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April 26, 2016

Mr. Mike Campbell, AICP  
HMH Engineers  
1570 Oakland Road  
San Jose, California 95131

**RE: Summary of Hydromodification Management Modeling for Phase 1 of the Samaritan Court Project, City of San Jose**

Dear Mr. Campbell:

Thank you again for extending the opportunity to Balance Hydrologics to continue assisting with modeling of the proposed hydromodification control facilities at the Samaritan Court project in the City of San Jose. So far, we have been providing appropriate design parameters for the infrastructure components that will be used to meet hydromodification management requirements at the entire project site. This letter report covers only the lower portion of the project and summarizes the proposed facilities that will meet the pertinent requirements for flow duration control.

***Setting and Proposed Stormwater Infrastructure***

The Samaritan Court project is located in a part of the City of San Jose that is subject to hydromodification management requirements as set for in the C.3 Stormwater Handbook prepared by the Santa Clara Valley Urban Runoff Pollution Prevention Program and the Municipal Regional Permit issued by the San Francisco Bay Regional Water Quality Control Board.

Soil mapping prepared by the National Resource Conservation Service shows that the entirety of the site is underlain by soils in the Urban Land-Flaskan Complex. These soils are categorized in Hydrologic Soil Group C, indicative of relatively low infiltration rates and correspondingly high runoff potential. On one hand, this confirms that the site is less susceptible to generating hydromodification impacts from the proposed improvements. However, it also shows that infiltration based approaches to C.3 compliance are not practical at the site.

To assure full C.3 compliance, all treatment control facilities at the site are designed as bioretention units (either cells or planters) for stormwater quality and flow-duration control.

### ***Technical Approach and Modeling***

Hydromodification impacts and mitigation were assessed using the Bay Area Hydrology Model (BAHM), a platform specifically developed by local stormwater agencies for this purpose. Data to parameterize the model were taken from site plans and information provided by HMM Engineers. Phase 1 of the Samaritan Court project comprises development of a site that is characterized by high levels of pre-project pervious cover as summarized in the attached Table 1. As the entire site currently drains to a common point of concentration (within the Guadalupe River watershed) and does not have installed treatment controls, the pre-project conditions are represented by a single sub-basin in the BAHM model. The post-project conditions are represented by a total of 12 sub-basins, also summarized in Table 1. Of these, four (DMA-1, DMA-2, DMA-3, DMA-4) will drain to bioretention units (biotreatment cells), one (DMA-5) will drain to a flow-through planter, and seven are categorized as self-treating areas. The total land area is 2.384 acres, of which a great portion, 2.284 acres, is characterized as pervious cover in the pre-project, dropping to 0.762 acres in the post-project case. On the other hand, the existing pervious cover in the overall Samaritan Court project site is only about 65% of the total project area. As a result, the pre-project peak flows in Phase 1 are approximately half of the respective flows in the overall project site analysis. The attached Figure 1 shows a map of the project site with the post-project drainage areas.

A preliminary BAHM report of the entire Samaritan Court project site was previously transmitted. This report summarizes the treatment controls in the lower portion (Phase 1) of the project, which is nearly consistent with the originally proposed bioretention facilities. Because the pre-project peak flows decreased significantly from that of the original BAHM analysis, slight modifications were required to satisfy the hydromodification standards. The assembled input data was entered into the BAHM model, and iterative model runs were carried out to retain the original facility sizes by altering the orifice diameters. The BAHM modeling results are provided in the attached Appendix A. Pre-project peak flows range from 0.96 cfs for the 2-year event to 1.53 cfs for the 10-year event, effectively setting the low end of the flow-duration control regime to 0.01 cfs. Post-project 2-year peak flow is reduced to 0.33 cfs and post-project 10-year peak flow to 0.90 cfs. The results show compliance with hydromodification criteria across the full-required control range.

Key aspects of the modeling and proposed design include:

- ***Dimensions of the Treatment Controls.*** Table 2 summarizes the dimensions of each of the proposed treatment controls. Facility size varies with the size of the respective drainage area and the extent and mix of the impervious cover therein.
- ***Bioretention Soil.*** Water-quality treatment will be provided by a standard 18-inch layer of bioretention soil with a modeled infiltration rate of 5 inches/hour.
- ***Underdrains and Orifices.*** Efforts were made to standardize facility component sizes. For example, all of the facilities will require underdrains with orifices to control outflow rates to meet the flow-duration control standards. The underdrain orifices for all of the units will be 0.75 inches

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in diameter, except for TCM 5, which will be 1.0 inches in diameter. The underdrain diameter for all units will be .33 feet in diameter, except for TCM 5, which will be .5 feet in diameter.

- Emergency Overflow. Each facility will be equipped with a standard overflow riser, modeled with a nominal diameter of 12 inches. However, four of the facilities (TCMs 1 through 4, see Table 2) will have notched riser tops to facilitate outflow during particularly large storm events.

### ***Closing***

The BAHM modeling work shows that the proposed distributed treatment control facilities can effectively control for hydromodification impacts while assuring that runoff from the site receives C.3 water-quality treatment per guidelines of the pertinent permits.

Please do not hesitate to contact Balance if you have any questions or comments related to this scope or the work approach suggested.

Sincerely,

BALANCE HYDROLOGICS, Inc.



Edward D. Ballman, P.E.  
Principal Engineer



Enclosure:      Table 1 – Summary of input land use parameters  
                      Table 2 – Summary of facility dimensions for C.3 compliance  
                      Figure 1 – Site Plan  
                      Appendix A – BAHM Project Report

**Table 1. Summary of input land use parameters for BAHM modeling, Phase 1 Samaritan Court Project, City of San Jose**

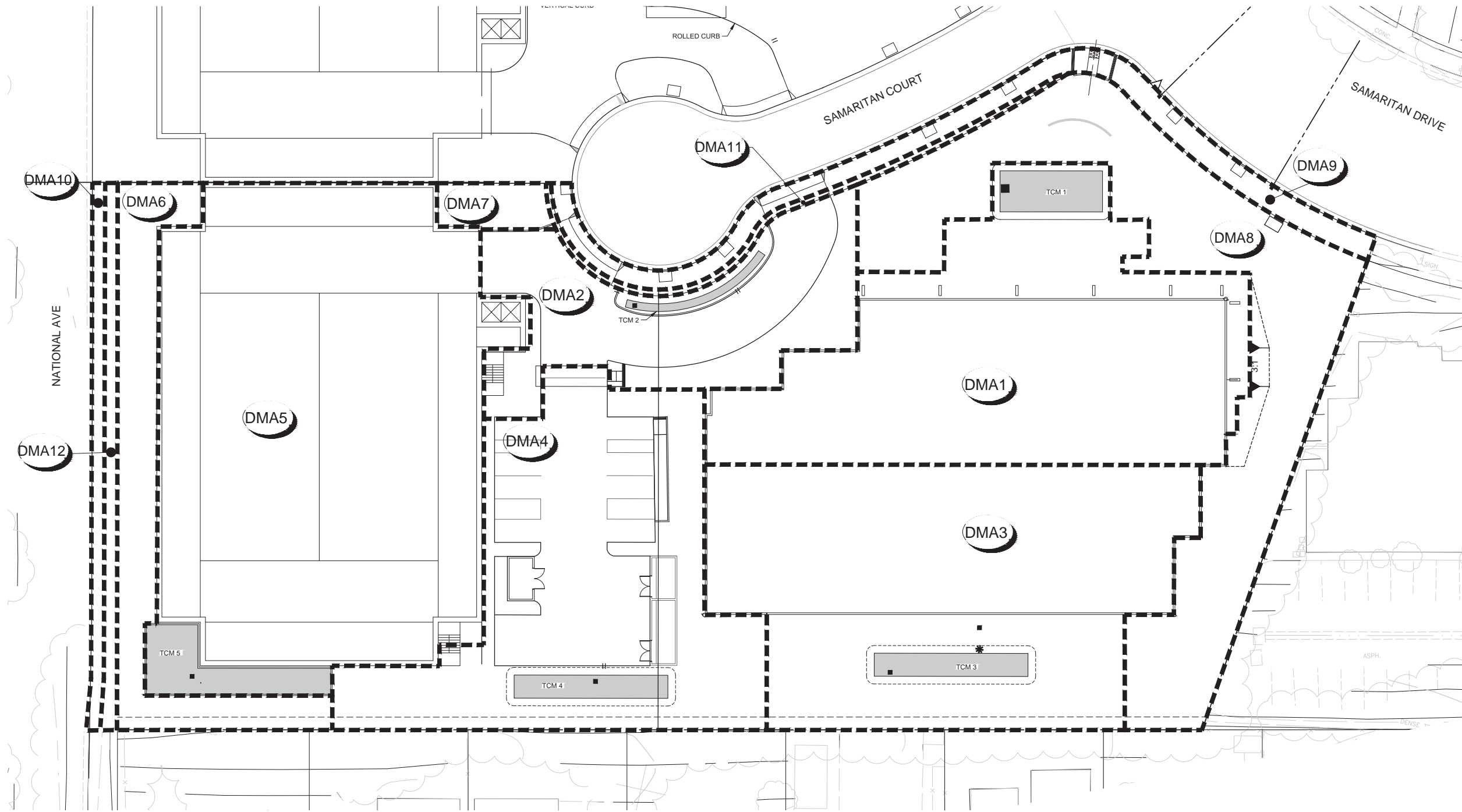
<b>Land Use</b>	<b>Pre-project</b>	<b>Post-project Drainage Areas</b>											
		<b>DMA1</b>	<b>DMA2</b>	<b>DMA3</b>	<b>DMA4</b>	<b>DMA5</b>	<b>DMA6</b>	<b>DMA7</b>	<b>DMA8</b>	<b>DMA9</b>	<b>DMA10</b>	<b>DMA11</b>	<b>DMA12</b>
<b><i>Pervious</i></b>													
C/D, Urban, Flat	2.284	0.034	0.021	0.147	0.117	0.028	0.102	0.018	0.295	0	0	0	0
<b><i>Impervious</i></b>													
Roof Area	0	0.267	0	0.250	0	0	0	0	0	0	0	0	0
Driveways, Flat	0	0	0.158	0	0	0	0	0	0	0	0	0	0
Sidewalks, Flat	0	0.066	0	0	0	0	0	0	0	0	0	0	0
Parking, Flat	0	0	0	0	0.208	0.534	0	0	0	0	0	0	0
Streets, Flat	0.100	0	0	0	0	0	0	0	0	0.075	0.025	0.014	0.025
<b>TOTAL</b>	<b>2.384</b>	<b>0.367</b>	<b>0.179</b>	<b>0.397</b>	<b>0.325</b>	<b>0.562</b>	<b>0.102</b>	<b>0.018</b>	<b>0.295</b>	<b>0.075</b>	<b>0.025</b>	<b>0.014</b>	<b>0.025</b>

*All values are shown in acres, based on land use data provided by HMM Engineers*

**Table 2. Summary of facility dimensions for C.3 compliance,  
Phase 1 Samaritan Court Project, City of San Jose**

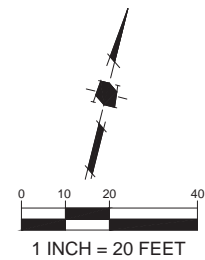
<b>Facility</b>	<b>Treatment Control</b>	<b>Dimensions</b>			<b>Underdrain Diameter</b>	<b>Orifice Diameter</b>	<b>Riser Notch</b>	
		<b>Length</b>	<b>Width</b>	<b>Area</b>			<b>Height</b>	<b>Width</b>
		<i>(feet)</i>	<i>(feet)</i>	<i>(ft<sup>2</sup>)</i>	<i>(ft)</i>	<i>(inches)</i>	<i>(inches)</i>	<i>(inches)</i>
TCM 1	Bioretention cell	40	16	640	0.33	0.75	4	3
TCM 2	Bioretention cell	66	3	198	0.33	0.75	4	3
TCM 3	Bioretention cell	60	9	540	0.33	0.75	4	3
TCM 4	Bioretention cell	60	9	540	0.33	0.75	4	3
TCM 5	Flow-through planter	28	37	1036	0.5	1	n.a.	n.a.

\*TCM 5 is an L shaped area with an equivalent area of about 28' x 37'.



**LEGEND**

PROJECT BOUNDARY  
 FLOW THROUGH PLANTER OR BIOTREATMENT CELL / HYDROMODIFICATION FACILITY  
 DRAINAGE MANAGEMENT AREA



ISSUE RECORD	
09/15/15	PD PERMIT SUBMITTAL

**MEDICAL OFFICE BUILDING and FREESTANDING PARKING STRUCTURE**

**CONCEPTUAL STORMWATER CONTROL PLAN**

SAMARITAN MEDICAL CENTER  
 2506 SAMARITAN COURT  
 San Jose, California  
 03/16/2016 RBB #1114600

PLANNED DEVELOPMENT PERMIT PHASE 1  
 LANDS OF SAMARITAN MEDICAL CENTER  
 PDC 14-013



**RBB ARCHITECTS INC**  
 10980 Wilshire Boulevard  
 Los Angeles, California  
 90024-3905



**BAHM2013**  
**PROJECT REPORT**

## *General Model Information*

Project Name: 215190 BAHM Phase 1  
Site Name: Samaritan Court  
Site Address:  
City: San Jose  
Report Date: 4/21/2016  
Gage: San Jose  
Data Start: 1959/10/01  
Data End: 2000/09/30  
Timestep: Hourly  
Precip Scale: 1.45  
Version Date: 2016/02/04

## *POC Thresholds*

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Low Flow Threshold for POC1:	10 Percent of the 2 Year
High Flow Threshold for POC1:	10 Year

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## Landuse Basin Data

### Predeveloped Land Use

#### Pre-project

Bypass:	No
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 2.284
Pervious Total	2.284
Impervious Land Use Roads,Flat(0-5%)	acre 0.1
Impervious Total	0.1
Basin Total	2.384

Element Flows To:		
Surface	Interflow	Groundwater

## Mitigated Land Use

### DMA 1

Bypass:	No
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.034
Pervious Total	0.034
Impervious Land Use Roof Area Sidewalks,Flat(0-5%)	acre 0.267 0.066
Impervious Total	0.333
Basin Total	0.367

### Element Flows To:

Surface	Interflow	Groundwater
Surface ention TCM 1	Surface ention TCM 1	

## DMA 2

Bypass:	No
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.021
Pervious Total	0.021
Impervious Land Use Driveways,Flat(0-5%)	acre 0.158
Impervious Total	0.158
Basin Total	0.179

### Element Flows To:

Surface	Interflow	Groundwater
Surface ention TCM 2	Surface ention TCM 2	

### DMA 3

Bypass:	No
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.147
Pervious Total	0.147
Impervious Land Use Roof Area	acre 0.25
Impervious Total	0.25
Basin Total	0.397

Element Flows To:  
Surface                      Interflow                      Groundwater  
Surface ention TCM 3   Surface ention TCM 3

## DMA 4

Bypass:	No
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.117
Pervious Total	0.117
Impervious Land Use Parking,Flat(0-5%)	acre 0.208
Impervious Total	0.208
Basin Total	0.325

### Element Flows To:

Surface	Interflow	Groundwater
Surface ention TCM 4	Surface ention TCM 4	

## DMA 5

Bypass:	No
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.028
Pervious Total	0.028
Impervious Land Use Parking,Flat(0-5%)	acre 0.534
Impervious Total	0.534
Basin Total	0.562

Element Flows To:  
Surface                      Interflow                      Groundwater  
FT Planter Surface 5    FT Planter Surface 5

## DMA 6

Bypass:	Yes
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.102
Pervious Total	0.102
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.102

Element Flows To:		
Surface	Interflow	Groundwater

## DMA 7

Bypass:	Yes
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.018
Pervious Total	0.018
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.018

Element Flows To:		
Surface	Interflow	Groundwater



## DMA 8

Bypass:	Yes
GroundWater:	No
Pervious Land Use C D,Urban,Flat(0-5%)	acre 0.295
Pervious Total	0.295
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.295

Element Flows To:		
Surface	Interflow	Groundwater

## DMA 9

Bypass:	Yes
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
Roads, Flat(0-5%)	0.075
Impervious Total	0.075
Basin Total	0.075

Element Flows To:		
Surface	Interflow	Groundwater

DMA 10

Bypass:	Yes
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
Roads, Flat(0-5%)	0.025
Impervious Total	0.025
Basin Total	0.025

Element Flows To:		
Surface	Interflow	Groundwater

DMA 11

Bypass:	Yes
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
Roads, Flat(0-5%)	0.014
Impervious Total	0.014
Basin Total	0.014

Element Flows To:		
Surface	Interflow	Groundwater

## DMA 12

Bypass:	Yes
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
Roads, Flat(0-5%)	0.025
Impervious Total	0.025
Basin Total	0.025

Element Flows To:		
Surface	Interflow	Groundwater

*Routing Elements*  
*Predeveloped Routing*

## Mitigated Routing

### Bioretention TCM 1

Bottom Length:	40.00 ft.
Bottom Width:	16.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1.17
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Underdrain used	
Underdrain Diameter (feet):	0.33
Orifice Diameter (in.):	0.75
Offset (in.):	0
Flow Through Underdrain (ac-ft.):	21.995
Total Outflow (ac-ft.):	23.634
Percent Through Underdrain:	93.07
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Notch Type:	Rectangular
Notch Width:	0.250 ft.
Notch Height:	0.330 ft.
Element Flows To:	
Outlet 1	Outlet 2

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0310	0.0000	0.0000	0.0000
0.0458	0.0310	0.0003	0.0000	0.0000
0.0916	0.0306	0.0005	0.0000	0.0000
0.1375	0.0303	0.0008	0.0000	0.0000
0.1833	0.0300	0.0011	0.0000	0.0000
0.2291	0.0297	0.0013	0.0000	0.0000
0.2749	0.0293	0.0016	0.0006	0.0000
0.3208	0.0290	0.0019	0.0009	0.0000
0.3666	0.0287	0.0022	0.0013	0.0000
0.4124	0.0284	0.0025	0.0018	0.0000
0.4582	0.0281	0.0028	0.0024	0.0000
0.5041	0.0278	0.0031	0.0030	0.0000
0.5499	0.0275	0.0034	0.0038	0.0000
0.5957	0.0272	0.0037	0.0045	0.0000
0.6415	0.0269	0.0040	0.0051	0.0000
0.6874	0.0266	0.0043	0.0051	0.0000
0.7332	0.0263	0.0046	0.0056	0.0000
0.7790	0.0259	0.0050	0.0061	0.0000
0.8248	0.0257	0.0053	0.0065	0.0000
0.8707	0.0254	0.0056	0.0069	0.0000
0.9165	0.0251	0.0060	0.0073	0.0000
0.9623	0.0248	0.0063	0.0077	0.0000
1.0081	0.0245	0.0067	0.0080	0.0000
1.0540	0.0242	0.0070	0.0083	0.0000
1.0998	0.0239	0.0074	0.0087	0.0000
1.1456	0.0236	0.0077	0.0090	0.0000

1.1914	0.0233	0.0081	0.0093	0.0000
1.2373	0.0230	0.0085	0.0095	0.0000
1.2831	0.0227	0.0089	0.0098	0.0000
1.3289	0.0225	0.0093	0.0101	0.0000
1.3747	0.0222	0.0096	0.0104	0.0000
1.4205	0.0219	0.0100	0.0106	0.0000
1.4664	0.0216	0.0104	0.0109	0.0000
1.5122	0.0213	0.0109	0.0111	0.0000
1.5580	0.0211	0.0113	0.0114	0.0000
1.6038	0.0208	0.0118	0.0116	0.0000
1.6497	0.0205	0.0122	0.0118	0.0000
1.6955	0.0202	0.0127	0.0121	0.0000
1.7413	0.0200	0.0132	0.0123	0.0000
1.7871	0.0197	0.0136	0.0125	0.0000
1.8330	0.0194	0.0141	0.0127	0.0000
1.8788	0.0192	0.0146	0.0129	0.0000
1.9246	0.0189	0.0151	0.0131	0.0000
1.9704	0.0187	0.0156	0.0133	0.0000
2.0163	0.0184	0.0161	0.0135	0.0000
2.0621	0.0181	0.0166	0.0137	0.0000
2.1079	0.0179	0.0171	0.0139	0.0000
2.1537	0.0176	0.0176	0.0141	0.0000
2.1996	0.0174	0.0182	0.0143	0.0000
2.2454	0.0171	0.0187	0.0145	0.0000
2.2912	0.0169	0.0192	0.0147	0.0000
2.3370	0.0166	0.0198	0.0149	0.0000
2.3829	0.0164	0.0203	0.0151	0.0000
2.4287	0.0161	0.0209	0.0152	0.0000
2.4745	0.0159	0.0214	0.0154	0.0000
2.5203	0.0156	0.0220	0.0156	0.0000
2.5662	0.0154	0.0226	0.0158	0.0000
2.6120	0.0152	0.0232	0.0161	0.0000
2.6578	0.0149	0.0237	0.0166	0.0000
2.6700	0.0147	0.0239	0.0166	0.0000

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infiltr(cfs)
2.6700	0.0310	0.0239	0.0000	0.0763	0.0000
2.7158	0.0314	0.0253	0.0000	0.0763	0.0000
2.7616	0.0317	0.0268	0.0000	0.0786	0.0000
2.8075	0.0320	0.0282	0.0000	0.0809	0.0000
2.8533	0.0324	0.0297	0.0000	0.0831	0.0000
2.8991	0.0327	0.0312	0.0000	0.0854	0.0000
2.9449	0.0330	0.0327	0.0000	0.0877	0.0000
2.9908	0.0334	0.0342	0.0000	0.0899	0.0000
3.0366	0.0337	0.0358	0.0000	0.0922	0.0000
3.0824	0.0340	0.0373	0.0000	0.0944	0.0000
3.1282	0.0344	0.0389	0.0000	0.0967	0.0000
3.1741	0.0347	0.0405	0.0000	0.0990	0.0000
3.2199	0.0351	0.0421	0.0000	0.1012	0.0000
3.2657	0.0354	0.0437	0.0000	0.1035	0.0000
3.3115	0.0357	0.0453	0.0000	0.1058	0.0000
3.3574	0.0361	0.0469	0.0019	0.1080	0.0000
3.4032	0.0364	0.0486	0.0132	0.1103	0.0000
3.4490	0.0368	0.0503	0.0300	0.1125	0.0000
3.4948	0.0372	0.0520	0.0507	0.1148	0.0000
3.5407	0.0375	0.0537	0.0748	0.1171	0.0000
3.5865	0.0379	0.0554	0.1019	0.1193	0.0000



3.6323	0.0382	0.0572	0.1316	0.1216	0.0000
3.6781	0.0386	0.0589	0.1656	0.1239	0.0000
3.7240	0.0389	0.0607	0.2906	0.1261	0.0000
3.7698	0.0393	0.0625	0.4903	0.1284	0.0000
3.8156	0.0397	0.0643	0.7371	0.1306	0.0000
3.8614	0.0400	0.0661	1.0124	0.1329	0.0000
3.9073	0.0404	0.0680	1.2971	0.1352	0.0000
3.9531	0.0408	0.0698	1.5721	0.1374	0.0000
3.9989	0.0411	0.0717	1.8194	0.1397	0.0000
4.0447	0.0415	0.0736	2.0251	0.1420	0.0000
4.0905	0.0419	0.0755	2.1824	0.1442	0.0000
4.1364	0.0422	0.0774	2.2955	0.1465	0.0000
4.1700	0.0425	0.0789	2.4119	0.1481	0.0000

## Surface ention TCM 1

Element Flows To:

Outlet 1

Outlet 2

Bioretention TCM 1

## Bioretention TCM 2

Bottom Length:	66.00 ft.
Bottom Width:	3.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1.17
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Underdrain used	
Underdrain Diameter (feet):	0.33
Orifice Diameter (in.):	0.75
Offset (in.):	0
Flow Through Underdrain (ac-ft.):	11.414
Total Outflow (ac-ft.):	11.663
Percent Through Underdrain:	97.87
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Notch Type:	Rectangular
Notch Width:	0.250 ft.
Notch Height:	0.330 ft.
Element Flows To:	
Outlet 1	Outlet 2

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0241	0.0000	0.0000	0.0000
0.0458	0.0240	0.0001	0.0000	0.0000
0.0916	0.0236	0.0002	0.0000	0.0000
0.1375	0.0232	0.0003	0.0000	0.0000
0.1833	0.0228	0.0004	0.0000	0.0000
0.2291	0.0225	0.0005	0.0000	0.0000
0.2749	0.0221	0.0006	0.0002	0.0000
0.3208	0.0217	0.0007	0.0003	0.0000
0.3666	0.0214	0.0008	0.0004	0.0000
0.4124	0.0210	0.0009	0.0005	0.0000
0.4582	0.0206	0.0010	0.0007	0.0000
0.5041	0.0203	0.0012	0.0010	0.0000
0.5499	0.0199	0.0013	0.0012	0.0000
0.5957	0.0195	0.0015	0.0016	0.0000
0.6415	0.0192	0.0016	0.0019	0.0000
0.6874	0.0188	0.0018	0.0023	0.0000
0.7332	0.0185	0.0019	0.0028	0.0000
0.7790	0.0181	0.0021	0.0030	0.0000
0.8248	0.0177	0.0023	0.0038	0.0000
0.8707	0.0174	0.0024	0.0042	0.0000
0.9165	0.0170	0.0026	0.0045	0.0000
0.9623	0.0167	0.0028	0.0051	0.0000
1.0081	0.0163	0.0030	0.0056	0.0000
1.0540	0.0160	0.0032	0.0056	0.0000
1.0998	0.0157	0.0034	0.0061	0.0000
1.1456	0.0153	0.0036	0.0065	0.0000
1.1914	0.0150	0.0038	0.0069	0.0000
1.2373	0.0146	0.0041	0.0073	0.0000

1.2831	0.0143	0.0043	0.0077	0.0000
1.3289	0.0140	0.0045	0.0080	0.0000
1.3747	0.0136	0.0048	0.0083	0.0000
1.4205	0.0133	0.0050	0.0087	0.0000
1.4664	0.0129	0.0053	0.0090	0.0000
1.5122	0.0126	0.0055	0.0093	0.0000
1.5580	0.0123	0.0058	0.0095	0.0000
1.6038	0.0120	0.0061	0.0098	0.0000
1.6497	0.0116	0.0064	0.0101	0.0000
1.6955	0.0113	0.0067	0.0104	0.0000
1.7413	0.0110	0.0071	0.0106	0.0000
1.7871	0.0107	0.0074	0.0109	0.0000
1.8330	0.0103	0.0077	0.0111	0.0000
1.8788	0.0100	0.0080	0.0114	0.0000
1.9246	0.0097	0.0084	0.0116	0.0000
1.9704	0.0094	0.0087	0.0118	0.0000
2.0163	0.0091	0.0091	0.0121	0.0000
2.0621	0.0088	0.0094	0.0123	0.0000
2.1079	0.0085	0.0098	0.0125	0.0000
2.1537	0.0081	0.0102	0.0127	0.0000
2.1996	0.0078	0.0106	0.0129	0.0000
2.2454	0.0075	0.0110	0.0131	0.0000
2.2912	0.0072	0.0114	0.0134	0.0000
2.3370	0.0069	0.0118	0.0138	0.0000
2.3829	0.0066	0.0122	0.0142	0.0000
2.4287	0.0063	0.0126	0.0146	0.0000
2.4745	0.0060	0.0130	0.0150	0.0000
2.5203	0.0057	0.0134	0.0153	0.0000
2.5662	0.0054	0.0139	0.0157	0.0000
2.6120	0.0051	0.0143	0.0161	0.0000
2.6578	0.0048	0.0148	0.0166	0.0000
2.6700	0.0045	0.0149	0.0166	0.0000

Bioretention Hydraulic Table

<b>Stage(feet)</b>	<b>Area(ac.)</b>	<b>Volume(ac-ft.)</b>	<b>Discharge(cfs)</b>	<b>To Amended(cfs)</b>	<b>Infil(cfs)</b>
2.6700	0.0241	0.0149	0.0000	0.0236	0.0000
2.7158	0.0245	0.0160	0.0000	0.0236	0.0000
2.7616	0.0248	0.0171	0.0000	0.0243	0.0000
2.8075	0.0252	0.0183	0.0000	0.0250	0.0000
2.8533	0.0256	0.0194	0.0000	0.0257	0.0000
2.8991	0.0260	0.0206	0.0000	0.0264	0.0000
2.9449	0.0264	0.0218	0.0000	0.0271	0.0000
2.9908	0.0268	0.0230	0.0000	0.0278	0.0000
3.0366	0.0272	0.0243	0.0000	0.0285	0.0000
3.0824	0.0276	0.0255	0.0000	0.0292	0.0000
3.1282	0.0280	0.0268	0.0000	0.0299	0.0000
3.1741	0.0284	0.0281	0.0000	0.0306	0.0000
3.2199	0.0288	0.0294	0.0000	0.0313	0.0000
3.2657	0.0292	0.0307	0.0000	0.0320	0.0000
3.3115	0.0296	0.0321	0.0000	0.0327	0.0000
3.3574	0.0300	0.0334	0.0019	0.0334	0.0000
3.4032	0.0304	0.0348	0.0132	0.0341	0.0000
3.4490	0.0308	0.0362	0.0300	0.0348	0.0000
3.4948	0.0312	0.0376	0.0507	0.0355	0.0000
3.5407	0.0316	0.0391	0.0748	0.0362	0.0000
3.5865	0.0320	0.0405	0.1019	0.0369	0.0000
3.6323	0.0324	0.0420	0.1316	0.0376	0.0000
3.6781	0.0328	0.0435	0.1656	0.0383	0.0000

3.7240	0.0332	0.0450	0.2906	0.0390	0.0000
3.7698	0.0337	0.0466	0.4903	0.0397	0.0000
3.8156	0.0341	0.0481	0.7371	0.0404	0.0000
3.8614	0.0345	0.0497	1.0124	0.0411	0.0000
3.9073	0.0349	0.0513	1.2971	0.0418	0.0000
3.9531	0.0353	0.0529	1.5721	0.0425	0.0000
3.9989	0.0358	0.0545	1.8194	0.0432	0.0000
4.0447	0.0362	0.0562	2.0251	0.0439	0.0000
4.0905	0.0366	0.0578	2.1824	0.0446	0.0000
4.1364	0.0370	0.0595	2.2955	0.0453	0.0000
4.1700	0.0374	0.0608	2.4119	0.0458	0.0000

## Surface ention TCM 2

Element Flows To:

Outlet 1

Outlet 2

Bioretention TCM 2

### Bioretention TCM 3

Bottom Length:	60.00 ft.
Bottom Width:	9.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1.17
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Underdrain used	
Underdrain Diameter (feet):	0.33
Orifice Diameter (in.):	0.75
Offset (in.):	0
Flow Through Underdrain (ac-ft.):	19.856
Total Outflow (ac-ft.):	21.343
Percent Through Underdrain:	93.03
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Notch Type:	Rectangular
Notch Width:	0.250 ft.
Notch Height:	0.330 ft.
Element Flows To:	
Outlet 1	Outlet 2

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0319	0.0000	0.0000	0.0000
0.0458	0.0318	0.0002	0.0000	0.0000
0.0916	0.0315	0.0004	0.0000	0.0000
0.1375	0.0311	0.0007	0.0000	0.0000
0.1833	0.0307	0.0009	0.0000	0.0000
0.2291	0.0303	0.0011	0.0000	0.0000
0.2749	0.0300	0.0014	0.0005	0.0000
0.3208	0.0296	0.0016	0.0007	0.0000
0.3666	0.0292	0.0019	0.0011	0.0000
0.4124	0.0288	0.0022	0.0015	0.0000
0.4582	0.0285	0.0024	0.0020	0.0000
0.5041	0.0281	0.0027	0.0027	0.0000
0.5499	0.0277	0.0030	0.0030	0.0000
0.5957	0.0274	0.0032	0.0038	0.0000
0.6415	0.0270	0.0035	0.0045	0.0000
0.6874	0.0267	0.0038	0.0051	0.0000
0.7332	0.0263	0.0041	0.0056	0.0000
0.7790	0.0260	0.0044	0.0061	0.0000
0.8248	0.0256	0.0047	0.0065	0.0000
0.8707	0.0252	0.0050	0.0069	0.0000
0.9165	0.0249	0.0054	0.0073	0.0000
0.9623	0.0245	0.0057	0.0077	0.0000
1.0081	0.0242	0.0060	0.0080	0.0000
1.0540	0.0238	0.0064	0.0083	0.0000
1.0998	0.0235	0.0067	0.0087	0.0000
1.1456	0.0232	0.0070	0.0090	0.0000
1.1914	0.0228	0.0074	0.0093	0.0000
1.2373	0.0225	0.0078	0.0095	0.0000

1.2831	0.0221	0.0081	0.0098	0.0000
1.3289	0.0218	0.0085	0.0101	0.0000
1.3747	0.0215	0.0089	0.0104	0.0000
1.4205	0.0211	0.0093	0.0106	0.0000
1.4664	0.0208	0.0096	0.0109	0.0000
1.5122	0.0205	0.0101	0.0111	0.0000
1.5580	0.0201	0.0105	0.0114	0.0000
1.6038	0.0198	0.0110	0.0116	0.0000
1.6497	0.0195	0.0114	0.0118	0.0000
1.6955	0.0192	0.0119	0.0121	0.0000
1.7413	0.0188	0.0123	0.0123	0.0000
1.7871	0.0185	0.0128	0.0125	0.0000
1.8330	0.0182	0.0133	0.0127	0.0000
1.8788	0.0179	0.0138	0.0129	0.0000
1.9246	0.0176	0.0142	0.0131	0.0000
1.9704	0.0172	0.0147	0.0133	0.0000
2.0163	0.0169	0.0152	0.0135	0.0000
2.0621	0.0166	0.0158	0.0137	0.0000
2.1079	0.0163	0.0163	0.0139	0.0000
2.1537	0.0160	0.0168	0.0141	0.0000
2.1996	0.0157	0.0173	0.0143	0.0000
2.2454	0.0154	0.0179	0.0145	0.0000
2.2912	0.0151	0.0184	0.0147	0.0000
2.3370	0.0148	0.0190	0.0149	0.0000
2.3829	0.0145	0.0195	0.0151	0.0000
2.4287	0.0142	0.0201	0.0152	0.0000
2.4745	0.0139	0.0207	0.0154	0.0000
2.5203	0.0136	0.0212	0.0156	0.0000
2.5662	0.0133	0.0218	0.0158	0.0000
2.6120	0.0130	0.0224	0.0161	0.0000
2.6578	0.0127	0.0230	0.0166	0.0000
2.6700	0.0124	0.0232	0.0166	0.0000

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infil(cfs)
2.6700	0.0319	0.0232	0.0000	0.0644	0.0000
2.7158	0.0323	0.0247	0.0000	0.0644	0.0000
2.7616	0.0327	0.0261	0.0000	0.0663	0.0000
2.8075	0.0331	0.0277	0.0000	0.0682	0.0000
2.8533	0.0335	0.0292	0.0000	0.0701	0.0000
2.8991	0.0339	0.0307	0.0000	0.0720	0.0000
2.9449	0.0342	0.0323	0.0000	0.0740	0.0000
2.9908	0.0346	0.0339	0.0000	0.0759	0.0000
3.0366	0.0350	0.0355	0.0000	0.0778	0.0000
3.0824	0.0354	0.0371	0.0000	0.0797	0.0000
3.1282	0.0358	0.0387	0.0000	0.0816	0.0000
3.1741	0.0362	0.0404	0.0000	0.0835	0.0000
3.2199	0.0366	0.0420	0.0000	0.0854	0.0000
3.2657	0.0370	0.0437	0.0000	0.0873	0.0000
3.3115	0.0374	0.0454	0.0000	0.0892	0.0000
3.3574	0.0378	0.0471	0.0019	0.0911	0.0000
3.4032	0.0382	0.0489	0.0132	0.0930	0.0000
3.4490	0.0386	0.0506	0.0300	0.0950	0.0000
3.4948	0.0390	0.0524	0.0507	0.0969	0.0000
3.5407	0.0394	0.0542	0.0748	0.0988	0.0000
3.5865	0.0398	0.0560	0.1019	0.1007	0.0000
3.6323	0.0403	0.0579	0.1316	0.1026	0.0000
3.6781	0.0407	0.0597	0.1656	0.1045	0.0000



3.7240	0.0411	0.0616	0.2906	0.1064	0.0000
3.7698	0.0415	0.0635	0.4903	0.1083	0.0000
3.8156	0.0419	0.0654	0.7371	0.1102	0.0000
3.8614	0.0423	0.0673	1.0124	0.1121	0.0000
3.9073	0.0428	0.0693	1.2971	0.1141	0.0000
3.9531	0.0432	0.0712	1.5721	0.1160	0.0000
3.9989	0.0436	0.0732	1.8194	0.1179	0.0000
4.0447	0.0440	0.0752	2.0251	0.1198	0.0000
4.0905	0.0445	0.0773	2.1824	0.1217	0.0000
4.1364	0.0449	0.0793	2.2955	0.1236	0.0000
4.1700	0.0452	0.0808	2.4119	0.1250	0.0000

## Surface ention TCM 3

Element Flows To:

Outlet 1

Outlet 2

Bioretention TCM 3

## Bioretention TCM 4

Bottom Length:	60.00 ft.
Bottom Width:	9.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1.17
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Underdrain used	
Underdrain Diameter (feet):	0.33
Orifice Diameter (in.):	0.75
Offset (in.):	0
Flow Through Underdrain (ac-ft.):	16.922
Total Outflow (ac-ft.):	17.682
Percent Through Underdrain:	95.7
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Notch Type:	Rectangular
Notch Width:	0.250 ft.
Notch Height:	0.330 ft.
Element Flows To:	
Outlet 1	Outlet 2

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0319	0.0000	0.0000	0.0000
0.0458	0.0318	0.0002	0.0000	0.0000
0.0916	0.0315	0.0004	0.0000	0.0000
0.1375	0.0311	0.0007	0.0000	0.0000
0.1833	0.0307	0.0009	0.0000	0.0000
0.2291	0.0303	0.0011	0.0000	0.0000
0.2749	0.0300	0.0014	0.0005	0.0000
0.3208	0.0296	0.0016	0.0007	0.0000
0.3666	0.0292	0.0019	0.0011	0.0000
0.4124	0.0288	0.0022	0.0015	0.0000
0.4582	0.0285	0.0024	0.0020	0.0000
0.5041	0.0281	0.0027	0.0027	0.0000
0.5499	0.0277	0.0030	0.0030	0.0000
0.5957	0.0274	0.0032	0.0038	0.0000
0.6415	0.0270	0.0035	0.0045	0.0000
0.6874	0.0267	0.0038	0.0051	0.0000
0.7332	0.0263	0.0041	0.0056	0.0000
0.7790	0.0260	0.0044	0.0061	0.0000
0.8248	0.0256	0.0047	0.0065	0.0000
0.8707	0.0252	0.0050	0.0069	0.0000
0.9165	0.0249	0.0054	0.0073	0.0000
0.9623	0.0245	0.0057	0.0077	0.0000
1.0081	0.0242	0.0060	0.0080	0.0000
1.0540	0.0238	0.0064	0.0083	0.0000
1.0998	0.0235	0.0067	0.0087	0.0000
1.1456	0.0232	0.0070	0.0090	0.0000
1.1914	0.0228	0.0074	0.0093	0.0000
1.2373	0.0225	0.0078	0.0095	0.0000

1.2831	0.0221	0.0081	0.0098	0.0000
1.3289	0.0218	0.0085	0.0101	0.0000
1.3747	0.0215	0.0089	0.0104	0.0000
1.4205	0.0211	0.0093	0.0106	0.0000
1.4664	0.0208	0.0096	0.0109	0.0000
1.5122	0.0205	0.0101	0.0111	0.0000
1.5580	0.0201	0.0105	0.0114	0.0000
1.6038	0.0198	0.0110	0.0116	0.0000
1.6497	0.0195	0.0114	0.0118	0.0000
1.6955	0.0192	0.0119	0.0121	0.0000
1.7413	0.0188	0.0123	0.0123	0.0000
1.7871	0.0185	0.0128	0.0125	0.0000
1.8330	0.0182	0.0133	0.0127	0.0000
1.8788	0.0179	0.0138	0.0129	0.0000
1.9246	0.0176	0.0142	0.0131	0.0000
1.9704	0.0172	0.0147	0.0133	0.0000
2.0163	0.0169	0.0152	0.0135	0.0000
2.0621	0.0166	0.0158	0.0137	0.0000
2.1079	0.0163	0.0163	0.0139	0.0000
2.1537	0.0160	0.0168	0.0141	0.0000
2.1996	0.0157	0.0173	0.0143	0.0000
2.2454	0.0154	0.0179	0.0145	0.0000
2.2912	0.0151	0.0184	0.0147	0.0000
2.3370	0.0148	0.0190	0.0149	0.0000
2.3829	0.0145	0.0195	0.0151	0.0000
2.4287	0.0142	0.0201	0.0152	0.0000
2.4745	0.0139	0.0207	0.0154	0.0000
2.5203	0.0136	0.0212	0.0156	0.0000
2.5662	0.0133	0.0218	0.0158	0.0000
2.6120	0.0130	0.0224	0.0161	0.0000
2.6578	0.0127	0.0230	0.0166	0.0000
2.6700	0.0124	0.0232	0.0166	0.0000

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infil(cfs)
2.6700	0.0319	0.0232	0.0000	0.0644	0.0000
2.7158	0.0323	0.0247	0.0000	0.0644	0.0000
2.7616	0.0327	0.0261	0.0000	0.0663	0.0000
2.8075	0.0331	0.0277	0.0000	0.0682	0.0000
2.8533	0.0335	0.0292	0.0000	0.0701	0.0000
2.8991	0.0339	0.0307	0.0000	0.0720	0.0000
2.9449	0.0342	0.0323	0.0000	0.0740	0.0000
2.9908	0.0346	0.0339	0.0000	0.0759	0.0000
3.0366	0.0350	0.0355	0.0000	0.0778	0.0000
3.0824	0.0354	0.0371	0.0000	0.0797	0.0000
3.1282	0.0358	0.0387	0.0000	0.0816	0.0000
3.1741	0.0362	0.0404	0.0000	0.0835	0.0000
3.2199	0.0366	0.0420	0.0000	0.0854	0.0000
3.2657	0.0370	0.0437	0.0000	0.0873	0.0000
3.3115	0.0374	0.0454	0.0000	0.0892	0.0000
3.3574	0.0378	0.0471	0.0019	0.0911	0.0000
3.4032	0.0382	0.0489	0.0132	0.0930	0.0000
3.4490	0.0386	0.0506	0.0300	0.0950	0.0000
3.4948	0.0390	0.0524	0.0507	0.0969	0.0000
3.5407	0.0394	0.0542	0.0748	0.0988	0.0000
3.5865	0.0398	0.0560	0.1019	0.1007	0.0000
3.6323	0.0403	0.0579	0.1316	0.1026	0.0000
3.6781	0.0407	0.0597	0.1656	0.1045	0.0000

3.7240	0.0411	0.0616	0.2906	0.1064	0.0000
3.7698	0.0415	0.0635	0.4903	0.1083	0.0000
3.8156	0.0419	0.0654	0.7371	0.1102	0.0000
3.8614	0.0423	0.0673	1.0124	0.1121	0.0000
3.9073	0.0428	0.0693	1.2971	0.1141	0.0000
3.9531	0.0432	0.0712	1.5721	0.1160	0.0000
3.9989	0.0436	0.0732	1.8194	0.1179	0.0000
4.0447	0.0440	0.0752	2.0251	0.1198	0.0000
4.0905	0.0445	0.0773	2.1824	0.1217	0.0000
4.1364	0.0449	0.0793	2.2955	0.1236	0.0000
4.1700	0.0452	0.0808	2.4119	0.1250	0.0000

## Surface ention TCM 4

Element Flows To:

Outlet 1

Outlet 2

Bioretention TCM 4

## FT Planter TCM 5

Bottom Length:	28.00 ft.
Bottom Width:	37.00 ft.
Material thickness of first layer:	2
Material type for first layer:	BAHM 5
Material thickness of second layer:	1.5
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Underdrain used	
Underdrain Diameter (feet):	0.33
Orifice Diameter (in.):	1
Offset (in.):	0
Flow Through Underdrain (ac-ft.):	30.275
Total Outflow (ac-ft.):	36.571
Percent Through Underdrain:	82.79
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2

Flow Through Planter Box Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0238	0.0000	0.0000	0.0000
0.0549	0.0238	0.0005	0.0000	0.0000
0.1099	0.0238	0.0010	0.0000	0.0000
0.1648	0.0238	0.0015	0.0000	0.0000
0.2198	0.0238	0.0020	0.0000	0.0000
0.2747	0.0238	0.0025	0.0000	0.0000
0.3297	0.0238	0.0030	0.0000	0.0000
0.3846	0.0238	0.0035	0.0000	0.0000
0.4396	0.0238	0.0040	0.0000	0.0000
0.4945	0.0238	0.0045	0.0000	0.0000
0.5495	0.0238	0.0050	0.0000	0.0000
0.6044	0.0238	0.0055	0.0000	0.0000
0.6593	0.0238	0.0060	0.0000	0.0000
0.7143	0.0238	0.0065	0.0000	0.0000
0.7692	0.0238	0.0070	0.0000	0.0000
0.8242	0.0238	0.0074	0.0000	0.0000
0.8791	0.0238	0.0079	0.0000	0.0000
0.9341	0.0238	0.0084	0.0000	0.0000
0.9890	0.0238	0.0089	0.0000	0.0000
1.0440	0.0238	0.0094	0.0000	0.0000
1.0989	0.0238	0.0099	0.0000	0.0000
1.1538	0.0238	0.0104	0.0000	0.0000
1.2088	0.0238	0.0109	0.0000	0.0000
1.2637	0.0238	0.0114	0.0000	0.0000
1.3187	0.0238	0.0119	0.0000	0.0000
1.3736	0.0238	0.0124	0.0000	0.0000
1.4286	0.0238	0.0129	0.0000	0.0000
1.4835	0.0238	0.0134	0.0000	0.0000
1.5385	0.0238	0.0139	0.0000	0.0000
1.5934	0.0238	0.0144	0.0000	0.0000
1.6484	0.0238	0.0149	0.0000	0.0000

1.7033	0.0238	0.0154	0.0000	0.0000
1.7582	0.0238	0.0159	0.0000	0.0000
1.8132	0.0238	0.0164	0.0000	0.0000
1.8681	0.0238	0.0169	0.0000	0.0000
1.9231	0.0238	0.0174	0.0000	0.0000
1.9780	0.0238	0.0179	0.0000	0.0000
2.0330	0.0238	0.0184	0.0000	0.0000
2.0879	0.0238	0.0190	0.0000	0.0000
2.1429	0.0238	0.0195	0.0000	0.0000
2.1978	0.0238	0.0200	0.0000	0.0000
2.2527	0.0238	0.0206	0.0000	0.0000
2.3077	0.0238	0.0211	0.0000	0.0000
2.3626	0.0238	0.0217	0.0000	0.0000
2.4176	0.0238	0.0222	0.0000	0.0000
2.4725	0.0238	0.0228	0.0000	0.0000
2.5275	0.0238	0.0233	0.0000	0.0000
2.5824	0.0238	0.0238	0.0000	0.0000
2.6374	0.0238	0.0244	0.0000	0.0000
2.6923	0.0238	0.0249	0.0000	0.0000
2.7473	0.0238	0.0255	0.0000	0.0000
2.8022	0.0238	0.0260	0.0000	0.0000
2.8571	0.0238	0.0266	0.0000	0.0000
2.9121	0.0238	0.0271	0.0000	0.0000
2.9670	0.0238	0.0276	0.0000	0.0000
3.0220	0.0238	0.0282	0.0000	0.0000
3.0769	0.0238	0.0287	0.0000	0.0000
3.1319	0.0238	0.0293	0.0000	0.0000
3.1868	0.0238	0.0298	0.0000	0.0000
3.2418	0.0238	0.0303	0.0000	0.0000
3.2967	0.0238	0.0309	0.0000	0.0000
3.3516	0.0238	0.0314	0.0000	0.0000
3.4066	0.0238	0.0320	0.0000	0.0000
3.4615	0.0238	0.0325	0.0000	0.0000
3.5000	0.0238	0.0329	0.0000	0.0000

Flow Through Planter Box Hydraulic Table

<b>Stage(feet)</b>	<b>Area(ac.)</b>	<b>Volume(ac-ft.)</b>	<b>Discharge(cfs)</b>	<b>To Amended(cfs)</b>	<b>Infiltr(cfs)</b>
3.5000	0.0238	0.0329	0.0000	0.0328	0.0000
3.5549	0.0238	0.0342	0.0000	0.0328	0.0000
3.6099	0.0238	0.0355	0.0000	0.0328	0.0000
3.6648	0.0238	0.0368	0.0000	0.0328	0.0000
3.7198	0.0238	0.0381	0.0000	0.0328	0.0000
3.7747	0.0238	0.0394	0.0000	0.0328	0.0000
3.8297	0.0238	0.0407	0.0007	0.0328	0.0000
3.8846	0.0238	0.0420	0.0011	0.0328	0.0000
3.9396	0.0238	0.0434	0.0016	0.0328	0.0000
3.9945	0.0238	0.0447	0.0022	0.0328	0.0000
4.0495	0.0238	0.0460	0.0030	0.0328	0.0000
4.1044	0.0238	0.0473	0.0039	0.0328	0.0000
4.1593	0.0238	0.0486	0.0050	0.0328	0.0000
4.2143	0.0238	0.0499	0.0063	0.0328	0.0000
4.2692	0.0238	0.0512	0.0064	0.0328	0.0000
4.3242	0.0238	0.0525	0.0079	0.0328	0.0000
4.3791	0.0238	0.0538	0.0091	0.0328	0.0000
4.4341	0.0238	0.0551	0.0102	0.0328	0.0000
4.4890	0.0238	0.0564	0.0112	0.0328	0.0000
4.5440	0.0238	0.0577	0.0121	0.0328	0.0000
4.5989	0.0238	0.0590	0.0129	0.0328	0.0000



4.6538	0.0238	0.0603	0.0137	0.0328	0.0000
4.7088	0.0238	0.0616	0.0144	0.0328	0.0000
4.7637	0.0238	0.0630	0.0151	0.0328	0.0000
4.8187	0.0238	0.0643	0.0158	0.0328	0.0000
4.8736	0.0238	0.0656	0.0164	0.0328	0.0000
4.9286	0.0238	0.0669	0.0170	0.0328	0.0000
4.9835	0.0238	0.0682	0.0176	0.0328	0.0000
5.0000	0.0238	0.0686	0.0182	0.0328	0.0000

## FT Planter Surface 5

Element Flows To:

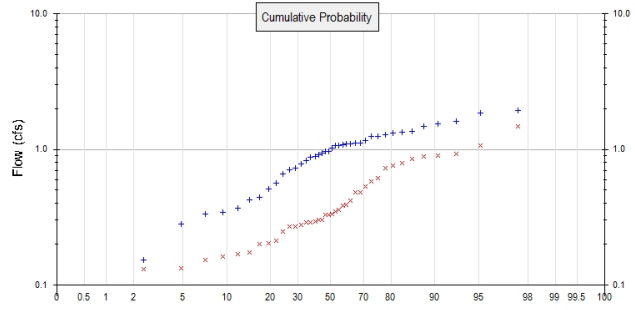
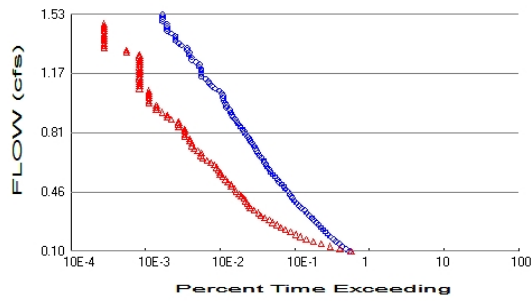
Outlet 1

Outlet 2

FT Planter TCM 5

# Analysis Results

## POC 1



+ Predeveloped    x Mitigated

### Predeveloped Landuse Totals for POC #1

Total Pervious Area: 2.284  
 Total Impervious Area: 0.1

### Mitigated Landuse Totals for POC #1

Total Pervious Area: 0.762  
 Total Impervious Area: 1.622

Flow Frequency Method: Weibull

### Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	Flow(cfs)
2 year	0.96078
5 year	1.29856
10 year	1.533463
25 year	1.860376

### Flow Frequency Return Periods for Mitigated. POC #1

Return Period	Flow(cfs)
2 year	0.328387
5 year	0.745583
10 year	0.897167
25 year	1.148679

## Annual Peaks

### Annual Peaks for Predeveloped and Mitigated. POC #1

Year	Predeveloped	Mitigated
1960	0.563	0.213
1961	0.335	0.161
1962	1.103	0.382
1963	1.282	1.069
1964	1.551	0.729
1965	0.827	0.275
1966	0.367	0.173
1967	1.252	0.758
1968	1.843	1.486
1969	1.064	0.328
1970	1.110	0.331
1971	1.082	0.924
1972	0.342	0.154
1973	1.335	0.419

1974	0.938	0.294
1975	0.892	0.271
1976	0.057	0.091
1977	0.152	0.132
1978	0.876	0.345
1979	1.021	0.327
1980	1.477	0.901
1981	0.513	0.200
1982	1.617	0.482
1983	1.367	0.884
1984	0.662	0.530
1985	1.090	0.391
1986	1.311	0.616
1987	0.441	0.203
1988	0.784	0.270
1989	0.283	0.131
1990	0.707	0.290
1991	0.727	0.249
1992	1.240	0.788
1993	1.155	0.355
1994	0.915	0.287
1995	1.121	0.844
1996	1.935	0.581
1997	1.060	0.483
1998	0.960	0.300
1999	0.423	0.170
2000	0.961	0.303

### Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

<b>Rank</b>	<b>Predeveloped</b>	<b>Mitigated</b>
1	1.9347	1.4859
2	1.8429	1.0693
3	1.6171	0.9243
4	1.5511	0.9014
5	1.4770	0.8837
6	1.3670	0.8439
7	1.3354	0.7882
8	1.3111	0.7579
9	1.2818	0.7292
10	1.2521	0.6157
11	1.2400	0.5805
12	1.1546	0.5298
13	1.1208	0.4825
14	1.1103	0.4819
15	1.1028	0.4187
16	1.0900	0.3911
17	1.0822	0.3819
18	1.0639	0.3554
19	1.0604	0.3453
20	1.0208	0.3312
21	0.9608	0.3284
22	0.9604	0.3268
23	0.9375	0.3032
24	0.9148	0.3001
25	0.8922	0.2936
26	0.8756	0.2896
27	0.8270	0.2873

28	0.7835	0.2753
29	0.7273	0.2709
30	0.7072	0.2697
31	0.6616	0.2487
32	0.5631	0.2130
33	0.5129	0.2027
34	0.4411	0.2003
35	0.4233	0.1733
36	0.3670	0.1696
37	0.3417	0.1613
38	0.3348	0.1537
39	0.2827	0.1321
40	0.1522	0.1314
41	0.0565	0.0911

## Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0961	1954	2055	105	Pass
0.1106	1733	1446	83	Pass
0.1251	1548	1070	69	Pass
0.1396	1421	812	57	Pass
0.1542	1287	638	49	Pass
0.1687	1184	514	43	Pass
0.1832	1087	429	39	Pass
0.1977	1002	372	37	Pass
0.2122	926	316	34	Pass
0.2267	866	271	31	Pass
0.2413	807	236	29	Pass
0.2558	752	209	27	Pass
0.2703	702	183	26	Pass
0.2848	648	164	25	Pass
0.2993	608	141	23	Pass
0.3139	564	126	22	Pass
0.3284	526	117	22	Pass
0.3429	485	102	21	Pass
0.3574	443	91	20	Pass
0.3719	410	87	21	Pass
0.3865	379	83	21	Pass
0.4010	355	79	22	Pass
0.4155	336	75	22	Pass
0.4300	324	69	21	Pass
0.4445	306	65	21	Pass
0.4591	290	59	20	Pass
0.4736	270	57	21	Pass
0.4881	257	51	19	Pass
0.5026	240	50	20	Pass
0.5171	221	45	20	Pass
0.5316	211	42	19	Pass
0.5462	196	39	19	Pass
0.5607	183	36	19	Pass
0.5752	171	36	21	Pass
0.5897	164	34	20	Pass
0.6042	157	32	20	Pass
0.6188	148	30	20	Pass
0.6333	141	27	19	Pass
0.6478	138	24	17	Pass
0.6623	129	21	16	Pass
0.6768	121	20	16	Pass
0.6914	115	20	17	Pass
0.7059	110	18	16	Pass
0.7204	106	16	15	Pass
0.7349	102	15	14	Pass
0.7494	96	15	15	Pass
0.7640	91	14	15	Pass
0.7785	88	14	15	Pass
0.7930	84	12	14	Pass
0.8075	79	12	15	Pass
0.8220	76	12	15	Pass
0.8365	72	12	16	Pass
0.8511	67	10	14	Pass

0.8656	63	10	15	Pass
0.8801	60	10	16	Pass
0.8946	57	8	14	Pass
0.9091	54	7	12	Pass
0.9237	52	7	13	Pass
0.9382	50	6	12	Pass
0.9527	48	5	10	Pass
0.9672	43	5	11	Pass
0.9817	43	5	11	Pass
0.9963	42	4	9	Pass
1.0108	40	4	10	Pass
1.0253	39	4	10	Pass
1.0398	39	4	10	Pass
1.0543	38	4	10	Pass
1.0689	35	4	11	Pass
1.0834	31	3	9	Pass
1.0979	28	3	10	Pass
1.1124	26	3	11	Pass
1.1269	25	3	12	Pass
1.1414	23	3	13	Pass
1.1560	20	3	15	Pass
1.1705	20	3	15	Pass
1.1850	20	3	15	Pass
1.1995	20	3	15	Pass
1.2140	19	3	15	Pass
1.2286	19	3	15	Pass
1.2431	17	3	17	Pass
1.2576	15	3	20	Pass
1.2721	15	3	20	Pass
1.2866	14	3	21	Pass
1.3012	14	2	14	Pass
1.3157	13	2	15	Pass
1.3302	13	1	7	Pass
1.3447	11	1	9	Pass
1.3592	10	1	10	Pass
1.3738	9	1	11	Pass
1.3883	9	1	11	Pass
1.4028	9	1	11	Pass
1.4173	8	1	12	Pass
1.4318	7	1	14	Pass
1.4463	7	1	14	Pass
1.4609	7	1	14	Pass
1.4754	7	1	14	Pass
1.4899	6	0	0	Pass
1.5044	6	0	0	Pass
1.5189	6	0	0	Pass
1.5335	6	0	0	Pass

## Water Quality



## *Model Default Modifications*

Total of 0 changes have been made.

### *PERLND Changes*

No PERLND changes have been made.

### *IMPLND Changes*

No IMPLND changes have been made.

*Appendix*  
*Predeveloped Schematic*



Mitigated Schematic



# Predeveloped UCI File

RUN

GLOBAL

```
WVHM4 model simulation
START      1959 10 01      END      2000 09 30
RUN INTERP OUTPUT LEVEL   3      0
RESUME     0 RUN         1
UNIT SYSTEM 1
```

END GLOBAL

FILES

```
<File> <Un#> <-----File Name----->***
<-ID->                                     ***
WDM      26      215190 BAHM Phase 1.wdm
MESSU    25      Pre215190 BAHM Phase 1.MES
          27      Pre215190 BAHM Phase 1.L61
          28      Pre215190 BAHM Phase 1.L62
          30      POC215190 BAHM Phase 11.dat
```

END FILES

OPN SEQUENCE

```
INGRP          INDELT 00:60
  PERLND        45
  IMPLND        1
  COPY          501
  DISPLY        1
```

END INGRP

END OPN SEQUENCE

DISPLY

DISPLY-INFO1

```
# - #<-----Title----->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
1      Pre-project          MAX          1      2      30      9
```

END DISPLY-INFO1

END DISPLY

COPY

TIMESERIES

```
# - # NPT NMN ***
1      1      1
501    1      1
```

END TIMESERIES

END COPY

GENER

OPCODE

```
# # OPCD ***
```

END OPCODE

PARM

```
# #          K ***
```

END PARM

END GENER

PERLND

GEN-INFO

```
<PLS ><-----Name----->NBLKS  Unit-systems  Printer ***
# - #          User  t-series  Engl Metr ***
          in  out          ***
```

```
45      C/D,Urban,Flat(0-5%)  1      1      1      1      27      0
```

END GEN-INFO

\*\*\* Section PWATER\*\*\*

ACTIVITY

```
<PLS > ***** Active Sections *****
# - # ATMP SNOW PWAT  SED  PST  PWG  PQAL MSTL PEST NITR PHOS TRAC ***
45      0      0      1      0      0      0      0      0      0      0      0      0
```

END ACTIVITY

PRINT-INFO

```
<PLS > ***** Print-flags ***** PIVL  PYR
# - # ATMP SNOW PWAT  SED  PST  PWG  PQAL MSTL PEST NITR PHOS TRAC *****
45      0      0      4      0      0      0      0      0      0      0      0      0      1      9
```

END PRINT-INFO

```

PWAT-PARM1
  <PLS > PWATER variable monthly parameter value flags ***
  # - # CSNO RTOP UZFG VCS VUZ VNN VIFW VIRG VLE INFC HWT ***
  45 0 0 0 1 0 0 0 0 0 1 0 0
END PWAT-PARM1

```

```

PWAT-PARM2
  <PLS > PWATER input info: Part 2 ***
  # - # ***FOREST LZSN INFILT LRSUR SLSUR KVARV AGWRC
  45 0 4.6 0.04 400 0.05 3 0.995
END PWAT-PARM2

```

```

PWAT-PARM3
  <PLS > PWATER input info: Part 3 ***
  # - # ***PETMAX PETMIN INFEXP INFILD DEEPFR BASETP AGWETP
  45 40 35 3 2 0.5 0.15 0
END PWAT-PARM3

```

```

PWAT-PARM4
  <PLS > PWATER input info: Part 4 ***
  # - # CEPSC UZSN NSUR INTFW IRC LZETP ***
  45 0 0.3 0.25 0.8 0.4 0
END PWAT-PARM4

```

```

MON-LZETPARAM
  <PLS > PWATER input info: Part 3 ***
  # - # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
  45 0.5 0.5 0.5 0.6 0.65 0.65 0.65 0.65 0.65 0.65 0.55 0.5
END MON-LZETPARAM

```

```

MON-INTERCEP
  <PLS > PWATER input info: Part 3 ***
  # - # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
  45 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11
END MON-INTERCEP

```

```

PWAT-STATE1
  <PLS > *** Initial conditions at start of simulation
  ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
  # - # *** CEPS SURS UZS IFWS LZS AGWS GWVS
  45 0 0 0.01 0 3.5 1.7 0.1
END PWAT-STATE1

```

END PERLND

IMPLND

```

GEN-INFO
  <PLS ><-----Name-----> Unit-systems Printer ***
  # - # User t-series Engr Metr ***
  in out ***
  1 Roads,Flat(0-5%) 1 1 1 27 0
END GEN-INFO
*** Section IWATER***

```

```

ACTIVITY
  <PLS > ***** Active Sections *****
  # - # ATMP SNOW IWAT SLD IWG IQAL ***
  1 0 0 1 0 0 0
END ACTIVITY

```

```

PRINT-INFO
  <ILS > ***** Print-flags ***** PIVL PYR
  # - # ATMP SNOW IWAT SLD IWG IQAL *****
  1 0 0 4 0 0 0 1 9
END PRINT-INFO

```

```

IWAT-PARM1
  <PLS > IWATER variable monthly parameter value flags ***
  # - # CSNO RTOP VRS VNN RTLI ***
  1 0 0 0 0 0
END IWAT-PARM1

```



```

END HYDR-PARM2
HYDR-INIT
  RCHRES Initial conditions for each HYDR section ***
  # - # *** VOL Initial value of COLIND Initial value of OUTDGT
  *** ac-ft for each possible exit for each possible exit
<-----><-----> <----><----><----><----><----> *** <----><----><----><----><---->
END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
FTABLES
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # tem strg<-factor->strg <Name> # # <Name> # # ***
WDM 2 PREC ENGL 1.448 PERLND 1 999 EXTNL PREC
WDM 2 PREC ENGL 1.448 IMPLND 1 999 EXTNL PREC
WDM 1 EVAP ENGL 1 PERLND 1 999 EXTNL PETINP
WDM 1 EVAP ENGL 1 IMPLND 1 999 EXTNL PETINP
WDM 22 IRRG ENGL 0.7 SAME PERLND 45 EXTNL SURLI

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name> # <Name> # #<-factor->strg <Name> # <Name> tem strg strg***
COPY 501 OUTPUT MEAN 1 1 12.1 WDM 501 FLOW ENGL REPL
END EXT TARGETS

MASS-LINK
<Volume> <-Grp> <-Member-><--Mult--> <Target> <-Grp> <-Member->***
<Name> <Name> # #<-factor-> <Name> <Name> # #***
MASS-LINK 12
PERLND PWATER SURO 0.083333 COPY INPUT MEAN
END MASS-LINK 12

MASS-LINK 13
PERLND PWATER IFWO 0.083333 COPY INPUT MEAN
END MASS-LINK 13

MASS-LINK 15
IMPLND IWATER SURO 0.083333 COPY INPUT MEAN
END MASS-LINK 15

END MASS-LINK

END RUN

```

# Mitigated UCI File

RUN

GLOBAL

WVHM4 model simulation  
START 1959 10 01 END 2000 09 30  
RUN INTERP OUTPUT LEVEL 3 0  
RESUME 0 RUN 1 UNIT SYSTEM 1  
END GLOBAL

FILES

<File>	<Un#>	<-----File Name----->	***
<-ID->			***
WDM	26	215190 BAHM Phase 1.wdm	
MESSU	25	Mit215190 BAHM Phase 1.MES	
	27	Mit215190 BAHM Phase 1.L61	
	28	Mit215190 BAHM Phase 1.L62	
	30	POC215190 BAHM Phase 11.dat	

END FILES

OPN SEQUENCE

INGRP INDELT 00:60

PERLND	45
IMPLND	5
IMPLND	10
IMPLND	6
IMPLND	14
IMPLND	1
GENER	2
RCHRES	1
RCHRES	2
GENER	4
RCHRES	3
RCHRES	4
GENER	6
RCHRES	5
RCHRES	6
GENER	8
RCHRES	7
RCHRES	8
RCHRES	9
RCHRES	10
COPY	1
COPY	501
COPY	601
DISPLY	1

END INGRP

END OPN SEQUENCE

DISPLY

DISPLY-INF01

#	-	#	<-----Title----->	***TRAN	PIVL	DIG1	FIL1	PYR	DIG2	FIL2	YRND
1			Surface ention TCM 1	MAX				1	2	30	9

END DISPLY-INF01

END DISPLY

COPY

TIMESERIES

#	-	#	NPT	NMN	***
1			1	1	
501			1	1	
601			1	1	

END TIMESERIES

END COPY

GENER

OPCODE

#	#	OPCD	***
2		24	
4		24	
6		24	
8		24	



```

END OPCODE
PARM
# # K ***
2 0.
4 0.
6 0.
8 0.
END PARM
END GENER
PERLND
GEN-INFO
<PLS ><-----Name----->NBLKS Unit-systems Printer ***
# - # User t-series Engl Metr ***
# in out ***
45 C/D,Urban,Flat(0-5%) 1 1 1 1 27 0
END GEN-INFO
*** Section PWATER***

ACTIVITY
<PLS > ***** Active Sections *****
# - # ATMP SNOW PWAT SED PST PWG PQAL MSTL PEST NITR PHOS TRAC ***
45 0 0 1 0 0 0 0 0 0 0 0 0 0
END ACTIVITY

PRINT-INFO
<PLS > ***** Print-flags ***** PIVL PYR
# - # ATMP SNOW PWAT SED PST PWG PQAL MSTL PEST NITR PHOS TRAC *****
45 0 0 4 0 0 0 0 0 0 0 0 0 0 1 9
END PRINT-INFO

PWAT-PARM1
<PLS > PWATER variable monthly parameter value flags ***
# - # CSNO RTOP UZFG VCS VUZ VNM VIFW VIRC VLE INFC HWT ***
45 0 0 0 1 0 0 0 0 1 0 0
END PWAT-PARM1

PWAT-PARM2
<PLS > PWATER input info: Part 2 ***
# - # ***FOREST LZSN INFILF LSUR SLSUR KVARY AGWRC
45 0 4.6 0.04 400 0.05 3 0.995
END PWAT-PARM2

PWAT-PARM3
<PLS > PWATER input info: Part 3 ***
# - # ***PETMAX PETMIN INFEXP INFILD DEEPFR BASETP AGWETP
45 40 35 3 2 0.5 0.15 0
END PWAT-PARM3

PWAT-PARM4
<PLS > PWATER input info: Part 4 ***
# - # CEPSC UZSN NSUR INTFW IRC LZETP ***
45 0 0.3 0.25 0.8 0.4 0
END PWAT-PARM4

MON-LZETPARM
<PLS > PWATER input info: Part 3 ***
# - # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
45 0.5 0.5 0.5 0.6 0.65 0.65 0.65 0.65 0.65 0.55 0.5
END MON-LZETPARM

MON-INTERCEP
<PLS > PWATER input info: Part 3 ***
# - # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
45 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11 0.11
END MON-INTERCEP

PWAT-STATE1
<PLS > *** Initial conditions at start of simulation
ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
# - # *** CEPS SURS UZS IFWS LZS AGWS GWVS
45 0 0 0.01 0 3.5 1.7 0.1
END PWAT-STATE1

```

END PERLND

IMPLND

GEN-INFO

<PLS ><-----Name----->		Unit-systems		Printer		***
#	- #	User	t-series	Engl	Metr	***
			in out			***
5	Roof Area	1	1	1	27	0
10	Sidewalks, Flat(0-5%)	1	1	1	27	0
6	Driveways, Flat(0-5%)	1	1	1	27	0
14	Parking, Flat(0-5%)	1	1	1	27	0
1	Roads, Flat(0-5%)	1	1	1	27	0

END GEN-INFO

\*\*\* Section IWATER\*\*\*

ACTIVITY

<PLS >		***** Active Sections *****						***
#	- #	ATMP	SNOW	IWAT	SLD	IWG	IQAL	***
5		0	0	1	0	0	0	
10		0	0	1	0	0	0	
6		0	0	1	0	0	0	
14		0	0	1	0	0	0	
1		0	0	1	0	0	0	

END ACTIVITY

PRINT-INFO

<ILS >		***** Print-flags *****						PIVL	PYR	*****
#	- #	ATMP	SNOW	IWAT	SLD	IWG	IQAL			
5		0	0	4	0	0	0	1	9	
10		0	0	4	0	0	0	1	9	
6		0	0	4	0	0	0	1	9	
14		0	0	4	0	0	0	1	9	
1		0	0	4	0	0	0	1	9	

END PRINT-INFO

IWAT-PARM1

<PLS >		IWATER variable monthly parameter value flags						***
#	- #	CSNO	RTOP	VRS	VNN	RTL1	***	
5		0	0	0	0	0		
10		0	0	0	0	0		
6		0	0	0	0	0		
14		0	0	0	0	0		
1		0	0	0	0	0		

END IWAT-PARM1

IWAT-PARM2

<PLS >		IWATER input info: Part 2				***
#	- #	***	LSUR	SLSUR	NSUR	RETSC
5			100	0.05	0.1	0.1
10			100	0.05	0.1	0.1
6			100	0.05	0.1	0.1
14			100	0.05	0.1	0.1
1			100	0.05	0.1	0.1

END IWAT-PARM2

IWAT-PARM3

<PLS >		IWATER input info: Part 3		***
#	- #	***	PETMAX	PETMIN
5			0	0
10			0	0
6			0	0
14			0	0
1			0	0

END IWAT-PARM3

IWAT-STATE1

<PLS >		*** Initial conditions at start of simulation		
#	- #	***	RETS	SURS
5			0	0
10			0	0

```

6          0          0
14         0          0
1          0          0
END IWAT-STATE1

```

END IMPLND

SCHMATIC

<-Source-> <Name> #	<--Area--> <-factor-->	<-Target--> <Name> #	MBLK Tbl#	*** ***
DMA 1***				
PERLND 45	0.034	RCHRES 1	2	
PERLND 45	0.034	RCHRES 1	3	
IMPLND 5	0.267	RCHRES 1	5	
IMPLND 10	0.066	RCHRES 1	5	
DMA 2***				
PERLND 45	0.021	RCHRES 3	2	
PERLND 45	0.021	RCHRES 3	3	
IMPLND 6	0.158	RCHRES 3	5	
DMA 3***				
PERLND 45	0.147	RCHRES 5	2	
PERLND 45	0.147	RCHRES 5	3	
IMPLND 5	0.25	RCHRES 5	5	
DMA 4***				
PERLND 45	0.117	RCHRES 7	2	
PERLND 45	0.117	RCHRES 7	3	
IMPLND 14	0.208	RCHRES 7	5	
DMA 5***				
PERLND 45	0.028	RCHRES 9	2	
PERLND 45	0.028	RCHRES 9	3	
IMPLND 14	0.534	RCHRES 9	5	
DMA 6***				
PERLND 45	0.102	COPY 501	12	
PERLND 45	0.102	COPY 601	12	
PERLND 45	0.102	COPY 501	13	
PERLND 45	0.102	COPY 601	13	
DMA 7***				
PERLND 45	0.018	COPY 501	12	
PERLND 45	0.018	COPY 601	12	
PERLND 45	0.018	COPY 501	13	
PERLND 45	0.018	COPY 601	13	
DMA 8***				
PERLND 45	0.295	COPY 501	12	
PERLND 45	0.295	COPY 601	12	
PERLND 45	0.295	COPY 501	13	
PERLND 45	0.295	COPY 601	13	
DMA 9***				
IMPLND 1	0.075	COPY 501	15	
IMPLND 1	0.075	COPY 601	15	
DMA 10***				
IMPLND 1	0.025	COPY 501	15	
IMPLND 1	0.025	COPY 601	15	
DMA 11***				
IMPLND 1	0.014	COPY 501	15	
IMPLND 1	0.014	COPY 601	15	
DMA 12***				
IMPLND 1	0.025	COPY 501	15	
IMPLND 1	0.025	COPY 601	15	

\*\*\*\*\*Routing\*\*\*\*\*

PERLND 45	0.034	COPY 1	12	
IMPLND 5	0.267	COPY 1	15	
IMPLND 10	0.066	COPY 1	15	
PERLND 45	0.034	COPY 1	13	
PERLND 45	0.021	COPY 1	12	
IMPLND 6	0.158	COPY 1	15	
PERLND 45	0.021	COPY 1	13	
PERLND 45	0.147	COPY 1	12	
IMPLND 5	0.25	COPY 1	15	
PERLND 45	0.147	COPY 1	13	

```

RCHRES 1 1 RCHRES 2 8
RCHRES 3 1 RCHRES 4 8
RCHRES 5 1 RCHRES 6 8
PERLND 45 0.117 COPY 1 12
IMPLND 14 0.208 COPY 1 15
PERLND 45 0.117 COPY 1 13
RCHRES 7 1 RCHRES 8 8
RCHRES 9 1 RCHRES 10 8
RCHRES 9 COPY 1 18
RCHRES 2 1 COPY 501 16
RCHRES 1 1 COPY 501 17
RCHRES 4 1 COPY 501 16
RCHRES 3 1 COPY 501 17
RCHRES 6 1 COPY 501 16
RCHRES 5 1 COPY 501 17
RCHRES 8 1 COPY 501 16
RCHRES 7 1 COPY 501 17
RCHRES 10 1 COPY 501 16
END SCHEMATIC

```

```

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # #<-factor->strg <Name> # # <Name> # # ***
COPY 501 OUTPUT MEAN 1 1 12.1 DISPLY 1 INPUT TIMSER 1
GENER 2 OUTPUT TIMSER .0002778 RCHRES 1 EXTNL OUTDGT 1
GENER 4 OUTPUT TIMSER .0002778 RCHRES 3 EXTNL OUTDGT 1
GENER 6 OUTPUT TIMSER .0002778 RCHRES 5 EXTNL OUTDGT 1
GENER 8 OUTPUT TIMSER .0002778 RCHRES 7 EXTNL OUTDGT 1

```

```

<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # #<-factor->strg <Name> # # <Name> # # ***
END NETWORK

```

```

RCHRES
GEN-INFO
RCHRES Name Nexits Unit Systems Printer ***
# - #<-----><----> User T-series Engr Metr LKFG ***
in out ***
1 Surface ention T-010 3 1 1 1 28 0 1
2 Bioretention TCM-009 1 1 1 1 28 0 1
3 Surface ention T-012 3 1 1 1 28 0 1
4 Bioretention TCM-011 1 1 1 1 28 0 1
5 Surface ention T-014 3 1 1 1 28 0 1
6 Bioretention TCM-013 1 1 1 1 28 0 1
7 Surface ention T-017 3 1 1 1 28 0 1
8 Bioretention TCM-016 1 1 1 1 28 0 1
9 FT Planter Surfa-050 3 1 1 1 28 0 1
10 FT Planter TCM 5-049 1 1 1 1 28 0 1
END GEN-INFO
*** Section RCHRES***

```

```

ACTIVITY
<PLS > ***** Active Sections *****
# - # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUGF PKFG PHFG ***
1 1 0 0 0 0 0 0 0 0 0
2 1 0 0 0 0 0 0 0 0 0
3 1 0 0 0 0 0 0 0 0 0
4 1 0 0 0 0 0 0 0 0 0
5 1 0 0 0 0 0 0 0 0 0
6 1 0 0 0 0 0 0 0 0 0
7 1 0 0 0 0 0 0 0 0 0
8 1 0 0 0 0 0 0 0 0 0
9 1 0 0 0 0 0 0 0 0 0
10 1 0 0 0 0 0 0 0 0 0
END ACTIVITY

```

```

PRINT-INFO
<PLS > ***** Print-flags ***** PIVL PYR

```

```

# - # HYDR ADCA CONS HEAT SED GQL OXRX NUTR PLNK PHCB PIVL PYR *****
1 4 0 0 0 0 0 0 0 0 0 0 1 9
2 4 0 0 0 0 0 0 0 0 0 0 1 9
3 4 0 0 0 0 0 0 0 0 0 0 1 9
4 4 0 0 0 0 0 0 0 0 0 0 1 9
5 4 0 0 0 0 0 0 0 0 0 0 1 9
6 4 0 0 0 0 0 0 0 0 0 0 1 9
7 4 0 0 0 0 0 0 0 0 0 0 1 9
8 4 0 0 0 0 0 0 0 0 0 0 1 9
9 4 0 0 0 0 0 0 0 0 0 0 1 9
10 4 0 0 0 0 0 0 0 0 0 0 1 9
END PRINT-INFO

```

```

HYDR-PARM1
RCHRES  Flags for each HYDR Section
# - # VC A1 A2 A3 ODFVFG for each *** ODGTFG for each FUNCT for each
      FG FG FG FG possible exit *** possible exit possible exit
      * * * * * * * * * * * * * * * * * * * * * * * *
1 0 1 0 0 4 5 6 0 0 0 0 0 0 0 0 2 1 2 2 2
2 0 1 0 0 4 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
3 0 1 0 0 4 5 6 0 0 0 0 1 0 0 0 2 1 2 2 2
4 0 1 0 0 4 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
5 0 1 0 0 4 5 6 0 0 0 0 1 0 0 0 2 1 2 2 2
6 0 1 0 0 4 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
7 0 1 0 0 4 5 6 0 0 0 0 1 0 0 0 2 1 2 2 2
8 0 1 0 0 4 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
9 0 1 0 0 4 5 6 0 0 0 0 0 0 0 0 2 2 2 2 2
10 0 1 0 0 4 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
END HYDR-PARM1

```

```

HYDR-PARM2
# - # FTABNO LEN DELTH STCOR KS DB50 ***
<-----><-----><-----><-----><-----><-----><----->
1 1 0.01 0.0 0.0 0.5 0.0 ***
2 2 0.01 0.0 0.0 0.5 0.0 ***
3 3 0.01 0.0 0.0 0.5 0.0
4 4 0.01 0.0 0.0 0.5 0.0
5 5 0.01 0.0 0.0 0.5 0.0
6 6 0.01 0.0 0.0 0.5 0.0
7 7 0.01 0.0 0.0 0.5 0.0
8 8 0.01 0.0 0.0 0.5 0.0
9 9 0.01 0.0 0.0 0.5 0.0
10 10 0.01 0.0 0.0 0.5 0.0
END HYDR-PARM2

```

```

HYDR-INIT
RCHRES  Initial conditions for each HYDR section
# - # *** VOL Initial value of COLIND Initial value of OUTDGT
      *** ac-ft for each possible exit for each possible exit
<-----><-----><-----><-----><-----><-----><-----><----->
1 0 4.0 5.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
2 0 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
3 0 4.0 5.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
4 0 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
5 0 4.0 5.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
6 0 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
7 0 4.0 5.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
8 0 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
9 0 4.0 5.0 6.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
10 0 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
END HYDR-INIT
END RCHRES

```

```

SPEC-ACTIONS
*** User-Defined Variable Quantity Lines
***
***
*** kwd varnam optyp opn vari s1 s2 s3 tp multiply lc ls ac as agfn ***
<****> <-----> <-----> <-> <-----><-----><-----><-----><-----> <-><-> <-><-> <-> ***
UVQUAN vol2 RCHRES 2 VOL 4
UVQUAN v2m2 GLOBAL WORKSP 1 3

```

```

UVQUAN vpo2    GLOBAL    WORKSP  2      3
UVQUAN v2d2    GENER     2 K      1      3
*** User-Defined Variable Quantity Lines
***          addr
***          <----->
*** kwd  varnam optyp  opn  vari  s1 s2 s3 tp multiply  lc ls ac as agfn ***
<****> <-----> <-----> <-> <-----><-><-><-><-><-----> <><-> <><-> <-> ***
UVQUAN vol4    RCHRES    4 VOL          4
UVQUAN v2m4    GLOBAL    WORKSP  3      3
UVQUAN vpo4    GLOBAL    WORKSP  4      3
UVQUAN v2d4    GENER     4 K      1      3
*** User-Defined Variable Quantity Lines
***          addr
***          <----->
*** kwd  varnam optyp  opn  vari  s1 s2 s3 tp multiply  lc ls ac as agfn ***
<****> <-----> <-----> <-> <-----><-><-><-><-><-----> <><-> <><-> <-> ***
UVQUAN vol6    RCHRES    6 VOL          4
UVQUAN v2m6    GLOBAL    WORKSP  5      3
UVQUAN vpo6    GLOBAL    WORKSP  6      3
UVQUAN v2d6    GENER     6 K      1      3
*** User-Defined Variable Quantity Lines
***          addr
***          <----->
*** kwd  varnam optyp  opn  vari  s1 s2 s3 tp multiply  lc ls ac as agfn ***
<****> <-----> <-----> <-> <-----><-><-><-><-><-----> <><-> <><-> <-> ***
UVQUAN vol8    RCHRES    8 VOL          4
UVQUAN v2m8    GLOBAL    WORKSP  7      3
UVQUAN vpo8    GLOBAL    WORKSP  8      3
UVQUAN v2d8    GENER     8 K      1      3
*** User-Defined Target Variable Names
***          addr or
***          <----->
*** kwd  varnam ct  vari  s1 s2 s3  frac oper  vari  s1 s2 s3  frac oper
<****> <-----><-> <-----><-><-><-> <-----> <-> <-----><-><-><-> <-----> <->
UVNAME v2m2    1 WORKSP  1          1.0 QUAN
UVNAME vpo2    1 WORKSP  2          1.0 QUAN
UVNAME v2d2    1 K      1          1.0 QUAN
*** User-Defined Target Variable Names
***          addr or
***          <----->
*** kwd  varnam ct  vari  s1 s2 s3  frac oper  vari  s1 s2 s3  frac oper
<****> <-----><-> <-----><-><-><-> <-----> <-> <-----><-><-><-> <-----> <->
UVNAME v2m4    1 WORKSP  3          1.0 QUAN
UVNAME vpo4    1 WORKSP  4          1.0 QUAN
UVNAME v2d4    1 K      1          1.0 QUAN
*** User-Defined Target Variable Names
***          addr or
***          <----->
*** kwd  varnam ct  vari  s1 s2 s3  frac oper  vari  s1 s2 s3  frac oper
<****> <-----><-> <-----><-><-><-> <-----> <-> <-----><-><-><-> <-----> <->
UVNAME v2m6    1 WORKSP  5          1.0 QUAN
UVNAME vpo6    1 WORKSP  6          1.0 QUAN
UVNAME v2d6    1 K      1          1.0 QUAN
*** User-Defined Target Variable Names
***          addr or
***          <----->
*** kwd  varnam ct  vari  s1 s2 s3  frac oper  vari  s1 s2 s3  frac oper
<****> <-----><-> <-----><-><-><-> <-----> <-> <-----><-><-><-> <-----> <->
UVNAME v2m8    1 WORKSP  7          1.0 QUAN
UVNAME vpo8    1 WORKSP  8          1.0 QUAN
UVNAME v2d8    1 K      1          1.0 QUAN
*** opt foplop dcdts yr mo dy hr mn d t  vnam  s1 s2 s3 ac quantity  tc  ts rp
<****><-><-><-><-><-><-> <> <> <> <><><> <-----><-><-><-><-><-----> <> <-><->
GENER 2          v2m2          = 981.
*** Compute remaining available pore space
GENER 2          vpo2          = v2m2
GENER 2          vpo2          -= vol2
*** Check to see if VPORA goes negative; if so set VPORA = 0.0
IF (vpo2 < 0.0) THEN
GENER 2          vpo2          = 0.0

```

```

END IF
*** Infiltration volume
GENER 2 v2d2 = vpo2
*** opt foplop dcdts yr mo dy hr mn d t vnam s1 s2 s3 ac quantity tc ts rp
<****><-><--><><--><--> <> <> <> <><><> <----><-><-><-><-><-----> <> <-><->
GENER 4 v2m4 = 611.
*** Compute remaining available pore space
GENER 4 vpo4 = v2m4
GENER 4 vpo4 -= vol4
*** Check to see if VPORA goes negative; if so set VPORA = 0.0
IF (vpo4 < 0.0) THEN
GENER 4 vpo4 = 0.0
END IF
*** Infiltration volume
GENER 4 v2d4 = vpo4
*** opt foplop dcdts yr mo dy hr mn d t vnam s1 s2 s3 ac quantity tc ts rp
<****><-><--><><--><--> <> <> <> <><><> <----><-><-><-><-><-----> <> <-><->
GENER 6 v2m6 = 953.
*** Compute remaining available pore space
GENER 6 vpo6 = v2m6
GENER 6 vpo6 -= vol6
*** Check to see if VPORA goes negative; if so set VPORA = 0.0
IF (vpo6 < 0.0) THEN
GENER 6 vpo6 = 0.0
END IF
*** Infiltration volume
GENER 6 v2d6 = vpo6
*** opt foplop dcdts yr mo dy hr mn d t vnam s1 s2 s3 ac quantity tc ts rp
<****><-><--><><--><--> <> <> <> <><><> <----><-><-><-><-><-----> <> <-><->
GENER 8 v2m8 = 953.
*** Compute remaining available pore space
GENER 8 vpo8 = v2m8
GENER 8 vpo8 -= vol8
*** Check to see if VPORA goes negative; if so set VPORA = 0.0
IF (vpo8 < 0.0) THEN
GENER 8 vpo8 = 0.0
END IF
*** Infiltration volume
GENER 8 v2d8 = vpo8
END SPEC-ACTIONS

```

```

FTABLES
FTABLE 2
60 4
Depth Area Volume Outflow1 Velocity Travel Time***
(ft) (acres) (acre-ft) (cfs) (ft/sec) (Minutes)***
0.000000 0.031041 0.000000 0.000000
0.045824 0.030954 0.000258 0.000000
0.091648 0.030630 0.000520 0.000000
0.137473 0.030307 0.000786 0.000000
0.183297 0.029986 0.001056 0.000000
0.229121 0.029666 0.001331 0.000000
0.274945 0.029348 0.001610 0.000588
0.320769 0.029031 0.001893 0.000880
0.366593 0.028716 0.002180 0.001272
0.412418 0.028403 0.002472 0.001774
0.458242 0.028091 0.002768 0.002395
0.504066 0.027780 0.003068 0.002958
0.549890 0.027471 0.003373 0.003797
0.595714 0.027164 0.003683 0.004475
0.641538 0.026858 0.003996 0.005057
0.687363 0.026554 0.004314 0.005059
0.733187 0.026251 0.004637 0.005579
0.779011 0.025950 0.004964 0.006053
0.824835 0.025650 0.005296 0.006491
0.870659 0.025352 0.005632 0.006900
0.916484 0.025056 0.005973 0.007286
0.962308 0.024761 0.006319 0.007652
1.008132 0.024467 0.006669 0.008000
1.053956 0.024175 0.007024 0.008334
1.099780 0.023885 0.007384 0.008654

```

```

1.145604 0.023596 0.007748 0.008963
1.191429 0.023309 0.008118 0.009261
1.237253 0.023023 0.008492 0.009549
1.283077 0.022739 0.008870 0.009830
1.328901 0.022456 0.009254 0.010102
1.374725 0.022175 0.009643 0.010367
1.420549 0.021895 0.010036 0.010625
1.466374 0.021617 0.010435 0.010877
1.512198 0.021340 0.010875 0.011123
1.558022 0.021066 0.011321 0.011364
1.603846 0.020792 0.011773 0.011600
1.649670 0.020520 0.012230 0.011831
1.695495 0.020250 0.012692 0.012058
1.741319 0.019981 0.013160 0.012280
1.787143 0.019714 0.013634 0.012499
1.832967 0.019448 0.014113 0.012714
1.878791 0.019184 0.014598 0.012925
1.924615 0.018921 0.015089 0.013133
1.970440 0.018660 0.015585 0.013338
2.016264 0.018401 0.016087 0.013540
2.062088 0.018143 0.016595 0.013738
2.107912 0.017886 0.017109 0.013935
2.153736 0.017631 0.017628 0.014128
2.199560 0.017378 0.018154 0.014319
2.245385 0.017126 0.018685 0.014508
2.291209 0.016876 0.019222 0.014694
2.337033 0.016627 0.019765 0.014879
2.382857 0.016380 0.020314 0.015062
2.428681 0.016134 0.020869 0.015242
2.474505 0.015890 0.021430 0.015422
2.520330 0.015647 0.021998 0.015600
2.566154 0.015406 0.022571 0.015777
2.611978 0.015167 0.023150 0.016050
2.657802 0.014929 0.023736 0.016586
2.670000 0.014692 0.081236 0.016629

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END FTABLE 2
FTABLE 1
34 6

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Depth Time*** (ft) (Minutes)***	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	outflow 3 (cfs)	Velocity (ft/sec)	Travel
0.000000	0.014692	0.000000	0.000000	0.000000	0.000000		
0.045824	0.031367	0.001430	0.000000	0.076337	0.000000		
0.091648	0.031695	0.002875	0.000000	0.078600	0.000000		
0.137473	0.032024	0.004335	0.000000	0.080863	0.000000		
0.183297	0.032355	0.005810	0.000000	0.083126	0.000000		
0.229121	0.032688	0.007300	0.000000	0.085389	0.000000		
0.274945	0.033022	0.008806	0.000000	0.087652	0.000000		
0.320769	0.033357	0.010327	0.000000	0.089915	0.000000		
0.366593	0.033694	0.011863	0.000000	0.092178	0.000000		
0.412418	0.034033	0.013415	0.000000	0.094440	0.000000		
0.458242	0.034373	0.014982	0.000000	0.096703	0.000000		
0.504066	0.034715	0.016565	0.000000	0.098966	0.000000		
0.549890	0.035058	0.018164	0.000000	0.101229	0.000000		
0.595714	0.035403	0.019778	0.000000	0.103492	0.000000		
0.641538	0.035749	0.021408	0.000000	0.105755	0.000000		
0.687363	0.036097	0.023054	0.001905	0.108018	0.000000		
0.733187	0.036447	0.024717	0.013223	0.110281	0.000000		
0.779011	0.036798	0.026395	0.029963	0.112544	0.000000		
0.824835	0.037150	0.028089	0.050721	0.114807	0.000000		
0.870659	0.037504	0.029799	0.074830	0.117070	0.000000		
0.916484	0.037860	0.031526	0.101875	0.119333	0.000000		
0.962308	0.038217	0.033269	0.131566	0.121596	0.000000		
1.008132	0.038576	0.035029	0.165603	0.123858	0.000000		
1.053956	0.038936	0.036805	0.290610	0.126121	0.000000		
1.099780	0.039298	0.038597	0.490251	0.128384	0.000000		
1.145604	0.039661	0.040406	0.737138	0.130647	0.000000		
1.191429	0.040026	0.042232	1.012378	0.132910	0.000000		
1.237253	0.040392	0.044075	1.297093	0.135173	0.000000		



1.283077	0.040760	0.045934	1.572071	0.137436	0.000000
1.328901	0.041130	0.047810	1.819397	0.139699	0.000000
1.374725	0.041501	0.049704	2.025085	0.141962	0.000000
1.420549	0.041873	0.051614	2.182367	0.144225	0.000000
1.466374	0.042247	0.053541	2.295529	0.146488	0.000000
1.500000	0.042523	0.054967	2.411945	0.148148	0.000000

END FTABLE 1

FTABLE 4

60 4

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.024081	0.000000	0.000000		
0.045824	0.023980	0.000082	0.000000		
0.091648	0.023601	0.000168	0.000000		
0.137473	0.023224	0.000260	0.000000		
0.183297	0.022848	0.000357	0.000000		
0.229121	0.022473	0.000460	0.000000		
0.274945	0.022100	0.000567	0.000182		
0.320769	0.021729	0.000679	0.000272		
0.366593	0.021359	0.000797	0.000393		
0.412418	0.020991	0.000920	0.000549		
0.458242	0.020624	0.001049	0.000741		
0.504066	0.020259	0.001183	0.000973		
0.549890	0.019896	0.001322	0.001247		
0.595714	0.019533	0.001466	0.001565		
0.641538	0.019173	0.001616	0.001929		
0.687363	0.018814	0.001771	0.002341		
0.733187	0.018456	0.001932	0.002805		
0.779011	0.018101	0.002098	0.002958		
0.824835	0.017746	0.002270	0.003797		
0.870659	0.017393	0.002447	0.004195		
0.916484	0.017042	0.002630	0.004475		
0.962308	0.016692	0.002818	0.005059		
1.008132	0.016344	0.003013	0.005562		
1.053956	0.015998	0.003212	0.005579		
1.099780	0.015652	0.003418	0.006053		
1.145604	0.015309	0.003629	0.006491		
1.191429	0.014967	0.003846	0.006900		
1.237253	0.014626	0.004068	0.007286		
1.283077	0.014287	0.004296	0.007652		
1.328901	0.013950	0.004531	0.008000		
1.374725	0.013614	0.004771	0.008334		
1.420549	0.013280	0.005016	0.008654		
1.466374	0.012947	0.005268	0.008963		
1.512198	0.012616	0.005550	0.009261		
1.558022	0.012286	0.005837	0.009549		
1.603846	0.011958	0.006132	0.009830		
1.649670	0.011631	0.006433	0.010102		
1.695495	0.011306	0.006740	0.010367		
1.741319	0.010983	0.007054	0.010625		
1.787143	0.010661	0.007375	0.010877		
1.832967	0.010340	0.007703	0.011123		
1.878791	0.010022	0.008037	0.011364		
1.924615	0.009704	0.008378	0.011600		
1.970440	0.009388	0.008725	0.011831		
2.016264	0.009074	0.009080	0.012058		
2.062088	0.008761	0.009441	0.012280		
2.107912	0.008450	0.009809	0.012499		
2.153736	0.008141	0.010184	0.012714		
2.199560	0.007833	0.010566	0.012925		
2.245385	0.007526	0.010954	0.013133		
2.291209	0.007221	0.011350	0.013446		
2.337033	0.006918	0.011753	0.013843		
2.382857	0.006616	0.012162	0.014230		
2.428681	0.006315	0.012579	0.014608		
2.474505	0.006016	0.013003	0.014976		
2.520330	0.005719	0.013434	0.015338		
2.566154	0.005423	0.013872	0.015694		
2.611978	0.005129	0.014317	0.016050		
2.657802	0.004837	0.014770	0.016586		

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2.670000 0.004545 0.031272 0.016629
END FTABLE 4
FTABLE 3
34 6
Depth Area Volume Outflow1 Outflow2 outflow 3 Velocity Travel
Time***
(ft) (acres) (acre-ft) (cfs) (cfs) (cfs) (ft/sec)
(Minutes)***
0.000000 0.004545 0.000000 0.000000 0.000000 0.000000
0.045824 0.024462 0.001112 0.000000 0.023617 0.000000
0.091648 0.024845 0.002242 0.000000 0.024317 0.000000
0.137473 0.025229 0.003389 0.000000 0.025017 0.000000
0.183297 0.025615 0.004554 0.000000 0.025717 0.000000
0.229121 0.026002 0.005737 0.000000 0.026417 0.000000
0.274945 0.026390 0.006937 0.000000 0.027117 0.000000
0.320769 0.026781 0.008156 0.000000 0.027817 0.000000
0.366593 0.027173 0.009392 0.000000 0.028517 0.000000
0.412418 0.027566 0.010646 0.000000 0.029218 0.000000
0.458242 0.027961 0.011918 0.000000 0.029918 0.000000
0.504066 0.028357 0.013208 0.000000 0.030618 0.000000
0.549890 0.028755 0.014517 0.000000 0.031318 0.000000
0.595714 0.029155 0.015844 0.000000 0.032018 0.000000
0.641538 0.029556 0.017189 0.000000 0.032718 0.000000
0.687363 0.029958 0.018553 0.001905 0.033418 0.000000
0.733187 0.030362 0.019935 0.013223 0.034118 0.000000
0.779011 0.030768 0.021335 0.029963 0.034818 0.000000
0.824835 0.031175 0.022755 0.050721 0.035518 0.000000
0.870659 0.031584 0.024193 0.074830 0.036218 0.000000
0.916484 0.031994 0.025649 0.101875 0.036919 0.000000
0.962308 0.032406 0.027125 0.131566 0.037619 0.000000
1.008132 0.032820 0.028619 0.165603 0.038319 0.000000
1.053956 0.033235 0.030133 0.290610 0.039019 0.000000
1.099780 0.033651 0.031665 0.490251 0.039719 0.000000
1.145604 0.034069 0.033217 0.737138 0.040419 0.000000
1.191429 0.034489 0.034788 1.012378 0.041119 0.000000
1.237253 0.034910 0.036378 1.297093 0.041819 0.000000
1.283077 0.035332 0.037987 1.572071 0.042519 0.000000
1.328901 0.035757 0.039616 1.819397 0.043219 0.000000
1.374725 0.036182 0.041264 2.025085 0.043919 0.000000
1.420549 0.036610 0.042932 2.182367 0.044620 0.000000
1.466374 0.037038 0.044619 2.295529 0.045320 0.000000
1.500000 0.037354 0.045870 2.411945 0.045833 0.000000
END FTABLE 3
FTABLE 6
60 4
Depth Area Volume Outflow1 Velocity Travel Time***
(ft) (acres) (acre-ft) (cfs) (ft/sec) (Minutes)***
0.000000 0.031933 0.000000 0.000000
0.045824 0.031831 0.000218 0.000000
0.091648 0.031452 0.000442 0.000000
0.137473 0.031075 0.000670 0.000000
0.183297 0.030699 0.000904 0.000000
0.229121 0.030324 0.001143 0.000000
0.274945 0.029952 0.001387 0.000496
0.320769 0.029580 0.001636 0.000742
0.366593 0.029210 0.001891 0.001073
0.412418 0.028842 0.002151 0.001497
0.458242 0.028476 0.002416 0.002021
0.504066 0.028110 0.002686 0.002653
0.549890 0.027747 0.002962 0.002958
0.595714 0.027385 0.003243 0.003797
0.641538 0.027024 0.003530 0.004475
0.687363 0.026665 0.003822 0.005059
0.733187 0.026308 0.004119 0.005579
0.779011 0.025952 0.004422 0.006053
0.824835 0.025597 0.004731 0.006491
0.870659 0.025245 0.005045 0.006900
0.916484 0.024893 0.005364 0.007286
0.962308 0.024544 0.005690 0.007652
1.008132 0.024195 0.006020 0.008000

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1.053956 0.023849 0.006357 0.008334  
 1.099780 0.023504 0.006699 0.008654  
 1.145604 0.023160 0.007047 0.008963  
 1.191429 0.022818 0.007400 0.009261  
 1.237253 0.022478 0.007759 0.009549  
 1.283077 0.022139 0.008124 0.009830  
 1.328901 0.021801 0.008495 0.010102  
 1.374725 0.021465 0.008872 0.010367  
 1.420549 0.021131 0.009255 0.010625  
 1.466374 0.020798 0.009643 0.010877  
 1.512198 0.020467 0.010074 0.011123  
 1.558022 0.020137 0.010511 0.011364  
 1.603846 0.019809 0.010955 0.011600  
 1.649670 0.019483 0.011405 0.011831  
 1.695495 0.019158 0.011862 0.012058  
 1.741319 0.018834 0.012325 0.012280  
 1.787143 0.018512 0.012795 0.012499  
 1.832967 0.018192 0.013272 0.012714  
 1.878791 0.017873 0.013755 0.012925  
 1.924615 0.017555 0.014246 0.013133  
 1.970440 0.017240 0.014742 0.013338  
 2.016264 0.016925 0.015246 0.013540  
 2.062088 0.016613 0.015757 0.013738  
 2.107912 0.016302 0.016274 0.013935  
 2.153736 0.015992 0.016798 0.014128  
 2.199560 0.015684 0.017329 0.014319  
 2.245385 0.015377 0.017867 0.014508  
 2.291209 0.015072 0.018412 0.014694  
 2.337033 0.014769 0.018964 0.014879  
 2.382857 0.014467 0.019523 0.015062  
 2.428681 0.014167 0.020089 0.015242  
 2.474505 0.013868 0.020663 0.015422  
 2.520330 0.013570 0.021243 0.015600  
 2.566154 0.013275 0.021830 0.015777  
 2.611978 0.012980 0.022425 0.016050  
 2.657802 0.012688 0.023027 0.016586  
 2.670000 0.012397 0.048695 0.016629  
 END FTABLE 6  
 FTABLE 5

Time***	Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	outflow 3 (cfs)	Velocity (ft/sec)	Travel
(Minutes)***								
0.000000	0.012397	0.000000	0.000000	0.000000	0.000000	0.000000		
0.045824	0.032314	0.001472	0.000000	0.064409	0.000000	0.000000		
0.091648	0.032696	0.002962	0.000000	0.066319	0.000000	0.000000		
0.137473	0.033080	0.004469	0.000000	0.068228	0.000000	0.000000		
0.183297	0.033466	0.005993	0.000000	0.070137	0.000000	0.000000		
0.229121	0.033853	0.007536	0.000000	0.072047	0.000000	0.000000		
0.274945	0.034242	0.009096	0.000000	0.073956	0.000000	0.000000		
0.320769	0.034632	0.010674	0.000000	0.075865	0.000000	0.000000		
0.366593	0.035024	0.012270	0.000000	0.077775	0.000000	0.000000		
0.412418	0.035417	0.013884	0.000000	0.079684	0.000000	0.000000		
0.458242	0.035812	0.015516	0.000000	0.081593	0.000000	0.000000		
0.504066	0.036208	0.017166	0.000000	0.083503	0.000000	0.000000		
0.549890	0.036606	0.018834	0.000000	0.085412	0.000000	0.000000		
0.595714	0.037006	0.020521	0.000000	0.087321	0.000000	0.000000		
0.641538	0.037407	0.022226	0.000000	0.089231	0.000000	0.000000		
0.687363	0.037810	0.023949	0.001905	0.091140	0.000000	0.000000		
0.733187	0.038214	0.025691	0.013223	0.093050	0.000000	0.000000		
0.779011	0.038619	0.027452	0.029963	0.094959	0.000000	0.000000		
0.824835	0.039027	0.029231	0.050721	0.096868	0.000000	0.000000		
0.870659	0.039435	0.031028	0.074830	0.098778	0.000000	0.000000		
0.916484	0.039846	0.032845	0.101875	0.100687	0.000000	0.000000		
0.962308	0.040257	0.034680	0.131566	0.102596	0.000000	0.000000		
1.008132	0.040671	0.036534	0.165603	0.104506	0.000000	0.000000		
1.053956	0.041086	0.038408	0.290610	0.106415	0.000000	0.000000		
1.099780	0.041502	0.040300	0.490251	0.108324	0.000000	0.000000		
1.145604	0.041920	0.042211	0.737138	0.110234	0.000000	0.000000		

1.191429	0.042340	0.044142	1.012378	0.112143	0.000000
1.237253	0.042761	0.046092	1.297093	0.114052	0.000000
1.283077	0.043184	0.048061	1.572071	0.115962	0.000000
1.328901	0.043608	0.050049	1.819397	0.117871	0.000000
1.374725	0.044034	0.052057	2.025085	0.119780	0.000000
1.420549	0.044461	0.054085	2.182367	0.121690	0.000000
1.466374	0.044890	0.056132	2.295529	0.123599	0.000000
1.500000	0.045205	0.057647	2.411945	0.125000	0.000000

END FTABLE 5  
 FTABLE 8

60 4

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflowl (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.031933	0.000000	0.000000	0.000000	
0.045824	0.031831	0.000218	0.000000		
0.091648	0.031452	0.000442	0.000000		
0.137473	0.031075	0.000670	0.000000		
0.183297	0.030699	0.000904	0.000000		
0.229121	0.030324	0.001143	0.000000		
0.274945	0.029952	0.001387	0.000496		
0.320769	0.029580	0.001636	0.000742		
0.366593	0.029210	0.001891	0.001073		
0.412418	0.028842	0.002151	0.001497		
0.458242	0.028476	0.002416	0.002021		
0.504066	0.028110	0.002686	0.002653		
0.549890	0.027747	0.002962	0.002958		
0.595714	0.027385	0.003243	0.003797		
0.641538	0.027024	0.003530	0.004475		
0.687363	0.026665	0.003822	0.005059		
0.733187	0.026308	0.004119	0.005579		
0.779011	0.025952	0.004422	0.006053		
0.824835	0.025597	0.004731	0.006491		
0.870659	0.025245	0.005045	0.006900		
0.916484	0.024893	0.005364	0.007286		
0.962308	0.024544	0.005690	0.007652		
1.008132	0.024195	0.006020	0.008000		
1.053956	0.023849	0.006357	0.008334		
1.099780	0.023504	0.006699	0.008654		
1.145604	0.023160	0.007047	0.008963		
1.191429	0.022818	0.007400	0.009261		
1.237253	0.022478	0.007759	0.009549		
1.283077	0.022139	0.008124	0.009830		
1.328901	0.021801	0.008495	0.010102		
1.374725	0.021465	0.008872	0.010367		
1.420549	0.021131	0.009255	0.010625		
1.466374	0.020798	0.009643	0.010877		
1.512198	0.020467	0.010074	0.011123		
1.558022	0.020137	0.010511	0.011364		
1.603846	0.019809	0.010955	0.011600		
1.649670	0.019483	0.011405	0.011831		
1.695495	0.019158	0.011862	0.012058		
1.741319	0.018834	0.012325	0.012280		
1.787143	0.018512	0.012795	0.012499		
1.832967	0.018192	0.013272	0.012714		
1.878791	0.017873	0.013755	0.012925		
1.924615	0.017555	0.014246	0.013133		
1.970440	0.017240	0.014742	0.013338		
2.016264	0.016925	0.015246	0.013540		
2.062088	0.016613	0.015757	0.013738		
2.107912	0.016302	0.016274	0.013935		
2.153736	0.015992	0.016798	0.014128		
2.199560	0.015684	0.017329	0.014319		
2.245385	0.015377	0.017867	0.014508		
2.291209	0.015072	0.018412	0.014694		
2.337033	0.014769	0.018964	0.014879		
2.382857	0.014467	0.019523	0.015062		
2.428681	0.014167	0.020089	0.015242		
2.474505	0.013868	0.020663	0.015422		
2.520330	0.013570	0.021243	0.015600		
2.566154	0.013275	0.021830	0.015777		

2.611978 0.012980 0.022425 0.016050  
 2.657802 0.012688 0.023027 0.016586  
 2.670000 0.012397 0.078839 0.016629  
 END FTABLE 8  
 FTABLE 7

Time*** (Minutes)***	Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	outflow 3 (cfs)	Velocity (ft/sec)	Travel
0.000000	0.012397	0.000000	0.000000	0.000000	0.000000	0.000000		
0.045824	0.032314	0.001472	0.000000	0.064409	0.000000			
0.091648	0.032696	0.002962	0.000000	0.066319	0.000000			
0.137473	0.033080	0.004469	0.000000	0.068228	0.000000			
0.183297	0.033466	0.005993	0.000000	0.070137	0.000000			
0.229121	0.033853	0.007536	0.000000	0.072047	0.000000			
0.274945	0.034242	0.009096	0.000000	0.073956	0.000000			
0.320769	0.034632	0.010674	0.000000	0.075865	0.000000			
0.366593	0.035024	0.012270	0.000000	0.077775	0.000000			
0.412418	0.035417	0.013884	0.000000	0.079684	0.000000			
0.458242	0.035812	0.015516	0.000000	0.081593	0.000000			
0.504066	0.036208	0.017166	0.000000	0.083503	0.000000			
0.549890	0.036606	0.018834	0.000000	0.085412	0.000000			
0.595714	0.037006	0.020521	0.000000	0.087321	0.000000			
0.641538	0.037407	0.022226	0.000000	0.089231	0.000000			
0.687363	0.037810	0.023949	0.001905	0.091140	0.000000			
0.733187	0.038214	0.025691	0.013223	0.093050	0.000000			
0.779011	0.038619	0.027452	0.029963	0.094959	0.000000			
0.824835	0.039027	0.029231	0.050721	0.096868	0.000000			
0.870659	0.039435	0.031028	0.074830	0.098778	0.000000			
0.916484	0.039846	0.032845	0.101875	0.100687	0.000000			
0.962308	0.040257	0.034680	0.131566	0.102596	0.000000			
1.008132	0.040671	0.036534	0.165603	0.104506	0.000000			
1.053956	0.041086	0.038408	0.290610	0.106415	0.000000			
1.099780	0.041502	0.040300	0.490251	0.108324	0.000000			
1.145604	0.041920	0.042211	0.737138	0.110234	0.000000			
1.191429	0.042340	0.044142	1.012378	0.112143	0.000000			
1.237253	0.042761	0.046092	1.297093	0.114052	0.000000			
1.283077	0.043184	0.048061	1.572071	0.115962	0.000000			
1.328901	0.043608	0.050049	1.819397	0.117871	0.000000			
1.374725	0.044034	0.052057	2.025085	0.119780	0.000000			
1.420549	0.044461	0.054085	2.182367	0.121690	0.000000			
1.466374	0.044890	0.056132	2.295529	0.123599	0.000000			
1.500000	0.045205	0.057647	2.411945	0.125000	0.000000			

END FTABLE 7  
 FTABLE 10

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.023783	0.000000	0.000000		
0.054945	0.023783	0.000497	0.000000		
0.109890	0.023783	0.000993	0.000000		
0.164835	0.023783	0.001490	0.000000		
0.219780	0.023783	0.001986	0.000000		
0.274725	0.023783	0.002483	0.000000		
0.329670	0.023783	0.002979	0.000723		
0.384615	0.023783	0.003476	0.001085		
0.439560	0.023783	0.003973	0.001572		
0.494505	0.023783	0.004469	0.002195		
0.549451	0.023783	0.004966	0.002967		
0.604396	0.023783	0.005462	0.003898		
0.659341	0.023783	0.005959	0.004997		
0.714286	0.023783	0.006455	0.006273		
0.769231	0.023783	0.006952	0.006385		
0.824176	0.023783	0.007449	0.007877		
0.879121	0.023783	0.007945	0.009118		
0.934066	0.023783	0.008442	0.010202		
0.989011	0.023783	0.008938	0.011177		
1.043956	0.023783	0.009435	0.012071		
1.098901	0.023783	0.009931	0.012901		

1.153846	0.023783	0.010428	0.013679
1.208791	0.023783	0.010925	0.014414
1.263736	0.023783	0.011421	0.015112
1.318681	0.023783	0.011918	0.015779
1.373626	0.023783	0.012414	0.016418
1.428571	0.023783	0.012911	0.017032
1.483516	0.023783	0.013408	0.017625
1.538462	0.023783	0.013904	0.018198
1.593407	0.023783	0.014401	0.018753
1.648352	0.023783	0.014897	0.019292
1.703297	0.023783	0.015394	0.019816
1.758242	0.023783	0.015890	0.020326
1.813187	0.023783	0.016387	0.020824
1.868132	0.023783	0.016884	0.021310
1.923077	0.023783	0.017380	0.021785
1.978022	0.023783	0.017877	0.022250
2.032967	0.023783	0.018419	0.022705
2.087912	0.023783	0.018961	0.023151
2.142857	0.023783	0.019504	0.023589
2.197802	0.023783	0.020046	0.024019
2.252747	0.023783	0.020588	0.024441
2.307692	0.023783	0.021131	0.024856
2.362637	0.023783	0.021673	0.025264
2.417582	0.023783	0.022215	0.025666
2.472527	0.023783	0.022757	0.026062
2.527473	0.023783	0.023300	0.026451
2.582418	0.023783	0.023842	0.026836
2.637363	0.023783	0.024384	0.027214
2.692308	0.023783	0.024927	0.027588
2.747253	0.023783	0.025469	0.027957
2.802198	0.023783	0.026011	0.028321
2.857143	0.023783	0.026554	0.028681
2.912088	0.023783	0.027096	0.029037
2.967033	0.023783	0.027638	0.029388
3.021978	0.023783	0.028181	0.029736
3.076923	0.023783	0.028723	0.030080
3.131868	0.023783	0.029265	0.030420
3.186813	0.023783	0.029808	0.030758
3.241758	0.023783	0.030350	0.031092
3.296703	0.023783	0.030892	0.031424
3.351648	0.023783	0.031434	0.031755
3.406593	0.023783	0.031977	0.032150
3.461538	0.023783	0.032519	0.032830
3.500000	0.023783	0.069087	0.033448

END FTABLE 10  
 FTABLE 9  
 29 6

Time*** (Minutes)***	Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	outflow 3 (cfs)	Velocity (ft/sec)	Travel
0.000000	0.023783	0.000000	0.000000	0.000000	0.000000	0.000000		
0.054945	0.023783	0.001307	0.000000	0.000000	0.032830	0.000000		
0.109890	0.023783	0.002614	0.000000	0.000000	0.032830	0.000000		
0.164835	0.023783	0.003920	0.000000	0.000000	0.032830	0.000000		
0.219780	0.023783	0.005227	0.000000	0.000000	0.032830	0.000000		
0.274725	0.023783	0.006534	0.000000	0.000000	0.032830	0.000000		
0.329670	0.023783	0.007841	0.000000	0.000000	0.032830	0.000000		
0.384615	0.023783	0.009147	0.000000	0.000000	0.032830	0.000000		
0.439560	0.023783	0.010454	0.000000	0.000000	0.032830	0.000000		
0.494505	0.023783	0.011761	0.000000	0.000000	0.032830	0.000000		
0.549451	0.023783	0.013068	0.000000	0.000000	0.032830	0.000000		
0.604396	0.023783	0.014375	0.000000	0.000000	0.032830	0.000000		
0.659341	0.023783	0.015681	0.000000	0.000000	0.032830	0.000000		
0.714286	0.023783	0.016988	0.000000	0.000000	0.032830	0.000000		
0.769231	0.023783	0.018295	0.000000	0.000000	0.032830	0.000000		
0.824176	0.023783	0.019602	0.000000	0.000000	0.032830	0.000000		
0.879121	0.023783	0.020908	0.000000	0.000000	0.032830	0.000000		
0.934066	0.023783	0.022215	0.000000	0.000000	0.032830	0.000000		
0.989011	0.023783	0.023522	0.000000	0.000000	0.032830	0.000000		

```

1.043956 0.023783 0.024829 0.097690 0.032830 0.000000
1.098901 0.023783 0.026135 0.328096 0.032830 0.000000
1.153846 0.023783 0.027442 0.627270 0.032830 0.000000
1.208791 0.023783 0.028749 0.962367 0.032830 0.000000
1.263736 0.023783 0.030056 1.300589 0.032830 0.000000
1.318681 0.023783 0.031363 1.609623 0.032830 0.000000
1.373626 0.023783 0.032669 1.862893 0.032830 0.000000
1.428571 0.023783 0.033976 2.047214 0.032830 0.000000
1.483516 0.023783 0.035283 2.172110 0.032830 0.000000
1.500000 0.023783 0.035675 2.311197 0.032830 0.000000

```

END FTABLE 9

END FTABLES

EXT SOURCES

```

<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member--> ***
<Name> # <Name> # tem strg<-factor->strg <Name> # # <Name> # # ***
WDM 2 PREC ENGL 1.448 PERLND 1 999 EXTNL PREC
WDM 2 PREC ENGL 1.448 IMPLND 1 999 EXTNL PREC
WDM 1 EVAP ENGL 1 PERLND 1 999 EXTNL PETINP
WDM 1 EVAP ENGL 1 IMPLND 1 999 EXTNL PETINP
WDM 22 IRRG ENGL 0.7 SAME PERLND 45 EXTNL SURLI
WDM 2 PREC ENGL 1.448 RCHRES 1 EXTNL PREC
WDM 2 PREC ENGL 1.448 RCHRES 3 EXTNL PREC
WDM 2 PREC ENGL 1.448 RCHRES 5 EXTNL PREC
WDM 2 PREC ENGL 1.448 RCHRES 7 EXTNL PREC
WDM 2 PREC ENGL 1.448 RCHRES 9 EXTNL PREC
WDM 1 EVAP ENGL 0.5 RCHRES 1 EXTNL POTEV
WDM 1 EVAP ENGL 0.7 RCHRES 2 EXTNL POTEV
WDM 1 EVAP ENGL 0.5 RCHRES 3 EXTNL POTEV
WDM 1 EVAP ENGL 0.7 RCHRES 4 EXTNL POTEV
WDM 1 EVAP ENGL 0.5 RCHRES 5 EXTNL POTEV
WDM 1 EVAP ENGL 0.7 RCHRES 6 EXTNL POTEV
WDM 1 EVAP ENGL 0.5 RCHRES 7 EXTNL POTEV
WDM 1 EVAP ENGL 0.7 RCHRES 8 EXTNL POTEV
WDM 1 EVAP ENGL 0.5 RCHRES 9 EXTNL POTEV
WDM 1 EVAP ENGL 0.7 RCHRES 10 EXTNL POTEV

```

END EXT SOURCES

EXT TARGETS

```

<-Volume-> <-Grp> <-Member--><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name> # <Name> # #<-factor->strg <Name> # <Name> tem strg strg***
RCHRES 2 HYDR RO 1 1 1 WDM 1000 FLOW ENGL REPL
RCHRES 2 HYDR STAGE 1 1 1 WDM 1001 STAG ENGL REPL
RCHRES 1 HYDR STAGE 1 1 1 WDM 1002 STAG ENGL REPL
RCHRES 1 HYDR O 1 1 1 WDM 1003 FLOW ENGL REPL
COPY 1 OUTPUT MEAN 1 1 12.1 WDM 701 FLOW ENGL REPL
COPY 501 OUTPUT MEAN 1 1 12.1 WDM 801 FLOW ENGL REPL
COPY 601 OUTPUT MEAN 1 1 12.1 WDM 901 FLOW ENGL REPL
RCHRES 4 HYDR RO 1 1 1 WDM 1004 FLOW ENGL REPL
RCHRES 4 HYDR STAGE 1 1 1 WDM 1005 STAG ENGL REPL
RCHRES 3 HYDR STAGE 1 1 1 WDM 1006 STAG ENGL REPL
RCHRES 3 HYDR O 1 1 1 WDM 1007 FLOW ENGL REPL
RCHRES 6 HYDR RO 1 1 1 WDM 1008 FLOW ENGL REPL
RCHRES 6 HYDR STAGE 1 1 1 WDM 1009 STAG ENGL REPL
RCHRES 5 HYDR STAGE 1 1 1 WDM 1010 STAG ENGL REPL
RCHRES 5 HYDR O 1 1 1 WDM 1011 FLOW ENGL REPL
RCHRES 8 HYDR RO 1 1 1 WDM 1012 FLOW ENGL REPL
RCHRES 8 HYDR STAGE 1 1 1 WDM 1013 STAG ENGL REPL
RCHRES 7 HYDR STAGE 1 1 1 WDM 1014 STAG ENGL REPL
RCHRES 7 HYDR O 1 1 1 WDM 1015 FLOW ENGL REPL
RCHRES 10 HYDR RO 1 1 1 WDM 1040 FLOW ENGL REPL
RCHRES 10 HYDR STAGE 1 1 1 WDM 1041 STAG ENGL REPL
RCHRES 9 HYDR STAGE 1 1 1 WDM 1042 STAG ENGL REPL
RCHRES 9 HYDR O 1 1 1 WDM 1043 FLOW ENGL REPL

```

END EXT TARGETS

MASS-LINK

```

<Volume> <-Grp> <-Member--><--Mult--> <Target> <-Grp> <-Member-->***
<Name> <Name> # #<-factor-> <Name> <Name> # #***

```

MASS-LINK		2				
PERLND	PWATER	SURO	0.083333	RCHRES	INFLOW	IVOL
END MASS-LINK		2				
MASS-LINK		3				
PERLND	PWATER	IFWO	0.083333	RCHRES	INFLOW	IVOL
END MASS-LINK		3				
MASS-LINK		5				
IMPLND	IWATER	SURO	0.083333	RCHRES	INFLOW	IVOL
END MASS-LINK		5				
MASS-LINK		8				
RCHRES	OFLOW	OVOL	2	RCHRES	INFLOW	IVOL
END MASS-LINK		8				
MASS-LINK		12				
PERLND	PWATER	SURO	0.083333	COPY	INPUT	MEAN
END MASS-LINK		12				
MASS-LINK		13				
PERLND	PWATER	IFWO	0.083333	COPY	INPUT	MEAN
END MASS-LINK		13				
MASS-LINK		15				
IMPLND	IWATER	SURO	0.083333	COPY	INPUT	MEAN
END MASS-LINK		15				
MASS-LINK		16				
RCHRES	ROFLOW			COPY	INPUT	MEAN
END MASS-LINK		16				
MASS-LINK		17				
RCHRES	OFLOW	OVOL	1	COPY	INPUT	MEAN
END MASS-LINK		17				
MASS-LINK		18				
RCHRES	OFLOW	OVOL	2	COPY	INPUT	MEAN
END MASS-LINK		18				

END MASS-LINK

END RUN



*Predeveloped HSPF Message File*

*Mitigated HSPF Message File*

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