE IN WATER STORAGE	0.279	1014.554	0.65
SOIL WATER AT START OF YEAR	46.268	167952.641	
SOIL WATER AT END OF YEAR	46.547	168967.187	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.018	0.00

0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

 AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0210	0.0139	0.0096	0.0001	0.0005	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0004
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 5

AVERAGES	0.0066	0.0052	0.0035	0.0000	0.0002	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
STD. DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - R_x LINER - 1 LIFT - 3:1 SLOPES

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 1

	INCHES		CU. FEET	PERCENT
	-----	-----	-----	-----
PRECIPITATION	42.99	(0.000)	156053.7	100.00
RUNOFF	25.271	(0.0000)	91733.14	58.783
EVAPOTRANSPIRATION	12.688	(0.0000)	46058.09	29.514
PERCOLATION/LEAKAGE THROUGH LAYER 3	4.74949	(0.00000)	17240.652	11.04790
AVERAGE HEAD ON TOP OF LAYER 3	0.004	(0.000)		
LATERAL DRAINAGE COLLECTED FROM LAYER 4	4.47596	(0.00000)	16247.741	10.41163
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.27553	(0.00000)	1000.176	0.64092
AVERAGE HEAD ON TOP OF LAYER 5	0.001	(0.000)		
CHANGE IN WATER STORAGE	0.279	(0.0000)	1014.55	0.650

PEAK DAILY VALUES FOR YEARS	1 THROUGH	1
	(INCHES)	(CU. FT.)
PRECIPITATION	5.77	20945.100
RUNOFF	5.457	19810.4590
PERCOLATION/LEAKAGE THROUGH LAYER 3	0.144908	526.01447
AVERAGE HEAD ON TOP OF LAYER 3	0.123	
DRAINAGE COLLECTED FROM LAYER 4	0.13868	503.42303
PERCOLATION/LEAKAGE THROUGH LAYER 5	0.007520	27.29601
AVERAGE HEAD ON TOP OF LAYER 5	0.014	
MAXIMUM HEAD ON TOP OF LAYER 5	0.011	
LOCATION OF MAXIMUM HEAD IN LAYER 4 (DISTANCE FROM DRAIN)	0.0 FEET	
SNOW WATER	0.00	0.0000
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.3372
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.1187

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 1

LAYER	(INCHES)	(VOL/VOL)
1	2.1220	0.3537
2	35.6594	0.2972
3	8.7600	0.3650
4	0.0020	0.0100
5	0.0000	0.0000
SNOW WATER	0.000	

LAYER 2

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS	=	0.20	INCHES
POROSITY	=	0.8500	VOL/VOL
FIELD CAPACITY	=	0.0100	VOL/VOL
WILTING POINT	=	0.0050	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0200	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	10.0000000000	CM/SEC
SLOPE	=	31.00	PERCENT
DRAINAGE LENGTH	=	600.0	FEET

LAYER 3

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	0.10	INCHES
POROSITY	=	0.0000	VOL/VOL
FIELD CAPACITY	=	0.0000	VOL/VOL
WILTING POINT	=	0.0000	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.0000	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.700000022000E-13	CM/SEC
FML PINHOLE DENSITY	=	1.00	HOLES/ACRE
FML INSTALLATION DEFECTS	=	5.00	HOLES/ACRE
FML PLACEMENT QUALITY	=	3	- GOOD

LAYER 4

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS	=	24.00	INCHES
POROSITY	=	0.3650	VOL/VOL
FIELD CAPACITY	=	0.3050	VOL/VOL
WILTING POINT	=	0.2020	VOL/VOL
INITIAL SOIL WATER CONTENT	=	0.3650	VOL/VOL
EFFECTIVE SAT. HYD. COND.	=	0.600000021000E-05	CM/SEC

LAYER 5

TYPE 1 - VERTICAL PERCOLATION LAYER

MATERIAL TEXTURE NUMBER 18

THICKNESS = 1200.00 INCHES
POROSITY = 0.6710 VOL/VOL
FIELD CAPACITY = 0.2920 VOL/VOL
WILTING POINT = 0.0770 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.100000005000E-02 CM/SEC

LAYER 6

TYPE 3 - BARRIER SOIL LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 24.00 INCHES
POROSITY = 0.3650 VOL/VOL
FIELD CAPACITY = 0.3050 VOL/VOL
WILTING POINT = 0.2020 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.3650 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.600000021000E-05 CM/SEC

LAYER 7

TYPE 2 - LATERAL DRAINAGE LAYER

MATERIAL TEXTURE NUMBER 20

THICKNESS = 0.20 INCHES
POROSITY = 0.8500 VOL/VOL
FIELD CAPACITY = 0.0100 VOL/VOL
WILTING POINT = 0.0050 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0100 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 10.0000000000 CM/SEC
SLOPE = 33.00 PERCENT
DRAINAGE LENGTH = 720.0 FEET

LAYER 8

TYPE 4 - FLEXIBLE MEMBRANE LINER

MATERIAL TEXTURE NUMBER 0

THICKNESS = 0.10 INCHES
POROSITY = 0.0000 VOL/VOL
FIELD CAPACITY = 0.0000 VOL/VOL
WILTING POINT = 0.0000 VOL/VOL
INITIAL SOIL WATER CONTENT = 0.0000 VOL/VOL
EFFECTIVE SAT. HYD. COND. = 0.700000022000E-13 CM/SEC
FML PINHOLE DENSITY = 1.00 HOLES/ACRE
FML INSTALLATION DEFECTS = 5.00 HOLES/ACRE

FML PLACEMENT QUALITY = 3 - GOOD

GENERAL DESIGN AND EVAPORATIVE ZONE DATA

NOTE: SCS RUNOFF CURVE NUMBER WAS COMPUTED FROM DEFAULT SOIL DATA BASE USING SOIL TEXTURE #10 WITH A FAIR STAND OF GRASS, A SURFACE SLOPE OF 31.% AND A SLOPE LENGTH OF 563. FEET.

SCS RUNOFF CURVE NUMBER	=	86.20	
FRACTION OF AREA ALLOWING RUNOFF	=	100.0	PERCENT
AREA PROJECTED ON HORIZONTAL PLANE	=	1.000	ACRES
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
INITIAL WATER IN EVAPORATIVE ZONE	=	4.500	INCHES
UPPER LIMIT OF EVAPORATIVE STORAGE	=	7.164	INCHES
LOWER LIMIT OF EVAPORATIVE STORAGE	=	2.448	INCHES
INITIAL SNOW WATER	=	0.000	INCHES
INITIAL WATER IN LAYER MATERIALS	=	382.026	INCHES
TOTAL INITIAL WATER	=	382.026	INCHES
TOTAL SUBSURFACE INFLOW	=	0.00	INCHES/YEAR

EVAPOTRANSPIRATION AND WEATHER DATA

NOTE: EVAPOTRANSPIRATION DATA WAS OBTAINED FROM COTATI CALIFORNIA

STATION LATITUDE	=	38.33	DEGREES
MAXIMUM LEAF AREA INDEX	=	2.00	
START OF GROWING SEASON (JULIAN DATE)	=	78	
END OF GROWING SEASON (JULIAN DATE)	=	328	
EVAPORATIVE ZONE DEPTH	=	18.0	INCHES
AVERAGE ANNUAL WIND SPEED	=	5.50	MPH
AVERAGE 1ST QUARTER RELATIVE HUMIDITY	=	75.00	%
AVERAGE 2ND QUARTER RELATIVE HUMIDITY	=	71.00	%
AVERAGE 3RD QUARTER RELATIVE HUMIDITY	=	73.00	%
AVERAGE 4TH QUARTER RELATIVE HUMIDITY	=	74.00	%

NOTE: PRECIPITATION DATA WAS SYNTHETICALLY GENERATED USING COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY PRECIPITATION (INCHES)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
6.29	5.39	3.84	1.93	0.88	0.24
0.04	0.12	0.33	1.86	4.14	5.90

NOTE: TEMPERATURE DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA

NORMAL MEAN MONTHLY TEMPERATURE (DEGREES FAHRENHEIT)

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
49.00	52.00	55.00	58.00	62.00	66.00
68.00	68.00	67.00	63.00	54.00	49.00

NOTE: SOLAR RADIATION DATA WAS SYNTHETICALLY GENERATED USING
 COEFFICIENTS FOR COTATI CALIFORNIA
 AND STATION LATITUDE = 38.33 DEGREES

ANNUAL TOTALS FOR YEAR 1

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.02	90822.609	100.00
RUNOFF	3.492	12676.022	13.96
EVAPOTRANSPIRATION	9.542	34638.437	38.14
DRAINAGE COLLECTED FROM LAYER 2	12.0340	43683.250	48.10
PERC./LEAKAGE THROUGH LAYER 4	0.000047	0.172	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	9.600065	34848.238	38.37
AVG. HEAD ON TOP OF LAYER 6	0.0068		
DRAINAGE COLLECTED FROM LAYER 7	9.2079	33424.582	36.80
PERC./LEAKAGE THROUGH LAYER 8	0.392190	1423.650	1.57
AVG. HEAD ON TOP OF LAYER 8	0.0040		
CHANGE IN WATER STORAGE	-9.648	-35023.387	-38.56
SOIL WATER AT START OF YEAR	382.028	1386761.750	
SOIL WATER AT END OF YEAR	372.380	1351738.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.050	0.00

ANNUAL TOTALS FOR YEAR 2

	INCHES	CU. FEET	PERCENT
PRECIPITATION	35.53	128973.883	100.00
RUNOFF	4.410	16007.570	12.41
EVAPOTRANSPIRATION	13.293	48254.238	37.41
DRAINAGE COLLECTED FROM LAYER 2	16.7179	60685.883	47.05
PERC./LEAKAGE THROUGH LAYER 4	0.000065	0.236	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000065	0.236	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000060	0.219	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.109	4026.034	3.12
SOIL WATER AT START OF YEAR	372.380	1351738.370	
SOIL WATER AT END OF YEAR	373.489	1355764.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.082	0.00

ANNUAL TOTALS FOR YEAR 3

	INCHES	CU. FEET	PERCENT
PRECIPITATION	23.71	86067.297	100.00
RUNOFF	1.242	4509.395	5.24
EVAPOTRANSPIRATION	12.747	46270.434	53.76
DRAINAGE COLLECTED FROM LAYER 2	10.6410	38626.965	44.88
PERC./LEAKAGE THROUGH LAYER 4	0.000043	0.158	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0011		
PERC./LEAKAGE THROUGH LAYER 6	0.000043	0.158	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000041	0.148	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.920	-3339.649	-3.88
SOIL WATER AT START OF YEAR	373.489	1355764.500	
SOIL WATER AT END OF YEAR	372.569	1352424.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.004	0.00

ANNUAL TOTALS FOR YEAR 4

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.94	94162.227	100.00
RUNOFF	2.447	8881.854	9.43
EVAPOTRANSPIRATION	13.849	50272.359	53.39
DRAINAGE COLLECTED FROM LAYER 2	9.1551	33233.090	35.29

PERC./LEAKAGE THROUGH LAYER	4	0.000038	0.137	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0009		
PERC./LEAKAGE THROUGH LAYER	6	0.000038	0.137	0.00
AVG. HEAD ON TOP OF LAYER	6	0.0000		
DRAINAGE COLLECTED FROM LAYER	7	0.0000	0.008	0.00
PERC./LEAKAGE THROUGH LAYER	8	0.000035	0.129	0.00
AVG. HEAD ON TOP OF LAYER	8	0.0000		
CHANGE IN WATER STORAGE		0.489	1774.677	1.88
SOIL WATER AT START OF YEAR		372.569	1352424.750	
SOIL WATER AT END OF YEAR		373.058	1354199.500	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	0.116	0.00

ANNUAL TOTALS FOR YEAR 5

		INCHES	CU. FEET	PERCENT
		-----	-----	-----
PRECIPITATION		33.02	119862.570	100.00
RUNOFF		2.892	10497.669	8.76
EVAPOTRANSPIRATION		16.044	58239.156	48.59
DRAINAGE COLLECTED FROM LAYER	2	14.5521	52824.250	44.07
PERC./LEAKAGE THROUGH LAYER	4	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0015		
PERC./LEAKAGE THROUGH LAYER	6	0.000058	0.211	0.00
AVG. HEAD ON TOP OF LAYER	6	0.0000		
DRAINAGE COLLECTED FROM LAYER	7	0.0000	0.014	0.00
PERC./LEAKAGE THROUGH LAYER	8	0.000054	0.197	0.00

AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.468	-1698.682	-1.42
SOIL WATER AT START OF YEAR	373.058	1354199.500	
SOIL WATER AT END OF YEAR	372.590	1352500.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.027	0.00

ANNUAL TOTALS FOR YEAR 6

	INCHES	CU. FEET	PERCENT
PRECIPITATION	23.63	85776.914	100.00
RUNOFF	1.902	6904.904	8.05
EVAPOTRANSPIRATION	11.172	40554.926	47.28
DRAINAGE COLLECTED FROM LAYER 2	10.6897	38803.730	45.24
PERC./LEAKAGE THROUGH LAYER 4	0.000042	0.151	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0011		
PERC./LEAKAGE THROUGH LAYER 6	0.000042	0.151	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000039	0.140	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.134	-486.762	-0.57
SOIL WATER AT START OF YEAR	372.590	1352500.750	
SOIL WATER AT END OF YEAR	372.456	1352014.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

PRECIPITATION		41.82	151806.594	100.00
RUNOFF		5.872	21315.135	14.04
EVAPOTRANSPIRATION		15.668	56875.328	37.47
DRAINAGE COLLECTED FROM LAYER	2	20.7558	75343.719	49.63
PERC./LEAKAGE THROUGH LAYER	4	0.000080	0.291	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0021		
PERC./LEAKAGE THROUGH LAYER	6	0.000080	0.291	0.00
AVG. HEAD ON TOP OF LAYER	6	0.0000		
DRAINAGE COLLECTED FROM LAYER	7	0.0000	0.021	0.00
PERC./LEAKAGE THROUGH LAYER	8	0.000074	0.270	0.00
AVG. HEAD ON TOP OF LAYER	8	0.0000		
CHANGE IN WATER STORAGE		-0.476	-1727.928	-1.14
SOIL WATER AT START OF YEAR		373.790	1356857.870	
SOIL WATER AT END OF YEAR		373.314	1355129.870	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	0.051	0.00

ANNUAL TOTALS FOR YEAR 9

	INCHES	CU. FEET	PERCENT	
PRECIPITATION	24.22	87918.609	100.00	
RUNOFF	4.050	14701.921	16.72	
EVAPOTRANSPIRATION	8.314	30178.246	34.33	
DRAINAGE COLLECTED FROM LAYER	2	12.2174	44349.023	50.44
PERC./LEAKAGE THROUGH LAYER	4	0.000048	0.175	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0012		

PERC./LEAKAGE THROUGH LAYER 6	0.000048	0.175	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.012	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000045	0.163	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.361	-1310.735	-1.49
SOIL WATER AT START OF YEAR	373.314	1355129.870	
SOIL WATER AT END OF YEAR	372.953	1353819.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.018	0.00

ANNUAL TOTALS FOR YEAR 10

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	36.89	133910.719	100.00
RUNOFF	5.390	19565.381	14.61
EVAPOTRANSPIRATION	14.960	54304.148	40.55
DRAINAGE COLLECTED FROM LAYER 2	16.4998	59894.148	44.73
PERC./LEAKAGE THROUGH LAYER 4	0.000065	0.235	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000065	0.235	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000060	0.218	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.040	146.782	0.11

SOIL WATER AT START OF YEAR	372.953	1353819.120	
SOIL WATER AT END OF YEAR	372.993	1353966.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.030	0.00

ANNUAL TOTALS FOR YEAR 11

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	34.79	126287.734	100.00
RUNOFF	3.358	12189.345	9.65
EVAPOTRANSPIRATION	13.870	50349.270	39.87
DRAINAGE COLLECTED FROM LAYER 2	16.8714	61243.191	48.49
PERC./LEAKAGE THROUGH LAYER 4	0.000066	0.240	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000066	0.240	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000062	0.224	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.690	2505.595	1.98
SOIL WATER AT START OF YEAR	372.993	1353966.000	
SOIL WATER AT END OF YEAR	373.684	1356471.500	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.089	0.00

ANNUAL TOTALS FOR YEAR 12

	INCHES	CU. FEET	PERCENT
PRECIPITATION	29.97	108791.094	100.00
RUNOFF	3.008	10920.648	10.04
EVAPOTRANSPIRATION	11.861	43057.008	39.58
DRAINAGE COLLECTED FROM LAYER 2	16.8422	61137.164	56.20
PERC./LEAKAGE THROUGH LAYER 4	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000067	0.242	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.016	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.742	-6323.919	-5.81
SOIL WATER AT START OF YEAR	373.684	1356471.500	
SOIL WATER AT END OF YEAR	371.941	1350147.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.046	0.00

ANNUAL TOTALS FOR YEAR 13

	INCHES	CU. FEET	PERCENT
PRECIPITATION	27.79	100877.703	100.00

RUNOFF	2.491	9041.617	8.96
EVAPOTRANSPIRATION	12.654	45933.012	45.53
DRAINAGE COLLECTED FROM LAYER 2	11.1871	40609.070	40.26
PERC./LEAKAGE THROUGH LAYER 4	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0011		
PERC./LEAKAGE THROUGH LAYER 6	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000043	0.158	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.458	5293.787	5.25
SOIL WATER AT START OF YEAR	371.941	1350147.620	
SOIL WATER AT END OF YEAR	373.400	1355441.370	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.047	0.00

ANNUAL TOTALS FOR YEAR 14

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	32.80	119064.023	100.00
RUNOFF	5.263	19105.373	16.05
EVAPOTRANSPIRATION	12.483	45314.066	38.06
DRAINAGE COLLECTED FROM LAYER 2	16.3082	59198.734	49.72
PERC./LEAKAGE THROUGH LAYER 4	0.000063	0.230	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000063	0.230	0.00

AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000059	0.213	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.255	-4554.449	-3.83
SOIL WATER AT START OF YEAR	373.400	1355441.370	
SOIL WATER AT END OF YEAR	372.145	1350887.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.068	0.00

ANNUAL TOTALS FOR YEAR 15

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	25.74	93436.203	100.00
RUNOFF	1.720	6243.871	6.68
EVAPOTRANSPIRATION	12.075	43831.465	46.91
DRAINAGE COLLECTED FROM LAYER 2	12.1956	44270.137	47.38
PERC./LEAKAGE THROUGH LAYER 4	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0013		
PERC./LEAKAGE THROUGH LAYER 6	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.010	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000048	0.174	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.251	-909.383	-0.97
SOIL WATER AT START OF YEAR	372.145	1350887.000	

SOIL WATER AT END OF YEAR	371.895	1349977.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.067	0.00

ANNUAL TOTALS FOR YEAR 16

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	26.49	96158.703	100.00
RUNOFF	2.016	7317.434	7.61
EVAPOTRANSPIRATION	14.626	53091.227	55.21
DRAINAGE COLLECTED FROM LAYER 2	8.6412	31367.643	32.62
PERC./LEAKAGE THROUGH LAYER 4	0.000034	0.123	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0009		
PERC./LEAKAGE THROUGH LAYER 6	0.000034	0.123	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.009	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000031	0.114	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.207	4382.299	4.56
SOIL WATER AT START OF YEAR	371.895	1349977.620	
SOIL WATER AT END OF YEAR	373.102	1354359.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.017	0.00

ANNUAL TOTALS FOR YEAR 17

	INCHES	CU. FEET	PERCENT
PRECIPITATION	26.33	95577.883	100.00
RUNOFF	2.187	7940.051	8.31
EVAPOTRANSPIRATION	12.472	45271.633	47.37
DRAINAGE COLLECTED FROM LAYER 2	11.5937	42085.105	44.03
PERC./LEAKAGE THROUGH LAYER 4	0.000047	0.171	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	0.000047	0.171	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.011	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000044	0.161	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.077	280.935	0.29
SOIL WATER AT START OF YEAR	373.102	1354359.870	
SOIL WATER AT END OF YEAR	373.179	1354640.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.016	0.00

ANNUAL TOTALS FOR YEAR 18

	INCHES	CU. FEET	PERCENT
PRECIPITATION	32.00	116160.016	100.00
RUNOFF	5.494	19944.500	17.17
EVAPOTRANSPIRATION	12.040	43703.430	37.62

DRAINAGE COLLECTED FROM LAYER 2	13.2916	48248.391	41.54
PERC./LEAKAGE THROUGH LAYER 4	0.000052	0.189	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000052	0.190	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.013	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000049	0.176	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.174	4263.433	3.67
SOIL WATER AT START OF YEAR	373.179	1354640.870	
SOIL WATER AT END OF YEAR	374.354	1358904.250	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.068	0.00

ANNUAL TOTALS FOR YEAR 19

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.22	102438.602	100.00
RUNOFF	2.308	8379.149	8.18
EVAPOTRANSPIRATION	14.057	51025.398	49.81
DRAINAGE COLLECTED FROM LAYER 2	13.5602	49223.426	48.05
PERC./LEAKAGE THROUGH LAYER 4	0.000055	0.198	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0014		
PERC./LEAKAGE THROUGH LAYER 6	0.000055	0.198	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.013	0.00

PERC./LEAKAGE THROUGH LAYER 8	0.000051	0.185	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.705	-6189.544	-6.04
SOIL WATER AT START OF YEAR	374.354	1358904.250	
SOIL WATER AT END OF YEAR	372.649	1352714.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.022	0.00

ANNUAL TOTALS FOR YEAR 20

	INCHES	CU. FEET	PERCENT
PRECIPITATION	25.68	93218.398	100.00
RUNOFF	1.811	6572.631	7.05
EVAPOTRANSPIRATION	16.116	58500.082	62.76
DRAINAGE COLLECTED FROM LAYER 2	8.3467	30298.348	32.50
PERC./LEAKAGE THROUGH LAYER 4	0.000036	0.129	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0009		
PERC./LEAKAGE THROUGH LAYER 6	0.000036	0.129	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.007	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000034	0.122	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.593	-2152.765	-2.31
SOIL WATER AT START OF YEAR	372.649	1352714.750	
SOIL WATER AT END OF YEAR	372.056	1350562.000	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00

SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.021	0.00

ANNUAL TOTALS FOR YEAR 21

	INCHES	CU. FEET	PERCENT
PRECIPITATION	29.64	107593.195	100.00
RUNOFF	4.118	14949.810	13.89
EVAPOTRANSPIRATION	11.123	40377.711	37.53
DRAINAGE COLLECTED FROM LAYER 2	12.4556	45213.812	42.02
PERC./LEAKAGE THROUGH LAYER 4	0.000048	0.176	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0013		
PERC./LEAKAGE THROUGH LAYER 6	0.000048	0.176	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.013	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000045	0.163	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	1.943	7051.736	6.55
SOIL WATER AT START OF YEAR	372.056	1350562.000	
SOIL WATER AT END OF YEAR	373.998	1357613.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.049	0.00

ANNUAL TOTALS FOR YEAR 22

	INCHES	CU. FEET	PERCENT
PRECIPITATION	33.55	121786.508	100.00
RUNOFF	3.870	14049.055	11.54
EVAPOTRANSPIRATION	10.749	39018.094	32.04
DRAINAGE COLLECTED FROM LAYER 2	20.2758	73601.062	60.43
PERC./LEAKAGE THROUGH LAYER 4	0.000080	0.289	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0021		
PERC./LEAKAGE THROUGH LAYER 6	0.000080	0.289	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000074	0.269	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.345	-4882.022	-4.01
SOIL WATER AT START OF YEAR	373.998	1357613.620	
SOIL WATER AT END OF YEAR	372.653	1352731.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.036	0.00

ANNUAL TOTALS FOR YEAR 23

	INCHES	CU. FEET	PERCENT
PRECIPITATION	31.45	114163.516	100.00
RUNOFF	3.622	13147.468	11.52
EVAPOTRANSPIRATION	11.637	42242.668	37.00
DRAINAGE COLLECTED FROM LAYER 2	15.2834	55478.621	48.60

PERC./LEAKAGE THROUGH LAYER 4	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0016		
PERC./LEAKAGE THROUGH LAYER 6	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.014	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000059	0.212	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.908	3294.451	2.89
SOIL WATER AT START OF YEAR	372.653	1352731.620	
SOIL WATER AT END OF YEAR	373.561	1356026.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.085	0.00

ANNUAL TOTALS FOR YEAR 24

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	28.54	103600.195	100.00
RUNOFF	3.035	11017.598	10.63
EVAPOTRANSPIRATION	15.551	56449.504	54.49
DRAINAGE COLLECTED FROM LAYER 2	11.8437	42992.477	41.50
PERC./LEAKAGE THROUGH LAYER 4	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0012		
PERC./LEAKAGE THROUGH LAYER 6	0.000046	0.168	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.012	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000043	0.156	0.00

AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.890	-6859.535	-6.62
SOIL WATER AT START OF YEAR	373.561	1356026.120	
SOIL WATER AT END OF YEAR	371.671	1349166.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.013	0.00

ANNUAL TOTALS FOR YEAR 25

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	34.75	126142.516	100.00
RUNOFF	5.062	18376.039	14.57
EVAPOTRANSPIRATION	12.679	46026.207	36.49
DRAINAGE COLLECTED FROM LAYER 2	17.0055	61729.887	48.94
PERC./LEAKAGE THROUGH LAYER 4	0.000067	0.243	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0018		
PERC./LEAKAGE THROUGH LAYER 6	0.000067	0.243	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.017	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000062	0.226	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.003	10.192	0.01
SOIL WATER AT START OF YEAR	371.671	1349166.620	
SOIL WATER AT END OF YEAR	371.674	1349176.750	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00

PRECIPITATION		38.81	140880.297	100.00
RUNOFF		6.541	23744.951	16.85
EVAPOTRANSPIRATION		13.008	47220.676	33.52
DRAINAGE COLLECTED FROM LAYER	2	18.5077	67182.812	47.69
PERC./LEAKAGE THROUGH LAYER	4	0.000070	0.253	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0019		
PERC./LEAKAGE THROUGH LAYER	6	0.000070	0.253	0.00
AVG. HEAD ON TOP OF LAYER	6	0.0000		
DRAINAGE COLLECTED FROM LAYER	7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER	8	0.000064	0.233	0.00
AVG. HEAD ON TOP OF LAYER	8	0.0000		
CHANGE IN WATER STORAGE		0.753	2731.584	1.94
SOIL WATER AT START OF YEAR		373.316	1355137.000	
SOIL WATER AT END OF YEAR		374.068	1357868.620	
SNOW WATER AT START OF YEAR		0.000	0.000	0.00
SNOW WATER AT END OF YEAR		0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE		0.0000	0.015	0.00

ANNUAL TOTALS FOR YEAR 28

	INCHES	CU. FEET	PERCENT	
PRECIPITATION	38.15	138484.500	100.00	
RUNOFF	5.175	18784.908	13.56	
EVAPOTRANSPIRATION	16.541	60043.082	43.36	
DRAINAGE COLLECTED FROM LAYER	2	17.7890	64574.160	46.63
PERC./LEAKAGE THROUGH LAYER	4	0.000070	0.255	0.00
AVG. HEAD ON TOP OF LAYER	3	0.0018		

PERC./LEAKAGE THROUGH LAYER 6	0.000070	0.255	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.018	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000065	0.237	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-1.355	-4917.915	-3.55
SOIL WATER AT START OF YEAR	374.068	1357868.620	
SOIL WATER AT END OF YEAR	372.714	1352950.620	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.015	0.00

ANNUAL TOTALS FOR YEAR 29

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	33.86	122911.828	100.00
RUNOFF	4.983	18086.584	14.72
EVAPOTRANSPIRATION	10.694	38819.625	31.58
DRAINAGE COLLECTED FROM LAYER 2	18.9965	68957.172	56.10
PERC./LEAKAGE THROUGH LAYER 4	0.000073	0.265	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0020		
PERC./LEAKAGE THROUGH LAYER 6	0.000073	0.265	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.020	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000067	0.245	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	-0.813	-2951.812	-2.40

SOIL WATER AT START OF YEAR	372.714	1352950.620	
SOIL WATER AT END OF YEAR	371.901	1349998.870	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	-0.003	0.00

ANNUAL TOTALS FOR YEAR 30

	INCHES	CU. FEET	PERCENT
	-----	-----	-----
PRECIPITATION	37.69	136814.703	100.00
RUNOFF	3.236	11747.268	8.59
EVAPOTRANSPIRATION	17.795	64595.316	47.21
DRAINAGE COLLECTED FROM LAYER 2	16.1974	58796.539	42.98
PERC./LEAKAGE THROUGH LAYER 4	0.000065	0.234	0.00
AVG. HEAD ON TOP OF LAYER 3	0.0017		
PERC./LEAKAGE THROUGH LAYER 6	0.000065	0.234	0.00
AVG. HEAD ON TOP OF LAYER 6	0.0000		
DRAINAGE COLLECTED FROM LAYER 7	0.0000	0.015	0.00
PERC./LEAKAGE THROUGH LAYER 8	0.000060	0.219	0.00
AVG. HEAD ON TOP OF LAYER 8	0.0000		
CHANGE IN WATER STORAGE	0.462	1675.308	1.22
SOIL WATER AT START OF YEAR	371.901	1349998.870	
SOIL WATER AT END OF YEAR	372.362	1351674.120	
SNOW WATER AT START OF YEAR	0.000	0.000	0.00
SNOW WATER AT END OF YEAR	0.000	0.000	0.00
ANNUAL WATER BUDGET BALANCE	0.0000	0.043	0.00

AVERAGE MONTHLY VALUES IN INCHES FOR YEARS 1 THROUGH 30

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
	-----	-----	-----	-----	-----	-----
PRECIPITATION						

TOTALS	6.11 0.03	5.10 0.13	3.98 0.27	2.06 1.52	1.04 3.96	0.21 6.87
STD. DEVIATIONS	2.75 0.05	3.41 0.19	1.95 0.45	1.40 1.51	0.96 2.43	0.27 3.45
RUNOFF						

TOTALS	0.996 0.000	0.801 0.000	0.160 0.003	0.051 0.090	0.011 0.442	0.000 1.162
STD. DEVIATIONS	1.089 0.000	0.926 0.000	0.211 0.018	0.133 0.160	0.032 0.583	0.000 0.984
EVAPOTRANSPIRATION						

TOTALS	1.248 0.049	1.722 0.120	2.825 0.136	2.745 0.601	1.416 0.947	0.303 1.133
STD. DEVIATIONS	0.066 0.084	0.156 0.183	0.420 0.207	1.209 0.623	0.967 0.389	0.404 0.115
LATERAL DRAINAGE COLLECTED FROM LAYER 2						

TOTALS	3.9714 0.0000	2.9010 0.0000	1.4765 0.0000	0.3053 0.0911	0.0239 1.3788	0.0001 4.1550
STD. DEVIATIONS	1.9046 0.0000	2.0771 0.0000	1.2655 0.0000	0.4572 0.2225	0.1023 1.5243	0.0003 2.1833
PERCOLATION/LEAKAGE THROUGH LAYER 4						

TOTALS	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000
STD. DEVIATIONS	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000
PERCOLATION/LEAKAGE THROUGH LAYER 6						

TOTALS	0.1190 0.0000	0.0998 0.0000	0.1012 0.0000	0.0000 0.0000	0.0000 0.0000	0.0000 0.0000

STD. DEVIATIONS	0.6517	0.5465	0.5545	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

LATERAL DRAINAGE COLLECTED FROM LAYER 7

TOTALS	0.1143	0.0957	0.0969	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.6260	0.5242	0.5309	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

PERCOLATION/LEAKAGE THROUGH LAYER 8

TOTALS	0.0047	0.0041	0.0043	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0257	0.0223	0.0236	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

AVERAGES OF MONTHLY AVERAGED DAILY HEADS (INCHES)

DAILY AVERAGE HEAD ON TOP OF LAYER 3

AVERAGES	0.0048	0.0038	0.0018	0.0004	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0001	0.0017	0.0050

STD. DEVIATIONS	0.0023	0.0028	0.0015	0.0006	0.0001	0.0000
	0.0000	0.0000	0.0000	0.0003	0.0019	0.0026

DAILY AVERAGE HEAD ON TOP OF LAYER 6

AVERAGES	0.0009	0.0008	0.0010	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0052	0.0041	0.0055	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

DAILY AVERAGE HEAD ON TOP OF LAYER 8

AVERAGES	0.0006	0.0005	0.0005	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

STD. DEVIATIONS	0.0031	0.0029	0.0027	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

TITLE: SCLF LANDFILL 2 EXPANSION - PRESCRIBED LINER 3:1 SLOPES

AVERAGE ANNUAL TOTALS & (STD. DEVIATIONS) FOR YEARS 1 THROUGH 30

	INCHES		CU. FEET	PERCENT
PRECIPITATION	31.26	(5.468)	113484.7	100.00
RUNOFF	3.717	(1.7032)	13491.69	11.889
EVAPOTRANSPIRATION	13.245	(2.2036)	48080.53	42.367
LATERAL DRAINAGE COLLECTED FROM LAYER 2	14.30310	(3.59708)	51920.254	45.75089
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.00006	(0.00001)	0.205	0.00018
AVERAGE HEAD ON TOP OF LAYER 3	0.001	(0.000)		
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.32006	(1.75271)	1161.808	1.02376
AVERAGE HEAD ON TOP OF LAYER 6	0.000	(0.001)		
LATERAL DRAINAGE COLLECTED FROM LAYER 7	0.30693	(1.68112)	1114.167	0.98178
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.01312	(0.07159)	47.641	0.04198
AVERAGE HEAD ON TOP OF LAYER 8	0.000	(0.001)		
CHANGE IN WATER STORAGE	-0.322	(2.0678)	-1169.59	-1.031

PEAK DAILY VALUES FOR YEARS	1 THROUGH	30
	(INCHES)	(CU. FT.)
PRECIPITATION	5.77	20945.100
RUNOFF	4.560	16553.5898
DRAINAGE COLLECTED FROM LAYER 2	1.25197	4544.63721
PERCOLATION/LEAKAGE THROUGH LAYER 4	0.000004	0.01486
AVERAGE HEAD ON TOP OF LAYER 3	0.047	
MAXIMUM HEAD ON TOP OF LAYER 3	0.235	
LOCATION OF MAXIMUM HEAD IN LAYER 2 (DISTANCE FROM DRAIN)	0.0 FEET	
PERCOLATION/LEAKAGE THROUGH LAYER 6	0.140332	509.40646
AVERAGE HEAD ON TOP OF LAYER 6	0.096	
DRAINAGE COLLECTED FROM LAYER 7	0.13529	491.11432
PERCOLATION/LEAKAGE THROUGH LAYER 8	0.005039	18.29213
AVERAGE HEAD ON TOP OF LAYER 8	0.021	
MAXIMUM HEAD ON TOP OF LAYER 8	0.156	
LOCATION OF MAXIMUM HEAD IN LAYER 7 (DISTANCE FROM DRAIN)	0.0 FEET	
SNOW WATER	0.01	37.4433
MAXIMUM VEG. SOIL WATER (VOL/VOL)		0.3577
MINIMUM VEG. SOIL WATER (VOL/VOL)		0.1360

*** Maximum heads are computed using McEnroe's equations. ***

Reference: Maximum Saturated Depth over Landfill Liner
by Bruce M. McEnroe, University of Kansas
ASCE Journal of Environmental Engineering
Vol. 119, No. 2, March 1993, pp. 262-270.

FINAL WATER STORAGE AT END OF YEAR 30

LAYER	(INCHES)	(VOL/VOL)
1	4.4351	0.2464
2	0.0029	0.0144
3	0.0000	0.0000
4	8.7600	0.3650
5	350.4000	0.2920
6	8.7600	0.3650
7	0.0020	0.0100
8	0.0000	0.0000
SNOW WATER	0.000	

