

**STORMWATER MANAGEMENT FACILITIES REPORT:  
CALCULATIONS**

**Watermark Apartments at O'Fallon  
O'Fallon, Missouri**

**Prepared For:**

**Watermark Residential**  
111 Monument Circle, Suite 1600  
Indianapolis, IN 46204  
(317) 454-8024

**Prepared By:**

**STOCK AND ASSOCIATES  
CONSULTING ENGINEERS, INC.**  
257 Chesterfield Business Parkway  
St. Louis, Missouri 63005  
Phone: (636) 530-9100  
Fax: (636) 530-9130

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**Stock Project No. 219-6494**

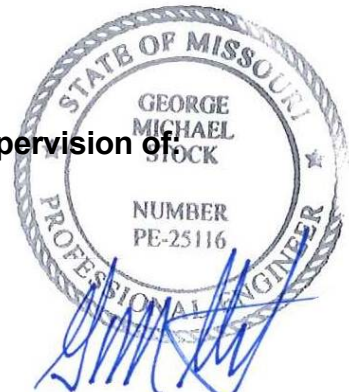
**Prepared By:**

*Jacob Buening*

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Jacob Buening, P.E.  
Civil Engineer  
License No. PE-2009018698

**Under Direct Supervision of:**



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George M. Stock, P.E.  
Civil Engineer  
License No. E-25116

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## **I. Executive Summary**

This report was prepared by Stock & Associates, for Watermark Residential, for proposed multi-building, multi-family residential development located on 19.10 acres at 1147 Technology Drive in the City of O'Fallon within the Dardenne Creek watershed. The project site is bounded by Technology Drive to the South, Weldon Spring Road to the East, existing hotels and Auto Mall Drive to the West and Crusher Road to the North.

The project site is an un-developed portion of property located within the former Kellen-Beck property. The site is tributary to the existing wet retention lake that is part of the original Regional Detention Analysis for Persimmon Pointe P.U.D. dated August 9, 2002.

The proposed project consists of the construction of three multi-story multi-family residential buildings and surface parking facilities on 17.09 acres. The remaining 2 acres of property will be designated as a commercial outlet and remain un-developed in the initial phase of the project.

The proposed site will be divided into multiple sub-basin watersheds, each tributary to internal private storm sewer systems which will discharge into the wet retention basin.

All drainage calculations were done in accordance with Section 405 Stormwater Detention of the City of O'Fallon Municipal Code.

## **II. Introduction**

### **A. Evaluation of Existing Conditions**

The existing site consists of 19.1 acres of un-developed grass area and an existing wet retention basin. The existing site sheet drains into the existing pond located at the north end of the property. The existing site has an impervious coverage of 0.106 acres, or +/- 0.55% of the site.

The soil survey map indicates that the type of soil is Harvester-Urban land complex, with a Hydrologic Soil Group of 'C'. A copy of the soil survey map and summary table from the soil survey is included in the Appendix for reference.

The existing site is part of the master planned regional detention system developed with the Persimmon Pointe P.U.D. dated August 9, 2002. The 19-acre parcel is located within the 34-acre parcel identified as the Kellen-Beck property. Subsequent subdivision and development of the adjacent hotel lots included individual dry detention basins on their respective lots.

### **B. Evaluation of Proposed Conditions**

The proposed project consists of the construction of three (3) four-story multi-family residential buildings and surface parking lots on approximately 17 of the 19-acre parcel. The remaining 2 acres will be designated as a commercial outlet. The commercial outlet

will be developed at some future time, however its stormwater runoff is tributary to the wet retention lake, and therefore will be included in the overall stormwater detention calculations. **Detention for the 2-acre commercial lot will be provided in the current detention basin design, based on a developed condition of 80% impervious coverage.**

**At the request of the City of O’Fallon, a portion of the Weldon Spring Road public right-of-way stormwater is being collected and routed through the on-site retention basin. Approximately 0.456 acres of the right-of-way has been included in the detention basin calculations. Future improvements to Weldon Spring Road will require an independent storm sewer and detention systems.**

The existing site is comprised of 0.106 acres of impervious coverage which equates to +/- 0.55% of the property. The 15-year/20-minute pre-developed runoff rate is:

$$Q(15) = (0.106 \text{ ac.})(3.54) + (19.01 \text{ ac.})(1.70) = 32.69 \text{ cfs}$$

The proposed site will have approximately 12.22 acres of impervious which equates to +/-63.96%. The 15-year/20-minute post-developed runoff rate is:

$$Q(15) = (12.22 \text{ ac.})(3.54) + (6.89 \text{ ac.})(1.70) = 54.97 \text{ cfs}$$

The proposed site will have a runoff differential of:

$$Q(15) = 54.97 \text{ cfs} - 32.69 \text{ cfs} = +22.28 \text{ cfs (to be detained)}$$

For the proposed development, the wet retention lake will be sized to provide 100% treatment of the tributary sub-basin and storm sewer pipes will be sized to convey the 15 year/20-minute design storm.

Refer to the Appendix of this report for the Drainage Area Map – Pipe Hydraulics.

### **III. Flood Protection Detention**

The proposed retention basin is part of the master-planned regional detention system known as the Regional Detention Analysis for Persimmon Pointe P.U.D. dated August 9, 2002. The proposed 19-acre parcel is located within the 34-acre parcel identified as the Kellen-Beck property. This parcel was planned for commercial development with an impervious coverage of 80%. The proposed project includes a total of 65% impervious coverage which results in a reduction in total stormwater runoff generated from the original design. Additionally, the proposed project intends to re-grade/re-shape the retention lake, including raising the basin berm 2 feet and lowering the normal pool 1 foot, as well as modify the existing outfall structure.



<b>TABLE 1</b>				
<b>Summary of Stormwater Discharges</b>				
<b>Peak Discharge for the 2, 15, 25, and 100 Year, 24-Hour Storm Events for P.O.E. #3 of the Persimmon Pointe P.U.D. Regional Detention Analysis</b>				
	<b>2 yr (cfs)</b>	<b>15 yr (cfs)</b>	<b>25 yr (cfs)</b>	<b>100 yr (cfs)</b>
2002 Allowable Release Rate	22.32	57.24	73.09	122.00
2002 Dev. Discharge Rate	21.50	54.40	71.87	130.98*
Proposed Discharge Rate	<b>22.16</b>	<b>55.55</b>	<b>66.02</b>	<b>120.63</b>

- \* 100-year 24-hour detention was not an adopted City requirement in 2002.

<b>TABLE 2</b>								
<b>Post-Development Conditions</b>								
<b>Peak Pond Elevation for the 2, 15, 25, and 100 Year, 24-Hour Storm Events</b>								
<b>Area</b>	<b>Normal Pool</b>	<b>Basin Bottom</b>	<b>2 yr (ft)</b>	<b>15 yr (ft)</b>	<b>25 yr (ft)</b>	<b>100 yr (ft)</b>	<b>100 yr LFB (ft)</b>	<b>Berm (ft)</b>
Pond	525.00	514.00	<b>529.08</b>	<b>531.12</b>	<b>531.66</b>	<b>532.71</b>	<b>533.41</b>	534.00

The proposed basin provides stormwater detention for the 2-year, 15-year, 25-year & 100-year design storms in accordance with the City of O’Fallon requirements. The proposed detention analysis utilized TR-55 software, Haestad Pondpack version 10.1.

#### **IV. Water Quality Calculations**

##### **A. Hydrology**

The total water quality volume/infiltration for each sub area was determined using the equation  $Volume = P \times R_v \times A$  in accordance with the MSD’s rules and regulations for 1.14 inches of rainfall as adopted by the City of O’Fallon. Quality/Quantity Management of the 1.14” rainfall event will be provided through the use of the Wet Retention Basin BMP located at the north end of the project site. The proposed residential building roofs and parking lots will be collected in on-site sewers and will then be conveyed directly to the retention basin. **The proposed retention lake water quality calculations have included the future 2-acre commercial lot developed condition.** Outfall structure to be modified to accommodate a 3.0” diameter orifice sized for the Water Quality Volume.

Refer to the Appendix of this report for the BMP Drainage Area Map, detailed calculations and outfall structure modifications for the Wet Retention Basin.

## Pipe Hydraulic Area Summary Table

Project name:	<b>WATERMARK RESIDENTIAL</b>	Calculated By:		<i>J.M.B.</i>	Revisions:
Project number:	<i>6494</i>	Checked By:		<i>G.M.S.</i>	<i>3/13/2020</i>
Project Location:	<i>O'Fallon, Missouri</i>	Date:		<i>2/14/2020</i>	

**Stormwater Pipe Hydraulics Area Summary**

Sub Basin	Tributary Area	% Impervious	15-year Impervious PI Factor	15-year Pervious PI Factor	15-year/20-minute runoff	100-year/20-minute runoff
	(ac)	(%)	(PI)	(PI)	(CFS)	(CFS)
1	0.63	85.00	3.54	1.70	2.06	2.78
2	0.84	85.00	3.54	1.70	2.74	3.70
3	0.93	85.00	3.54	1.70	3.04	4.10
4	0.12	90.00	3.54	1.70	0.40	0.54
5	0.10	92.00	3.54	1.70	0.34	0.46
6	0.13	90.00	3.54	1.70	0.44	0.59
7	0.12	90.00	3.54	1.70	0.40	0.54
8	0.12	92.00	3.54	1.70	0.41	0.55
9	0.08	92.00	3.54	1.70	0.27	0.37
10	0.17	5.00	3.54	1.70	0.30	0.41
11	0.07	87.00	3.54	1.70	0.23	0.31
12	0.15	87.00	3.54	1.70	0.50	0.67
13	0.14	85.00	3.54	1.70	0.46	0.62
14	0.16	100.00	4.20	1.70	0.67	0.91
15	0.13	100.00	4.20	1.70	0.55	0.74
16	0.16	100.00	4.20	1.70	0.67	0.91
17	0.13	100.00	4.20	1.70	0.55	0.74
18	0.16	100.00	4.20	1.70	0.67	0.91
19	0.20	5.00	3.54	1.70	0.36	0.48
20	0.20	95.00	3.54	1.70	0.69	0.93
21	0.55	80.00	3.54	1.70	1.74	2.36
22	0.26	5.00	3.54	1.70	0.47	0.63
23	0.16	95.00	3.54	1.70	0.55	0.74
24	0.07	100.00	3.54	1.70	0.25	0.33
24a	0.08	95.00	3.54	1.70	0.28	0.37
25	0.18	90.00	3.54	1.70	0.60	0.82
25a	0.07	95.00	3.54	1.70	0.24	0.33
26	0.54	85.00	3.54	1.70	1.76	2.38
27	0.06	95.00	3.54	1.70	0.21	0.28
27a	0.02	100.00	3.54	1.70	0.07	0.10
28	0.06	95.00	3.54	1.70	0.21	0.28
29	0.34	5.00	3.54	1.70	0.61	0.82
30	0.31	5.00	3.54	1.70	0.56	0.75
31	0.31	5.00	3.54	1.70	0.56	0.75
32	0.32	5.00	3.54	1.70	0.57	0.77
33	0.27	70.00	3.54	1.70	0.81	1.09
34	0.12	95.00	3.54	1.70	0.41	0.56
35	0.12	90.00	3.54	1.70	0.40	0.54
36	0.11	90.00	3.54	1.70	0.37	0.50
37	0.09	95.00	3.54	1.70	0.31	0.42
38	0.08	85.00	3.54	1.70	0.26	0.35
38a	0.16	80.00	3.54	1.70	0.51	0.69
39	0.08	95.00	3.54	1.70	0.28	0.37
40	0.12	90.00	3.54	1.70	0.40	0.54
41	0.12	95.00	3.54	1.70	0.41	0.56
42	0.11	90.00	3.54	1.70	0.37	0.50
43	0.12	95.00	3.54	1.70	0.41	0.56
44	0.10	90.00	3.54	1.70	0.34	0.45
45	0.11	95.00	3.54	1.70	0.38	0.51
46	0.10	100.00	4.20	1.70	0.42	0.57
47	0.13	100.00	4.20	1.70	0.55	0.74
48	0.15	100.00	4.20	1.70	0.63	0.85
49	0.13	100.00	4.20	1.70	0.55	0.74
50	0.14	100.00	4.20	1.70	0.59	0.79
51	0.21	70.00	3.54	1.70	0.63	0.85
52	0.16	100.00	4.20	1.70	0.67	0.91
53	0.13	100.00	4.20	1.70	0.55	0.74
54	0.15	100.00	4.20	1.70	0.63	0.85
55	0.20	100.00	4.20	1.70	0.84	1.13
56	0.21	100.00	4.20	1.70	0.88	1.19
57	0.19	5.00	3.54	1.70	0.34	0.46
58	0.13	95.00	3.54	1.70	0.45	0.61
59	0.23	95.00	3.54	1.70	0.79	1.07
60	0.15	5.00	3.54	1.70	0.27	0.36
61	0.25	80.00	3.54	1.70	0.79	1.07
62	0.20	75.00	3.54	1.70	0.62	0.83
63	0.40	95.00	3.54	1.70	1.38	1.86
64	0.23	90.00	3.54	1.70	0.77	1.04
65	0.09	95.00	3.54	1.70	0.31	0.42
66	0.08	100.00	3.54	1.70	0.28	0.38
67	0.07	95.00	3.54	1.70	0.24	0.33
68	0.08	95.00	3.54	1.70	0.28	0.37
69	0.07	90.00	3.54	1.70	0.23	0.32
70	0.43	70.00	3.54	1.70	1.28	1.73
71	0.23	90.00	3.54	1.70	0.77	1.04
72	0.08	95.00	3.54	1.70	0.28	0.37
73	0.11	95.00	3.54	1.70	0.38	0.51
74	0.21	70.00	3.54	1.70	0.63	0.85
75	0.11	95.00	3.54	1.70	0.38	0.51
76	0.09	95.00	3.54	1.70	0.31	0.42
77	0.19	90.00	3.54	1.70	0.64	0.86
78	0.09	5.00	3.54	1.70	0.16	0.22
79	0.14	5.00	3.54	1.70	0.25	0.34
<b>Total:</b>	<b>15.34</b>			<b>Total:</b>	<b>48.83</b>	<b>65.92</b>

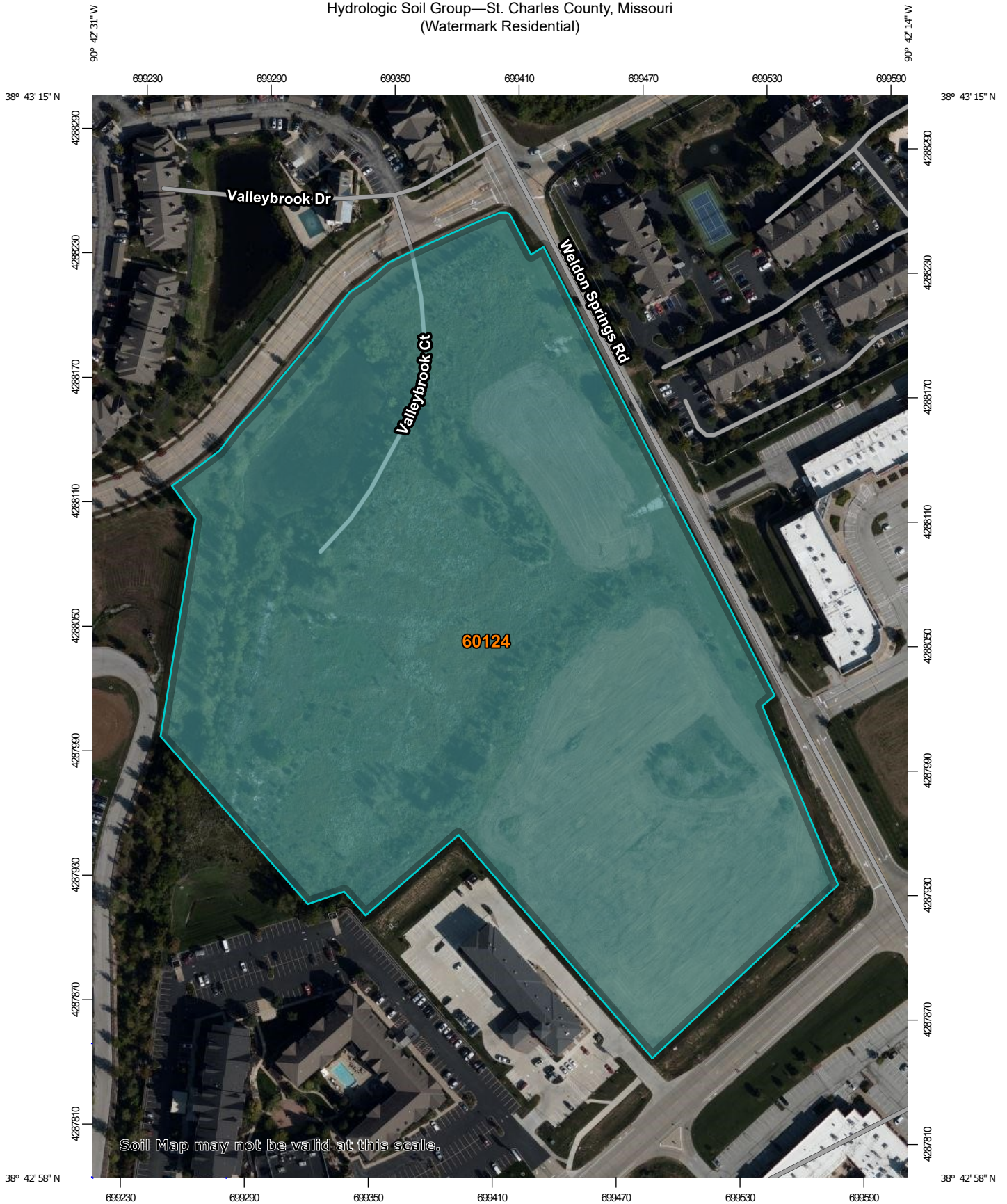
## Wet Retention Basin Calculations

**Table 2a: Extended Wet Retention Basin**

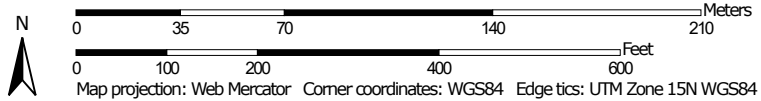
Step 1: Water Quantity Volume:			
Drainage Area:	19.1	Acres	
Percent Impervious Cover(I)	63.96	%	
Water Quality Required	49,450	Cu. FT	$Water\ Quantity=[1.14*(.05+.009I)*A/12]*43560]$
Step 2: Water Quality Orifice Sizing			
WQv=	49,450	Cu. FT	
Max. Hydraulic Head=	7.0	FT	
Q(avg) =	0.57	CFS (WQv / (24 hr)(3,600 s/hr)	
Orifice area=	0.045	CF (A=Q/C(2gh) <sup>0.5</sup>	
Pipe Diameter=	0.239	FT (D = (4A /3.14) <sup>0.5</sup>	
	2.871	INCH	
	3.0" orifice to be installed at elevation = 525.00		
Step 3: Water Quality Summary			
Water Quality Required	49,450	Cu. Ft.	
Water Quality Provided	101,597	Cu. Ft.	Provided at intermediate weir elevation = 526.81

## Soil Survey Map

Hydrologic Soil Group—St. Charles County, Missouri  
(Watermark Residential)




Map Scale: 1:2,540 if printed on A portrait (8.5" x 11") sheet.



Hydrologic Soil Group—St. Charles County, Missouri  
(Watermark Residential)

### MAP LEGEND

**Area of Interest (AOI)**









 Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Lines**


-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Points**






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: St. Charles County, Missouri  
Survey Area Data: Version 19, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 17, 2018—Oct 24, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
60124	Harvester-Urban land complex, 2 to 9 percent slopes	C	19.1	100.0%
<b>Totals for Area of Interest</b>			<b>19.1</b>	<b>100.0%</b>

### Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

### Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*

## FEMA Floodplain Exhibit

# National Flood Hazard Layer FIRMette



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
OTHER FEATURES		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

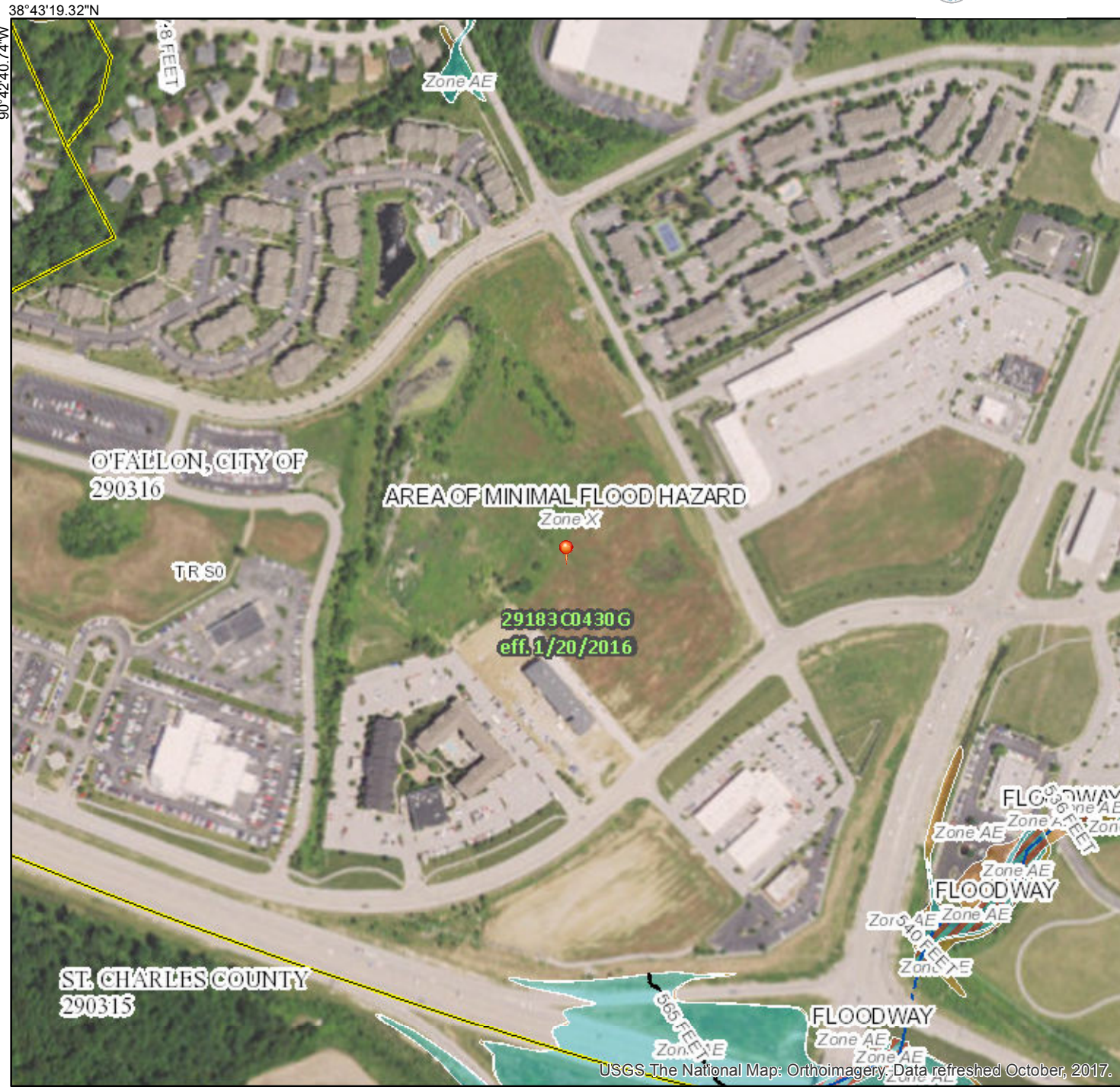
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/26/2019 at 10:47:35 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



## Table of Runoff Curve Numbers for Urban Areas

**Table 2-2a** Runoff curve numbers for urban areas <sup>1/</sup>

Cover description	Average percent impervious area <sup>2/</sup>	Curve numbers for hydrologic soil group			
		A	B	C	D
<b>Fully developed urban areas (vegetation established)</b>					
Open space (lawns, parks, golf courses, cemeteries, etc.) <sup>3/</sup> :					
Poor condition (grass cover < 50%) .....		68	79	86	89
Fair condition (grass cover 50% to 75%) .....		49	69	79	84
Good condition (grass cover > 75%) .....		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way) .....		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way) .....		98	98	98	98
Paved; open ditches (including right-of-way) .....		83	89	92	93
Gravel (including right-of-way) .....		76	85	89	91
Dirt (including right-of-way) .....		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) <sup>4/</sup> .....		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders) .....		96	96	96	96
Urban districts:					
Commercial and business .....	85	89	92	94	95
Industrial .....	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses) .....	65	77	85	90	92
1/4 acre .....	38	61	75	83	87
1/3 acre .....	30	57	72	81	86
1/2 acre .....	25	54	70	80	85
1 acre .....	20	51	68	79	84
2 acres .....	12	46	65	77	82

**Developing urban areas**

Newly graded areas  
(pervious areas only, no vegetation) <sup>5/</sup> .....

	77	86	91	94
--	----	----	----	----

Idle lands (CN's are determined using cover types  
similar to those in table 2-2c).

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2</sup> The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

<sup>3</sup> CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

<sup>4</sup> Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

<sup>5</sup> Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

## Sediment Storage Calculations

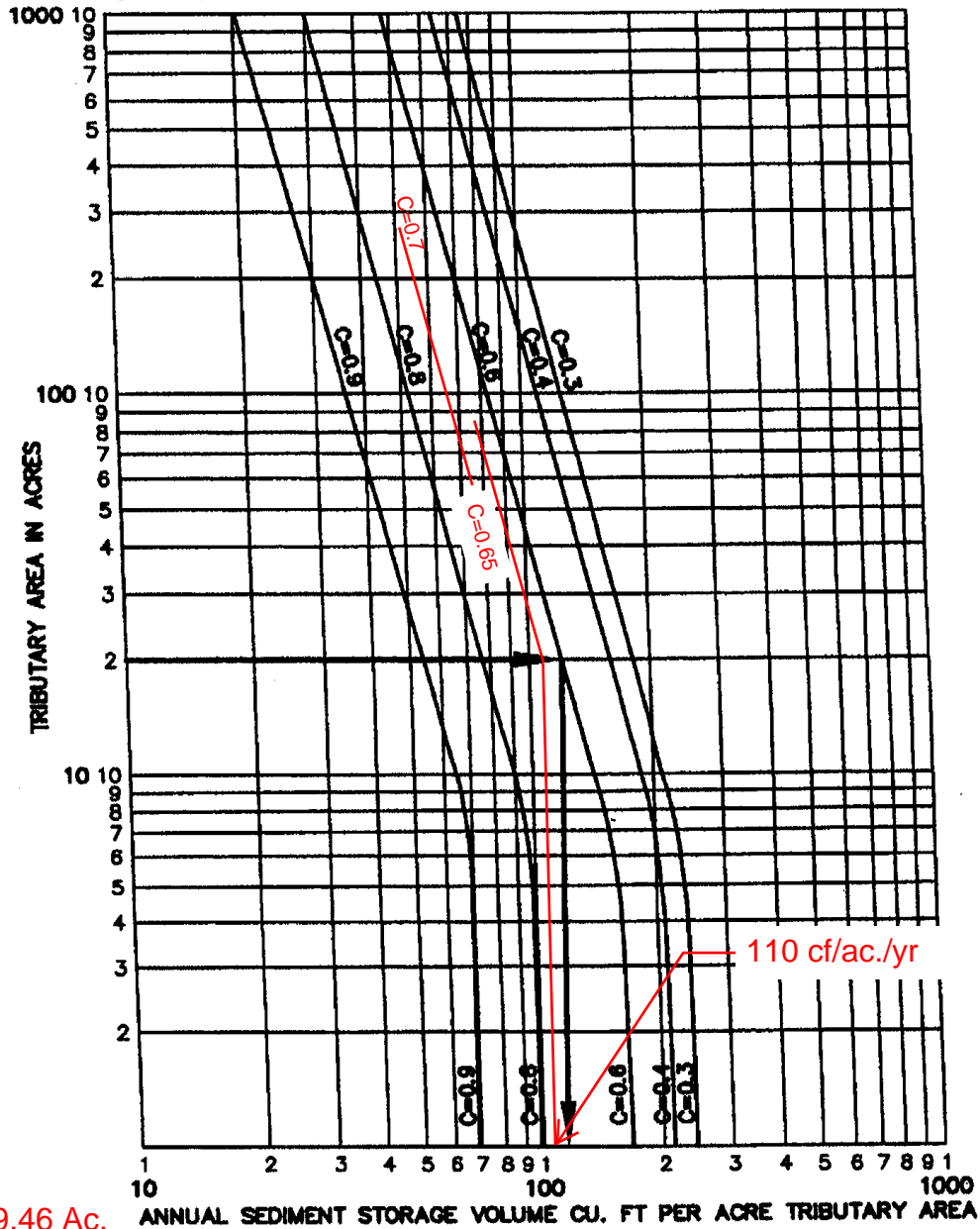


SUBDIVISION AND LAND DEVELOPMENT

FIGURE #1

**EXAMPLE:**

TRIBUTARY AREA = 20 ACRES  
 RATIONAL METHOD RUNOFF COEFFICIENT "C" = 0.6  
 SEDIMENT STORAGE = 120 CU.FT.PER ACRE PER YEAR  
 TOTAL SEDIMENT STORAGE = 120 X 20 = 2400 CU.FT. PER YEAR



Trib. Area = 19.46 Ac.  
 Rational Coeff. = 0.65  
 Sediment Storage = 110 cf/ac/yr

**ANNUAL SEDIMENT STORAGE**

Required 2-year volume:  
 Vol. = 2\*110\*19.46 = 4,281 cf

Provided Volume:  
 Pond Bottom = 514.00  
 Volume @ Elev. = 514.50 = 6,968 cf



B. Hydraulic Calculations

The hydraulic calculations for the 15-Year, 20-Minute and 100-Year, 20-Minute design storms can be found on the following sheets.



3.2	3.2	3.1a	530.50	527.25	35.00	0.0929	24	69.12	27.15	8.64	0.00	0.00	1.16	31.49	0.013	0.50	0.96	0.00	0.00	0.96	532.50	533.34	532.83	534.29	546.00	11.71	3.2	Double Curb Inlet
3.1a	3.1a	3.1	525.25	525.00	28.00	0.0089	30	38.86	27.15	5.53	0.00	0.00	0.48	12.90	0.013	0.12	0.00	0.00	0.00	0.00	527.75	532.83	532.71	532.83	535.00	2.17	3.1a	Manhole
3.1	3.1		514.00																		100-yr W.S. Elev.=				532.71		3.1	Flared End Section
3.27	3.27	3.26	543.91	542.45	73.00	0.0200	12	5.05	1.25	1.59	0.00	0.00	0.04	0.05	0.013	0.09	0.00	0.00	0.00	0.00	544.91	543.54	543.45	544.91	548.80	3.89	3.27	Grate Inlet
3.26	3.26	3.25	542.25	540.99	73.00	0.0173	12	4.69	2.25	2.86	0.00	0.00	0.13	0.29	0.013	0.29	0.14	0.00	0.00	0.14	543.25	542.28	541.99	543.39	548.80	5.41	3.26	Grate Inlet
3.25	3.25	3.24	540.79	539.53	73.00	0.0173	12	4.69	2.62	3.34	0.00	0.00	0.17	0.45	0.013	0.39	0.08	0.00	0.00	0.08	541.79	540.99	540.60	541.87	548.80	6.93	3.25	Grate Inlet
3.24	3.24	3.5	539.33	538.09	72.00	0.0172	12	4.69	3.48	4.43	0.11	0.00	0.30	1.06	0.013	0.69	0.23	0.03	0.00	0.27	540.33	540.10	539.42	540.60	548.80	8.20	3.24	Grate Inlet
3.5	3.5		537.09																		HGL Structure #3.5 =				539.42		3.5	Grate Inlet
3.23	3.23	3.22	543.20	542.47	73.00	0.0100	12	3.57	1.04	1.32	0.00	0.00	0.03	0.03	0.013	0.06	0.00	0.00	0.00	0.00	544.20	543.53	543.47	544.20	547.70	3.50	3.23	Grate Inlet
3.22	3.22	3.21	542.27	541.54	73.00	0.0100	12	3.57	1.41	1.80	0.00	0.00	0.05	0.07	0.013	0.11	0.04	0.00	0.00	0.04	543.27	542.65	542.54	543.31	547.70	4.39	3.22	Grate Inlet
3.21	3.21	3.20	541.34	540.84	50.00	0.0100	12	3.57	2.37	3.02	0.35	0.00	0.14	0.34	0.013	0.22	0.15	0.05	0.00	0.20	542.34	542.06	541.84	542.54	547.70	5.16	3.21	Grate Inlet
3.20	3.20	3.19	540.64	539.91	73.00	0.0100	12	3.57	2.71	3.45	0.55	0.00	0.18	0.50	0.013	0.42	0.08	0.10	0.00	0.18	541.64	541.33	540.91	541.82	547.70	5.88	3.20	Grate Inlet
3.19	3.19	3.18	539.71	538.73	98.00	0.0100	12	3.57	3.09	3.93	0.24	0.00	0.24	0.74	0.013	0.74	0.10	0.06	0.00	0.16	540.71	540.62	539.89	540.87	547.70	6.83	3.19	Grate Inlet
3.18	3.18	3.17	538.53	537.88	65.00	0.0100	15	6.48	4.15	3.38	0.60	0.00	0.18	0.74	0.013	0.27	0.00	0.11	0.00	0.11	539.78	539.40	539.13	539.89	546.40	6.51	3.18	Grate Inlet
3.17	3.17	3.16	537.68	537.08	60.00	0.0100	15	6.48	4.46	3.63	0.11	0.00	0.21	0.91	0.013	0.29	0.05	0.02	0.00	0.08	538.93	538.62	538.33	539.01	547.00	7.99	3.17	Grate Inlet
3.16	3.16	3.15	536.88	536.10	78.00	0.0100	15	6.48	5.47	4.46	0.00	0.00	0.31	1.69	0.013	0.56	0.19	0.00	0.00	0.19	538.13	537.91	537.35	538.32	547.00	8.68	3.16	Grate Inlet
3.15	3.15	3.14	535.90	535.30	60.00	0.0100	15	6.48	5.85	4.77	0.00	0.00	0.35	2.06	0.013	0.49	0.09	0.00	0.00	0.09	537.15	537.12	536.63	537.24	547.00	9.76	3.15	Grate Inlet
3.14	3.14	3.2	535.10	533.50	81.00	0.0198	15	9.10	6.72	5.48	0.15	0.00	0.47	3.13	0.013	0.88	0.21	0.07	0.00	0.28	536.35	535.63	534.75	536.63	547.00	10.37	3.14	Grate Inlet
3.2	3.2		530.50																		HGL Structure #3.2 =				534.29		3.2	Double Curb Inlet
3.16a	3.16a	3.16	540.00	537.38	45.00	0.0582	12	8.62	0.63	0.80	0.00	0.00	0.01	0.01	0.013	0.01	0.00	0.00	0.00	0.00	541.00	538.39	538.38	541.00	548.00	7.00	3.16a	Manhole
3.16	3.16		536.88																		HGL Structure #3.16 =				538.32		3.16	Grate Inlet
3.29	3.29	3.28	542.70	541.00	44.00	0.0386	12	7.02	0.56	0.71	0.00	0.00	0.01	0.00	0.013	0.01	0.00	0.00	0.00	0.00	543.70	542.01	542.00	543.70	547.11	3.41	3.29	Area Inlet
3.28	3.28	3.5	540.80	538.09	66.00	0.0411	12	7.24	1.12	1.43	0.60	0.00	0.03	0.04	0.013	0.07	0.04	0.02	0.00	0.06	541.80	539.48	539.42	541.86	547.11	5.25	3.28	Area Inlet
3.5	3.5		537.09																		HGL Structure #3.5 =				539.42		3.5	Grate Inlet
3.30	3.30	3.8	542.00	541.75	26.00	0.0096	12	3.50	0.61	0.78	0.00	0.00	0.01	0.01	0.013	0.01	0.00	0.00	0.00	0.00	543.00	543.19	543.18	543.19	547.11	3.92	3.30	Area Inlet
3.8	3.8		541.55																		HGL Structure #3.8 =				543.18		3.8	Grate Inlet
3.33	3.33	3.32	553.90	553.60	50.00	0.0060	12	2.77	1.76	2.24	0.00	0.00	0.08	0.14	0.013	0.12	0.00	0.00	0.00	0.00	554.90	554.72	554.60	554.90	558.90	4.00	3.33	Grate Inlet
3.32	3.32	3.31	553.40	552.90	48.00	0.0104	12	3.65	2.64	3.36	0.11	0.00	0.18	0.46	0.013	0.26	0.16	0.02	0.00	0.18	554.40	554.16	553.90	554.58	558.90	4.32	3.32	Grate Inlet
3.31	3.31	3.9	550.50	546.50	49.00	0.0816	12	10.21	2.71	3.45	0.08	0.00	0.18	0.50	0.013	0.28	0.00	0.01	0.00	0.01	551.50	548.31	548.03	551.51	557.80	6.29	3.31	Grate Inlet
3.9	3.9		545.30																		HGL Structure #3.9 =				548.03		3.9	Double Area Inlet
3.36	3.36	3.35	557.00	556.50	70.00	0.0071	12	3.02	2.74	3.49	0.00	0.00	0.19	0.52	0.013	0.41	0.00	0.00	0.00	0.00	558.00	558.01	557.60	558.01	563.91	5.90	3.36	Area Inlet
3.35	3.35	3.34	556.30	555.77	73.00	0.0073	15	5.52	3.14	2.56	0.48	0.00	0.10	0.32	0.013	0.17	0.00	0.05	0.00	0.05	557.55	557.19	557.02	557.60	564.50	6.90	3.35	Grate Inlet
3.34	3.34	3.12	555.57	555.04	73.00	0.0073	15	5.52	4.10	3.34	0.00	0.00	0.17	0.71	0.013	0.29	0.13	0.00	0.00	0.13	556.82	556.58	556.29	556.95	564.50	7.55	3.34	Grate Inlet
3.12	3.12		554.84																		HGL Structure #3.12 =				556.13		3.12	Grate Inlet
4.2	4.2	4.1	540.00	536.00	35.00	0.1143	12	12.08	0.16	0.20	0.00	0.00	0.00	0.00	0.013	0.00	0.00	0.00	0.00	0.00	541.00	537.00	537.00	541.00	541.00	0.00	4.2	Flared End Section
4.1	4.1		536.00																		Top of Pipe =				537.00		4.1	Flared End Section
5.2	5.2	5.1	535.85	535.53	32.00	0.0100	15	6.48	0.25	0.20	0.50	0.00	0.00	0.00	0.013	0.00	0.00	0.00	0.00	0.00	537.10	536.79	536.79	537.10	540.91	3.81	5.2	Area Inlet
5.1	5.1	EX	535.53	522.47	199.15	0.0656	15	16.59	0.87	0.71	0.44	0.00	0.01	0.01	0.013	0.04	0.01	0.00	0.00	0.01	536.78	524.01	523.97	536.79	539.20	2.41	5.1	Existing Area Inlet
EX	EX		522.47																		Top of Pipe =				523.97		EX	Existing Manhole
<p><b>MEAN FULL FLOW VELOCIV = <math>Q_{ACT}/A_{PIPE}</math></b>  <b>FRICION LOSS (<math>H_f</math>) : <math>H_f = 2.87 n^2 (LV^2/d^{1.33})</math></b>  <b>VELOCITY HEAD : <math>V_h = V^2/2g</math></b></p> <p><b>JUNCTION LOSSES (JUNC.) = <math>[Q_{out}V_{out} - \sum(Q_{in}V_{in})]x1.33/[Q_{out}]</math></b>  <b>BEND LOSSES (BEND) = <math>(V^h) * \text{ANGLE COEFFICIENT}</math></b>  <b>CURVE LOSS=<math>V_h * \text{CURVE COEFFICIENT}</math></b></p>																												
<p><b>Note(s):</b></p>																												
<p><b>Note:</b> 1. IF MORE THAN ONE INCOMING LINE, CALC. EACH BEND LOSS AND ADD TOGETHER.  2. NO STRUCTURE LOSSES TO BE CALCULATED AT A DROP  3. IF <math>Q_{V_{h(in)}} &gt; Q_{V_{h(out)}}</math>, NO JUNCTION LOSSES TO BE CALCULATED.</p>																												



3.2	3.2	3.1a	530.50	527.25	35.00	0.0929	24	69.12	36.65	11.67	0.00	0.00	2.11	77.47	0.013	0.92	1.74	0.00	0.00	1.74	532.50	533.85	532.93	535.60	546.00	10.40	3.2	Double Curb Inlet	
3.1a	3.1a	3.1	525.25	525.00	28.00	0.0089	30	38.86	36.65	7.47	0.00	0.00	0.87	31.73	0.013	0.22	0.00	0.00	0.00	0.00	527.75	532.93	532.71	532.93	535.00	2.07	3.1a	Manhole	
3.1	3.1		514.00																		100-yr W.S. Elev.=					532.71		3.1	Flared End Section
3.27	3.27	3.26	543.91	542.45	73.00	0.0200	12	5.05	1.69	2.15	0.00	0.00	0.07	0.12	0.013	0.16	0.00	0.00	0.00	0.00	544.91	543.67	543.51	544.91	548.80	3.89	3.27	Grate Inlet	
3.26	3.26	3.25	542.25	540.99	73.00	0.0173	12	4.69	3.04	3.87	0.00	0.00	0.23	0.71	0.013	0.53	0.26	0.00	0.00	0.26	543.25	543.04	542.51	543.51	548.80	5.29	3.26	Grate Inlet	
3.25	3.25	3.24	540.79	539.53	73.00	0.0173	12	4.69	3.54	4.50	0.00	0.00	0.31	1.11	0.013	0.72	0.15	0.00	0.00	0.15	541.79	542.36	541.64	542.51	548.80	6.29	3.25	Grate Inlet	
3.24	3.24	3.5	539.33	538.09	72.00	0.0172	12	4.69	4.70	5.98	0.11	0.00	0.56	2.61	0.013	1.25	0.42	0.06	0.00	0.48	540.33	541.15	539.90	541.64	548.80	7.16	3.24	Grate Inlet	
3.5	3.5		537.09																		HGL Structure #3.5 =					539.90		3.5	Grate Inlet
3.23	3.23	3.22	543.20	542.47	73.00	0.0100	12	3.57	1.40	1.79	0.00	0.00	0.05	0.07	0.013	0.11	0.00	0.00	0.00	0.00	544.20	545.35	545.24	545.35	547.70	2.35	3.23	Grate Inlet	
3.22	3.22	3.21	542.27	541.54	73.00	0.0100	12	3.57	1.90	2.42	0.00	0.00	0.09	0.17	0.013	0.21	0.07	0.00	0.00	0.07	543.27	545.17	544.96	545.24	547.70	2.46	3.22	Grate Inlet	
3.21	3.21	3.20	541.34	540.84	50.00	0.0100	12	3.57	3.20	4.07	0.35	0.00	0.26	0.82	0.013	0.40	0.27	0.09	0.00	0.36	542.34	544.60	544.19	544.96	547.70	2.74	3.21	Grate Inlet	
3.20	3.20	3.19	540.64	539.91	73.00	0.0100	12	3.57	3.66	4.66	0.55	0.00	0.34	1.23	0.013	0.77	0.15	0.19	0.00	0.33	541.64	543.86	543.09	544.19	547.70	3.51	3.20	Grate Inlet	
3.19	3.19	3.18	539.71	538.73	98.00	0.0100	12	3.57	4.17	5.31	0.24	0.00	0.44	1.83	0.013	1.34	0.19	0.11	0.00	0.29	540.71	542.80	541.46	543.09	547.70	4.61	3.19	Grate Inlet	
3.18	3.18	3.17	538.53	537.88	65.00	0.0100	15	6.48	5.60	4.57	0.60	0.00	0.32	1.81	0.013	0.49	0.00	0.19	0.00	0.19	539.78	541.26	540.77	541.46	546.40	4.94	3.18	Grate Inlet	
3.17	3.17	3.16	537.68	537.08	60.00	0.0100	15	6.48	6.02	4.91	0.11	0.00	0.37	2.25	0.013	0.52	0.10	0.04	0.00	0.14	538.93	540.64	540.12	540.77	547.00	6.23	3.17	Grate Inlet	
3.16	3.16	3.15	536.88	536.10	78.00	0.0100	15	6.48	7.38	6.02	0.00	0.00	0.56	4.15	0.013	1.02	0.34	0.00	0.00	0.34	538.13	539.77	538.76	540.12	547.00	6.88	3.16	Grate Inlet	
3.15	3.15	3.14	535.90	535.30	60.00	0.0100	15	6.48	7.90	6.44	0.00	0.00	0.64	5.08	0.013	0.90	0.16	0.00	0.00	0.16	537.15	538.60	537.70	538.76	547.00	8.24	3.15	Grate Inlet	
3.14	3.14	3.2	535.10	533.50	81.00	0.0198	15	9.10	9.07	7.39	0.15	0.00	0.85	7.70	0.013	1.60	0.38	0.13	0.00	0.51	536.35	537.19	535.60	537.70	547.00	9.30	3.14	Grate Inlet	
3.2	3.2		530.50																		HGL Structure #3.2 =					535.60		3.2	Double Curb Inlet
3.16a	3.16a	3.16	540.00	537.38	45.00	0.0582	12	8.62	0.85	1.08	0.00	0.00	0.02	0.02	0.013	0.03	0.00	0.00	0.00	0.00	541.00	540.14	540.12	541.00	548.00	7.00	3.16a	Manhole	
3.16	3.16		536.88																		HGL Structure #3.16 =					540.12		3.16	Grate Inlet
3.29	3.29	3.28	542.70	541.00	44.00	0.0386	12	7.02	0.76	0.96	0.00	0.00	0.01	0.01	0.013	0.02	0.00	0.00	0.00	0.00	543.70	542.02	542.00	543.70	547.11	3.41	3.29	Area Inlet	
3.28	3.28	3.5	540.80	538.09	66.00	0.0411	12	7.24	1.51	1.93	0.60	0.00	0.06	0.09	0.013	0.12	0.07	0.03	0.00	0.10	541.80	540.02	539.90	541.90	547.11	5.21	3.28	Area Inlet	
3.5	3.5		537.09																		HGL Structure #3.5 =					539.90		3.5	Grate Inlet
3.30	3.30	3.8	542.00	541.75	26.00	0.0096	12	3.50	0.82	1.05	0.00	0.00	0.02	0.01	0.013	0.01	0.00	0.00	0.00	0.00	543.00	545.40	545.39	545.40	547.11	1.71	3.30	Area Inlet	
3.8	3.8		541.55																		HGL Structure #3.8 =					545.39		3.8	Grate Inlet
3.33	3.33	3.32	553.90	553.60	50.00	0.0060	12	2.77	2.38	3.03	0.00	0.00	0.14	0.34	0.013	0.22	0.00	0.00	0.00	0.00	554.90	554.96	554.73	554.96	558.90	3.94	3.33	Grate Inlet	
3.32	3.32	3.31	553.40	552.90	48.00	0.0104	12	3.65	3.56	4.54	0.11	0.00	0.32	1.14	0.013	0.48	0.30	0.04	0.00	0.33	554.40	554.38	553.90	554.73	558.90	4.17	3.32	Grate Inlet	
3.31	3.31	3.9	550.50	546.50	49.00	0.0816	12	10.21	3.66	4.66	0.08	0.00	0.34	1.23	0.013	0.52	0.00	0.03	0.00	0.03	551.50	552.44	551.93	552.47	557.80	5.33	3.31	Grate Inlet	
3.9	3.9		545.30																		HGL Structure #3.9 =					551.93		3.9	Double Area Inlet
3.36	3.36	3.35	557.00	556.50	70.00	0.0071	12	3.02	3.70	4.71	0.00	0.00	0.34	1.27	0.013	0.75	0.00	0.00	0.00	0.00	558.00	561.46	560.71	561.46	563.91	2.45	3.36	Area Inlet	
3.35	3.35	3.34	556.30	555.77	73.00	0.0073	15	5.52	4.24	3.45	0.48	0.00	0.19	0.79	0.013	0.31	0.00	0.09	0.00	0.09	557.55	560.62	560.30	560.71	564.50	3.79	3.35	Grate Inlet	
3.34	3.34	3.12	555.57	555.04	73.00	0.0073	15	5.52	5.54	4.51	0.00	0.00	0.32	1.75	0.013	0.54	0.23	0.00	0.00	0.23	556.82	560.07	559.54	560.30	564.50	4.20	3.34	Grate Inlet	
3.12	3.12		554.84																		HGL Structure #3.12 =					559.54		3.12	Grate Inlet
4.2	4.2	4.1	540.00	536.00	35.00	0.1143	12	12.08	0.22	0.28	0.00	0.00	0.00	0.00	0.013	0.00	0.00	0.00	0.00	0.00	541.00	537.00	537.00	541.00	541.00	0.00	4.2	Flared End Section	
4.1	4.1		536.00																		Top of Pipe =					537.00		4.1	Flared End Section
5.2	5.2	5.1	535.85	535.53	32.00	0.0100	15	6.48	0.34	0.28	0.50	0.00	0.00	0.00	0.013	0.00	0.00	0.00	0.00	0.00	537.10	536.81	536.80	537.10	540.91	3.81	5.2	Area Inlet	
5.1	5.1	EX	535.53	522.47	199.15	0.0656	15	16.59	1.17	0.96	0.44	0.00	0.01	0.02	0.013	0.07	0.02	0.01	0.00	0.02	536.78	524.04	523.97	536.80	539.20	2.40	5.1	Existing Area Inlet	
EX	EX		522.47																		Top of Pipe =					523.97		EX	Existing Manhole
<p><b>MEAN FULL FLOW VELOCIV = <math>Q_{ACT}/A_{PIPE}</math></b>  <b>FRICION LOSS (<math>H_f</math>) :</b> <math>H_f = 2.87 n^2 (LV^2/d^{1.33})</math>  <b>VELOCITY HEAD :</b> <math>V_h = V^2/2g</math></p> <p><b>JUNCTION LOSSES (JUNC.) = <math>[Q_{out}V_{out} - \text{Sum}(Q_{in}V_{in})] \times 1.33/[Q_{out}]</math></b>  <b>BEND LOSSES (BEND) = <math>(V^h) \times \text{ANGLE COEFFICIENT}</math></b>  <b>CURVE LOSS = <math>V_h \times \text{CURVE COEFFICIENT}</math></b></p> <p><b>Note(s):</b></p>																													
<p><b>Note:</b> 1. IF MORE THAN ONE INCOMING LINE, CALC. EACH BEND LOSS AND ADD TOGETHER.  2. NO STRUCTURE LOSSES TO BE CALCULATED AT A DROP  3. IF <math>Q_{V_{h(in)}} &gt; Q_{V_{h(out)}}</math>, NO JUNCTION LOSSES TO BE CALCULATED.</p>																													

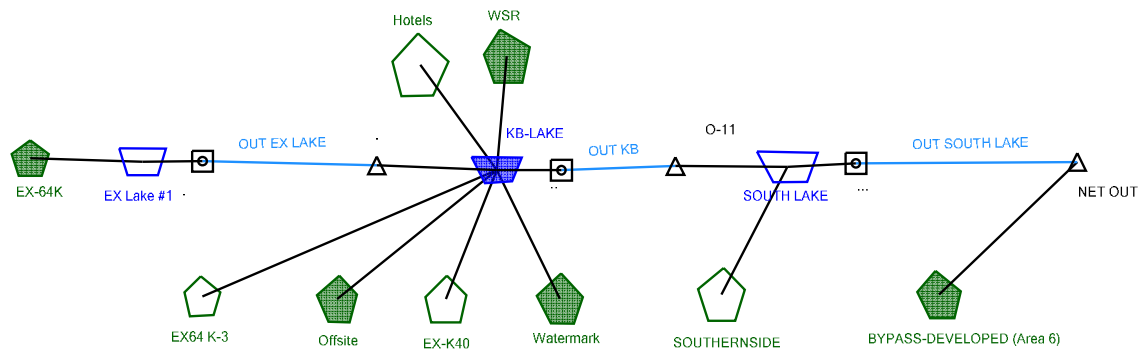
**V. Runoff Calculations – Post-Developed Conditions**

\* Network Schematic

\* Pondpack Reports – 2, 15, 25 and 100 year storms

\* **Pondpack Report – 100 year storm – Low Flow Blocked**

# Scenario: 2 yr



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Project Summary

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Title	WatermarkReside ntial O'Fallon
Engineer	J.M.B.
Company	
Date	2/10/2020

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Notes

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Subsection: Master Network Summary

**Catchments Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)
EX-64K	2 yr	2	1.281	744.000	8.80
EX-64K	15 yr	15	2.938	738.000	22.78
EX-64K	25 yr	25	3.487	738.000	27.46
EX-64K	100 yr	100	5.248	738.000	42.35
EX64 K-3	2 yr	2	0.496	741.000	3.39
EX64 K-3	15 yr	15	1.219	735.000	9.94
EX64 K-3	25 yr	25	1.464	735.000	12.21
EX64 K-3	100 yr	100	2.260	735.000	19.56
Offsite	2 yr	2	5.625	777.000	23.08
Offsite	15 yr	15	11.019	777.000	46.92
Offsite	25 yr	25	12.715	777.000	54.34
Offsite	100 yr	100	17.989	777.000	77.20
EX-K40	2 yr	2	0.829	738.000	6.75
EX-K40	15 yr	15	1.779	735.000	15.58
EX-K40	25 yr	25	2.087	735.000	18.43
EX-K40	100 yr	100	3.063	735.000	27.37
Watermark	2 yr	2	3.808	720.000	56.57
Watermark	15 yr	15	6.360	720.000	92.54
Watermark	25 yr	25	7.124	720.000	103.07
Watermark	100 yr	100	9.435	720.000	134.48
SOUTHERNSIDE	2 yr	2	1.585	735.000	15.03
SOUTHERNSIDE	15 yr	15	2.949	732.000	28.12
SOUTHERNSIDE	25 yr	25	3.371	732.000	32.13
SOUTHERNSIDE	100 yr	100	4.670	732.000	44.31
BYPASS-DEVELOPED (Area 6)	2 yr	2	0.217	729.000	2.33
BYPASS-DEVELOPED (Area 6)	15 yr	15	0.481	729.000	5.55
BYPASS-DEVELOPED (Area 6)	25 yr	25	0.567	729.000	6.58
BYPASS-DEVELOPED (Area 6)	100 yr	100	0.842	726.000	9.90
Hotels	2 yr	2	1.629	720.000	26.58
Hotels	15 yr	15	3.319	720.000	54.91
Hotels	25 yr	25	3.858	720.000	63.73
Hotels	100 yr	100	5.545	720.000	90.90
WSR	2 yr	2	0.124	717.000	1.93
WSR	15 yr	15	0.188	717.000	2.89
WSR	25 yr	25	0.207	717.000	3.17
WSR	100 yr	100	0.264	717.000	4.01

**Node Summary**

Subsection: Master Network Summary

**Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)
NET OUT	2 yr	2	11.243	855.000	22.16
NET OUT	15 yr	15	25.188	822.000	55.55
NET OUT	25 yr	25	29.614	816.000	66.02
NET OUT	100 yr	100	43.386	777.000	120.63

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
EX Lake #1 (IN)	2 yr	2	1.281	744.000	8.80	(N/A)	(N/A)
EX Lake #1 (OUT)	2 yr	2	1.264	792.000	2.92	551.51	0.367
EX Lake #1 (IN)	15 yr	15	2.938	738.000	22.78	(N/A)	(N/A)
EX Lake #1 (OUT)	15 yr	15	2.880	798.000	5.35	552.02	1.147
EX Lake #1 (IN)	25 yr	25	3.487	738.000	27.46	(N/A)	(N/A)
EX Lake #1 (OUT)	25 yr	25	3.415	801.000	5.93	552.15	1.429
EX Lake #1 (IN)	100 yr	100	5.248	738.000	42.35	(N/A)	(N/A)
EX Lake #1 (OUT)	100 yr	100	5.077	810.000	7.38	552.60	2.389
KB-LAKE (IN)	2 yr	2	13.776	720.000	93.07	(N/A)	(N/A)
KB-LAKE (OUT)	2 yr	2	10.278	840.000	20.92	529.08	5.934
KB-LAKE (IN)	15 yr	15	26.766	720.000	173.87	(N/A)	(N/A)
KB-LAKE (OUT)	15 yr	15	22.725	816.000	52.48	531.12	9.579
KB-LAKE (IN)	25 yr	25	30.871	720.000	198.88	(N/A)	(N/A)
KB-LAKE (OUT)	25 yr	25	26.674	813.000	62.22	531.66	10.619
KB-LAKE (IN)	100 yr	100	43.633	720.000	275.25	(N/A)	(N/A)
KB-LAKE (OUT)	100 yr	100	38.954	783.000	110.62	532.71	12.749
SOUTH LAKE (IN)	2 yr	2	11.863	837.000	22.32	(N/A)	(N/A)



Subsection: Master Network Summary

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
SOUTH LAKE (OUT)	2 yr	2	11.026	855.000	21.96	522.92	1.297
SOUTH LAKE (IN)	15 yr	15	25.674	810.000	55.58	(N/A)	(N/A)
SOUTH LAKE (OUT)	15 yr	15	24.707	822.000	55.07	523.74	1.915
SOUTH LAKE (IN)	25 yr	25	30.046	807.000	65.86	(N/A)	(N/A)
SOUTH LAKE (OUT)	25 yr	25	29.047	816.000	65.43	523.97	2.094
SOUTH LAKE (IN)	100 yr	100	43.624	777.000	119.30	(N/A)	(N/A)
SOUTH LAKE (OUT)	100 yr	100	42.543	777.000	119.29	524.57	2.584

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Time-Depth Curve: 100	
Label	100
Start Time	0.000 min
Increment	6.000 min
End Time	1,440.000 min
Return Event	100 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.1	0.1	0.1
60.000	0.1	0.1	0.1	0.1	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.2	0.2	0.2	0.2	0.2
150.000	0.2	0.2	0.2	0.2	0.2
180.000	0.2	0.3	0.3	0.3	0.3
210.000	0.3	0.3	0.3	0.3	0.3
240.000	0.3	0.4	0.4	0.4	0.4
270.000	0.4	0.4	0.4	0.4	0.4
300.000	0.5	0.5	0.5	0.5	0.5
330.000	0.5	0.5	0.5	0.6	0.6
360.000	0.6	0.6	0.6	0.6	0.6
390.000	0.6	0.7	0.7	0.7	0.7
420.000	0.7	0.7	0.7	0.8	0.8
450.000	0.8	0.8	0.8	0.8	0.8
480.000	0.9	0.9	0.9	0.9	0.9
510.000	1.0	1.0	1.0	1.0	1.0
540.000	1.1	1.1	1.1	1.1	1.2
570.000	1.2	1.2	1.2	1.2	1.3
600.000	1.3	1.3	1.4	1.4	1.4
630.000	1.5	1.5	1.5	1.6	1.6
660.000	1.7	1.7	1.8	1.9	2.0
690.000	2.0	2.2	2.6	3.1	4.1
720.000	4.8	4.9	5.0	5.1	5.2
750.000	5.3	5.4	5.4	5.5	5.5
780.000	5.6	5.6	5.6	5.7	5.7
810.000	5.8	5.8	5.8	5.8	5.9
840.000	5.9	5.9	6.0	6.0	6.0
870.000	6.0	6.1	6.1	6.1	6.1
900.000	6.1	6.2	6.2	6.2	6.2
930.000	6.2	6.3	6.3	6.3	6.3
960.000	6.3	6.4	6.4	6.4	6.4
990.000	6.4	6.4	6.4	6.5	6.5
1,020.000	6.5	6.5	6.5	6.5	6.6

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	6.6	6.6	6.6	6.6	6.6
1,080.000	6.6	6.6	6.7	6.7	6.7
1,110.000	6.7	6.7	6.7	6.7	6.7
1,140.000	6.8	6.8	6.8	6.8	6.8
1,170.000	6.8	6.8	6.8	6.8	6.8
1,200.000	6.9	6.9	6.9	6.9	6.9
1,230.000	6.9	6.9	6.9	6.9	6.9
1,260.000	6.9	7.0	7.0	7.0	7.0
1,290.000	7.0	7.0	7.0	7.0	7.0
1,320.000	7.0	7.0	7.1	7.1	7.1
1,350.000	7.1	7.1	7.1	7.1	7.1
1,380.000	7.1	7.1	7.1	7.1	7.2
1,410.000	7.2	7.2	7.2	7.2	7.2
1,440.000	7.2	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Time-Depth Curve: 15	
Label	15
Start Time	0.000 min
Increment	6.000 min
End Time	1,440.000 min
Return Event	15 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.0	0.0	0.0
60.000	0.1	0.1	0.1	0.1	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.1	0.1	0.1	0.1	0.1
150.000	0.1	0.2	0.2	0.2	0.2
180.000	0.2	0.2	0.2	0.2	0.2
210.000	0.2	0.2	0.2	0.2	0.2
240.000	0.2	0.3	0.3	0.3	0.3
270.000	0.3	0.3	0.3	0.3	0.3
300.000	0.3	0.3	0.3	0.4	0.4
330.000	0.4	0.4	0.4	0.4	0.4
360.000	0.4	0.4	0.4	0.4	0.5
390.000	0.5	0.5	0.5	0.5	0.5
420.000	0.5	0.5	0.5	0.5	0.6
450.000	0.6	0.6	0.6	0.6	0.6
480.000	0.6	0.6	0.6	0.7	0.7
510.000	0.7	0.7	0.7	0.7	0.7
540.000	0.8	0.8	0.8	0.8	0.8
570.000	0.8	0.9	0.9	0.9	0.9
600.000	0.9	1.0	1.0	1.0	1.0
630.000	1.1	1.1	1.1	1.2	1.2
660.000	1.2	1.3	1.3	1.4	1.4
690.000	1.5	1.6	1.8	2.2	3.0
720.000	3.4	3.5	3.6	3.7	3.8
750.000	3.8	3.9	3.9	3.9	4.0
780.000	4.0	4.0	4.1	4.1	4.1
810.000	4.2	4.2	4.2	4.2	4.2
840.000	4.3	4.3	4.3	4.3	4.3
870.000	4.4	4.4	4.4	4.4	4.4
900.000	4.4	4.5	4.5	4.5	4.5
930.000	4.5	4.5	4.5	4.6	4.6
960.000	4.6	4.6	4.6	4.6	4.6
990.000	4.6	4.6	4.7	4.7	4.7
1,020.000	4.7	4.7	4.7	4.7	4.7

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	4.7	4.8	4.8	4.8	4.8
1,080.000	4.8	4.8	4.8	4.8	4.8
1,110.000	4.8	4.8	4.9	4.9	4.9
1,140.000	4.9	4.9	4.9	4.9	4.9
1,170.000	4.9	4.9	4.9	4.9	4.9
1,200.000	5.0	5.0	5.0	5.0	5.0
1,230.000	5.0	5.0	5.0	5.0	5.0
1,260.000	5.0	5.0	5.0	5.0	5.0
1,290.000	5.0	5.1	5.1	5.1	5.1
1,320.000	5.1	5.1	5.1	5.1	5.1
1,350.000	5.1	5.1	5.1	5.1	5.1
1,380.000	5.1	5.1	5.2	5.2	5.2
1,410.000	5.2	5.2	5.2	5.2	5.2
1,440.000	5.2	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Time-Depth Curve: 2	
Label	2
Start Time	0.000 min
Increment	6.000 min
End Time	1,440.000 min
Return Event	2 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.0	0.0	0.0
60.000	0.0	0.0	0.0	0.0	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.1	0.1	0.1	0.1	0.1
150.000	0.1	0.1	0.1	0.1	0.1
180.000	0.1	0.1	0.1	0.1	0.1
210.000	0.1	0.1	0.2	0.2	0.2
240.000	0.2	0.2	0.2	0.2	0.2
270.000	0.2	0.2	0.2	0.2	0.2
300.000	0.2	0.2	0.2	0.2	0.2
330.000	0.2	0.3	0.3	0.3	0.3
360.000	0.3	0.3	0.3	0.3	0.3
390.000	0.3	0.3	0.3	0.3	0.3
420.000	0.3	0.4	0.4	0.4	0.4
450.000	0.4	0.4	0.4	0.4	0.4
480.000	0.4	0.4	0.4	0.4	0.5
510.000	0.5	0.5	0.5	0.5	0.5
540.000	0.5	0.5	0.5	0.5	0.6
570.000	0.6	0.6	0.6	0.6	0.6
600.000	0.6	0.6	0.7	0.7	0.7
630.000	0.7	0.7	0.8	0.8	0.8
660.000	0.8	0.8	0.9	0.9	1.0
690.000	1.0	1.1	1.2	1.5	2.0
720.000	2.3	2.4	2.4	2.5	2.5
750.000	2.6	2.6	2.6	2.7	2.7
780.000	2.7	2.7	2.7	2.8	2.8
810.000	2.8	2.8	2.8	2.8	2.9
840.000	2.9	2.9	2.9	2.9	2.9
870.000	2.9	2.9	3.0	3.0	3.0
900.000	3.0	3.0	3.0	3.0	3.0
930.000	3.0	3.0	3.1	3.1	3.1
960.000	3.1	3.1	3.1	3.1	3.1
990.000	3.1	3.1	3.1	3.1	3.1
1,020.000	3.2	3.2	3.2	3.2	3.2

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	3.2	3.2	3.2	3.2	3.2
1,080.000	3.2	3.2	3.2	3.2	3.2
1,110.000	3.3	3.3	3.3	3.3	3.3
1,140.000	3.3	3.3	3.3	3.3	3.3
1,170.000	3.3	3.3	3.3	3.3	3.3
1,200.000	3.3	3.3	3.3	3.3	3.4
1,230.000	3.4	3.4	3.4	3.4	3.4
1,260.000	3.4	3.4	3.4	3.4	3.4
1,290.000	3.4	3.4	3.4	3.4	3.4
1,320.000	3.4	3.4	3.4	3.4	3.4
1,350.000	3.4	3.4	3.4	3.5	3.5
1,380.000	3.5	3.5	3.5	3.5	3.5
1,410.000	3.5	3.5	3.5	3.5	3.5
1,440.000	3.5	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Time-Depth Curve: 25	
Label	25
Start Time	0.000 min
Increment	6.000 min
End Time	1,440.000 min
Return Event	25 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.0	0.0	0.1
60.000	0.1	0.1	0.1	0.1	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.1	0.1	0.1	0.1	0.2
150.000	0.2	0.2	0.2	0.2	0.2
180.000	0.2	0.2	0.2	0.2	0.2
210.000	0.2	0.2	0.2	0.3	0.3
240.000	0.3	0.3	0.3	0.3	0.3
270.000	0.3	0.3	0.3	0.3	0.4
300.000	0.4	0.4	0.4	0.4	0.4
330.000	0.4	0.4	0.4	0.4	0.4
360.000	0.5	0.5	0.5	0.5	0.5
390.000	0.5	0.5	0.5	0.5	0.6
420.000	0.6	0.6	0.6	0.6	0.6
450.000	0.6	0.6	0.6	0.7	0.7
480.000	0.7	0.7	0.7	0.7	0.7
510.000	0.8	0.8	0.8	0.8	0.8
540.000	0.8	0.9	0.9	0.9	0.9
570.000	0.9	0.9	1.0	1.0	1.0
600.000	1.0	1.1	1.1	1.1	1.1
630.000	1.2	1.2	1.2	1.3	1.3
660.000	1.3	1.4	1.4	1.5	1.5
690.000	1.6	1.7	2.0	2.5	3.2
720.000	3.8	3.9	4.0	4.1	4.1
750.000	4.2	4.2	4.3	4.3	4.4
780.000	4.4	4.4	4.5	4.5	4.5
810.000	4.6	4.6	4.6	4.6	4.7
840.000	4.7	4.7	4.7	4.7	4.8
870.000	4.8	4.8	4.8	4.8	4.8
900.000	4.9	4.9	4.9	4.9	4.9
930.000	4.9	5.0	5.0	5.0	5.0
960.000	5.0	5.0	5.0	5.1	5.1
990.000	5.1	5.1	5.1	5.1	5.1
1,020.000	5.1	5.2	5.2	5.2	5.2



Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	5.2	5.2	5.2	5.2	5.2
1,080.000	5.2	5.3	5.3	5.3	5.3
1,110.000	5.3	5.3	5.3	5.3	5.3
1,140.000	5.3	5.4	5.4	5.4	5.4
1,170.000	5.4	5.4	5.4	5.4	5.4
1,200.000	5.4	5.4	5.4	5.4	5.5
1,230.000	5.5	5.5	5.5	5.5	5.5
1,260.000	5.5	5.5	5.5	5.5	5.5
1,290.000	5.5	5.5	5.5	5.6	5.6
1,320.000	5.6	5.6	5.6	5.6	5.6
1,350.000	5.6	5.6	5.6	5.6	5.6
1,380.000	5.6	5.6	5.6	5.7	5.7
1,410.000	5.7	5.7	5.7	5.7	5.7
1,440.000	5.7	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Runoff CN-Area  
 Label: EX-64K  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil C	74.000	359,370.00	0.0	0.0	74.000
Pasture, grassland, or range - good - Soil B	61.000	440,391.60	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	799,761.60	(N/A)	(N/A)	66.842

Subsection: Runoff CN-Area  
 Label: EX-64K  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil C	74.000	359,370.00	0.0	0.0	74.000
Pasture, grassland, or range - good - Soil B	61.000	440,391.60	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	799,761.60	(N/A)	(N/A)	66.842

Subsection: Runoff CN-Area  
 Label: EX-64K  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil C	74.000	359,370.00	0.0	0.0	74.000
Pasture, grassland, or range - good - Soil B	61.000	440,391.60	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	799,761.60	(N/A)	(N/A)	66.842

Subsection: Runoff CN-Area  
 Label: EX-64K  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (ft <sup>2</sup> )	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil C	74.000	359,370.00	0.0	0.0	74.000
Pasture, grassland, or range - good - Soil B	61.000	440,391.60	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	799,761.60	(N/A)	(N/A)	66.842

Subsection: Unit Hydrograph Equations

**Unit Hydrograph Method (Computational Notes)**

**Definition of Terms**

At	Total area (acres): $At = Ai + Ap$
Ai	Impervious area (acres)
Ap	Pervious area (acres)
CNi	Runoff curve number for impervious area
CNp	Runoff curve number for pervious area
fLoss	f loss constant infiltration (depth/time)
gKs	Saturated Hydraulic Conductivity (depth/time)
Md	Volumetric Moisture Deficit
Psi	Capillary Suction (length)
hK	Horton Infiltration Decay Rate ( $time^{-1}$ )
fo	Initial Infiltration Rate (depth/time)
fc	Ultimate(capacity)Infiltration Rate (depth/time)
Ia	Initial Abstraction (length)
dt	Computational increment (duration of unit excess rainfall) Default dt is smallest value of $0.1333Tc$ , $r_{tm}$ , and $t_h$ (Smallest dt is then adjusted to match up with $T_p$ )
UDdt	User specified override computational main time increment (only used if UDdt is $\Rightarrow .1333Tc$ )
D(t)	Point on distribution curve (fraction of P) for time step t
K	$2 / (1 + (Tr/Tp))$ : default $K = 0.75$ : (for $Tr/Tp = 1.67$ )
Ks	Hydrograph shape factor = Unit Conversions * $K = ((1hr/3600sec) * (1ft/12in) * ((5280ft)^2/sq.mi)) * K$ Default $K_s = 645.333 * 0.75 = 484$
Lag	Lag time from center of excess runoff (dt) to $T_p$ : $Lag = 0.6Tc$
P	Total precipitation depth, inches
Pa(t)	Accumulated rainfall at time step t
Pi(t)	Incremental rainfall at time step t
qp	Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi. = $(K_s * A * Q) / T_p$ (where $Q = 1in.$ runoff, $A=sq.mi.$ )
Qu(t)	Unit hydrograph ordinate (cfs) at time step t
Q(t)	Final hydrograph ordinate (cfs) at time step t
Rai(t)	Accumulated runoff (inches) at time step t for impervious area
Rap(t)	Accumulated runoff (inches) at time step t for pervious area
Rii(t)	Incremental runoff (inches) at time step t for impervious area
Rip(t)	Incremental runoff (inches) at time step t for pervious area
R(t)	Incremental weighted total runoff (inches)
Rtm	Time increment for rainfall table
Si	S for impervious area: $S_i = (1000/CNi) - 10$
Sp	S for pervious area: $S_p = (1000/CNp) - 10$
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: $T_b = T_p + Tr$
Tp	Time (hrs) to peak of a unit hydrograph: $T_p = (dt/2) + Lag$
Tr	Time (hrs) of receding limb of unit hydrograph: $Tr = ratio\ of\ T_p$

## Subsection: Unit Hydrograph Equations

### Unit Hydrograph Method

#### Computational Notes

##### Precipitation

Column (1)	Time for time step t
Column (2)	$D(t)$ = Point on distribution curve for time step t
Column (3)	$P_i(t) = P_a(t) - P_a(t-1)$ : Col.(4) - Preceding Col.(4)
Column (4)	$P_a(t) = D(t) \times P$ : Col.(2) x P

##### Pervious Area Runoff (using SCS Runoff CN Method)

Column (5)	$Rap(t)$ = Accumulated pervious runoff for time step t If $(P_a(t))$ is $\leq 0.2Sp$ then use: $Rap(t) = 0.0$ If $(P_a(t))$ is $> 0.2Sp$ then use: $Rap(t) = (Col.(4) - 0.2Sp) \times 2 / (Col.(4) + 0.8Sp)$
Column (6)	$Rip(t)$ = Incremental pervious runoff for time step t $Rip(t) = Rap(t) - Rap(t-1)$ $Rip(t) = Col.(5)$ for current row - $Col.(5)$ for preceding row.

##### Impervious Area Runoff

Column (7 & 8)...	Did not specify to use impervious areas.
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##### Incremental Weighted Runoff

Column (9)	$R(t) = (A_p/At) \times Rip(t) + (A_i/At) \times Rii(t)$ $R(t) = (A_p/At) \times Col.(6) + (A_i/At) \times Col.(8)$
------------	--

##### SCS Unit Hydrograph Method

Column (10)	$Q(t)$ is computed with the SCS unit hydrograph method using $R(t)$ and $Qu(t)$ .
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Subsection: Unit Hydrograph Summary  
 Label: BYPASS-DEVELOPED (Area 6)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	23.472 min
Area (User Defined)	120,661.20 ft <sup>2</sup>
Computational Time Increment	3.130 min
Time to Peak (Computed)	729.197 min
Flow (Peak, Computed)	2.34 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	729.000 min
Flow (Peak Interpolated Output)	2.33 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	68.884
Area (User Defined)	120,661.20 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	0.9 in
Runoff Volume (Pervious)	0.219 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.217 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	23.472 min
Computational Time Increment	3.130 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.02 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: BYPASS-DEVELOPED (Area 6)  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	15.648 min
Unit receding limb, $T_r$	62.592 min
Total unit time, $T_b$	78.240 min

---

Subsection: Unit Hydrograph Summary  
 Label: BYPASS-DEVELOPED (Area 6)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	23.472 min
Area (User Defined)	120,661.20 ft <sup>2</sup>
Computational Time Increment	3.130 min
Time to Peak (Computed)	729.197 min
Flow (Peak, Computed)	5.55 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	729.000 min
Flow (Peak Interpolated Output)	5.55 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	68.884
Area (User Defined)	120,661.20 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	2.1 in
Runoff Volume (Pervious)	0.484 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.481 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	23.472 min
Computational Time Increment	3.130 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.02 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: BYPASS-DEVELOPED (Area 6)  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	15.648 min
Unit receding limb, $T_r$	62.592 min
Total unit time, $T_b$	78.240 min

---

Subsection: Unit Hydrograph Summary  
 Label: BYPASS-DEVELOPED (Area 6)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	23.472 min
Area (User Defined)	120,661.20 ft <sup>2</sup>
Computational Time Increment	3.130 min
Time to Peak (Computed)	729.197 min
Flow (Peak, Computed)	6.58 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	729.000 min
Flow (Peak Interpolated Output)	6.58 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	68.884
Area (User Defined)	120,661.20 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	2.5 in
Runoff Volume (Pervious)	0.570 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.567 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	23.472 min
Computational Time Increment	3.130 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.02 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: BYPASS-DEVELOPED (Area 6)  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	15.648 min
Unit receding limb, $T_r$	62.592 min
Total unit time, $T_b$	78.240 min

---

Subsection: Unit Hydrograph Summary  
 Label: BYPASS-DEVELOPED (Area 6)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	23.472 min
Area (User Defined)	120,661.20 ft <sup>2</sup>
Computational Time Increment	3.130 min
Time to Peak (Computed)	726.067 min
Flow (Peak, Computed)	9.92 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	726.000 min
Flow (Peak Interpolated Output)	9.90 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	68.884
Area (User Defined)	120,661.20 ft <sup>2</sup>
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.7 in
Runoff Volume (Pervious)	0.846 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.842 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	23.472 min
Computational Time Increment	3.130 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.02 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: BYPASS-DEVELOPED (Area 6)  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	15.648 min
Unit receding limb, $T_r$	62.592 min
Total unit time, $T_b$	78.240 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX64 K-3  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	38.022 min
Area (User Defined)	383,328.00 ft <sup>2</sup>
Computational Time Increment	5.070 min
Time to Peak (Computed)	740.162 min
Flow (Peak, Computed)	3.42 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	741.000 min
Flow (Peak Interpolated Output)	3.39 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	63.600
Area (User Defined)	383,328.00 ft <sup>2</sup>
Maximum Retention (Pervious)	5.7 in
Maximum Retention (Pervious, 20 percent)	1.1 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	0.7 in
Runoff Volume (Pervious)	0.504 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.496 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	38.022 min
Computational Time Increment	5.070 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.73 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: EX64 K-3  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	25.348 min
Unit receding limb, $T_r$	101.392 min
Total unit time, $T_b$	126.740 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX64 K-3  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	38.022 min
Area (User Defined)	383,328.00 ft <sup>2</sup>

Computational Time Increment	5.070 min
Time to Peak (Computed)	735.092 min
Flow (Peak, Computed)	9.96 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	9.94 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	63.600
Area (User Defined)	383,328.00 ft <sup>2</sup>
Maximum Retention (Pervious)	5.7 in
Maximum Retention (Pervious, 20 percent)	1.1 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.7 in
Runoff Volume (Pervious)	1.233 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.219 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	38.022 min
Computational Time Increment	5.070 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.73 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX64 K-3  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	25.348 min
Unit receding limb, $T_r$	101.392 min
Total unit time, $T_b$	126.740 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX64 K-3  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	38.022 min
Area (User Defined)	383,328.00 ft <sup>2</sup>
Computational Time Increment	5.070 min
Time to Peak (Computed)	735.092 min
Flow (Peak, Computed)	12.23 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	12.21 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	63.600
Area (User Defined)	383,328.00 ft <sup>2</sup>
Maximum Retention (Pervious)	5.7 in
Maximum Retention (Pervious, 20 percent)	1.1 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	2.0 in
Runoff Volume (Pervious)	1.481 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	1.464 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	38.022 min
Computational Time Increment	5.070 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.73 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX64 K-3  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	25.348 min
Unit receding limb, $T_r$	101.392 min
Total unit time, $T_b$	126.740 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX64 K-3  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	38.022 min
Area (User Defined)	383,328.00 ft <sup>2</sup>
Computational Time Increment	5.070 min
Time to Peak (Computed)	735.092 min
Flow (Peak, Computed)	19.59 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	19.56 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	63.600
Area (User Defined)	383,328.00 ft <sup>2</sup>
Maximum Retention (Pervious)	5.7 in
Maximum Retention (Pervious, 20 percent)	1.1 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.1 in
Runoff Volume (Pervious)	2.283 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	2.260 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	38.022 min
Computational Time Increment	5.070 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.73 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX64 K-3  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	25.348 min
Unit receding limb, $T_r$	101.392 min
Total unit time, $T_b$	126.740 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-64K  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	42.864 min
Area (User Defined)	799,761.60 ft <sup>2</sup>
Computational Time Increment	5.715 min
Time to Peak (Computed)	742.976 min
Flow (Peak, Computed)	8.89 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	744.000 min
Flow (Peak Interpolated Output)	8.80 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	67.000
Area (User Defined)	799,761.60 ft <sup>2</sup>
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	0.9 in
Runoff Volume (Pervious)	1.301 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	1.281 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	42.864 min
Computational Time Increment	5.715 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	29.12 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: EX-64K  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	28.576 min
Unit receding limb, $T_r$	114.304 min
Total unit time, $T_b$	142.880 min

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Subsection: Unit Hydrograph Summary  
 Label: EX-64K  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	42.864 min
Area (User Defined)	799,761.60 ft <sup>2</sup>
Computational Time Increment	5.715 min
Time to Peak (Computed)	737.261 min
Flow (Peak, Computed)	22.79 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	738.000 min
Flow (Peak Interpolated Output)	22.78 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	67.000
Area (User Defined)	799,761.60 ft <sup>2</sup>
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	1.9 in
Runoff Volume (Pervious)	2.974 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	2.938 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	42.864 min
Computational Time Increment	5.715 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	29.12 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-64K  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	28.576 min
Unit receding limb, $T_r$	114.304 min
Total unit time, $T_b$	142.880 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-64K  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	42.864 min
Area (User Defined)	799,761.60 ft <sup>2</sup>
Computational Time Increment	5.715 min
Time to Peak (Computed)	737.261 min
Flow (Peak, Computed)	27.49 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	738.000 min
Flow (Peak Interpolated Output)	27.46 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	67.000
Area (User Defined)	799,761.60 ft <sup>2</sup>
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	2.3 in
Runoff Volume (Pervious)	3.528 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	3.487 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	42.864 min
Computational Time Increment	5.715 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	29.12 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-64K  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	28.576 min
Unit receding limb, $T_r$	114.304 min
Total unit time, $T_b$	142.880 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-64K  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	42.864 min
Area (User Defined)	799,761.60 ft <sup>2</sup>
Computational Time Increment	5.715 min
Time to Peak (Computed)	737.261 min
Flow (Peak, Computed)	42.46 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	738.000 min
Flow (Peak Interpolated Output)	42.35 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	67.000
Area (User Defined)	799,761.60 ft <sup>2</sup>
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.5 in
Runoff Volume (Pervious)	5.305 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	5.248 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	42.864 min
Computational Time Increment	5.715 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	29.12 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-64K  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	28.576 min
Unit receding limb, $T_r$	114.304 min
Total unit time, $T_b$	142.880 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-K40  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	36.810 min
Area (User Defined)	417,740.40 ft <sup>2</sup>

Computational Time Increment	4.908 min
Time to Peak (Computed)	736.200 min
Flow (Peak, Computed)	6.83 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	738.000 min
Flow (Peak Interpolated Output)	6.75 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	70.747
Area (User Defined)	417,740.40 ft <sup>2</sup>
Maximum Retention (Pervious)	4.1 in
Maximum Retention (Pervious, 20 percent)	0.8 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.0 in
Runoff Volume (Pervious)	0.839 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.829 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	36.810 min
Computational Time Increment	4.908 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	17.71 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: EX-K40  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	24.540 min
Unit receding limb, $T_r$	98.160 min
Total unit time, $T_b$	122.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-K40  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	36.810 min
Area (User Defined)	417,740.40 ft <sup>2</sup>

Computational Time Increment	4.908 min
Time to Peak (Computed)	736.200 min
Flow (Peak, Computed)	15.75 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	15.58 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	70.747
Area (User Defined)	417,740.40 ft <sup>2</sup>
Maximum Retention (Pervious)	4.1 in
Maximum Retention (Pervious, 20 percent)	0.8 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.2 in
Runoff Volume (Pervious)	1.796 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.779 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	36.810 min
Computational Time Increment	4.908 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	17.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-K40  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	24.540 min
Unit receding limb, $T_r$	98.160 min
Total unit time, $T_b$	122.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-K40  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	36.810 min
Area (User Defined)	417,740.40 ft <sup>2</sup>

Computational Time Increment	4.908 min
Time to Peak (Computed)	736.200 min
Flow (Peak, Computed)	18.62 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	18.43 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	70.747
Area (User Defined)	417,740.40 ft <sup>2</sup>
Maximum Retention (Pervious)	4.1 in
Maximum Retention (Pervious, 20 percent)	0.8 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.6 in
Runoff Volume (Pervious)	2.107 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.087 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	36.810 min
Computational Time Increment	4.908 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	17.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-K40  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	24.540 min
Unit receding limb, $T_r$	98.160 min
Total unit time, $T_b$	122.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-K40  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	36.810 min
Area (User Defined)	417,740.40 ft <sup>2</sup>
Computational Time Increment	4.908 min
Time to Peak (Computed)	736.200 min
Flow (Peak, Computed)	27.59 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	27.37 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	70.747
Area (User Defined)	417,740.40 ft <sup>2</sup>
Maximum Retention (Pervious)	4.1 in
Maximum Retention (Pervious, 20 percent)	0.8 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.9 in
Runoff Volume (Pervious)	3.089 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	3.063 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	36.810 min
Computational Time Increment	4.908 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	17.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-K40  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	24.540 min
Unit receding limb, $T_r$	98.160 min
Total unit time, $T_b$	122.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: Hotels  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	9.600 min
Area (User Defined)	688,683.60 ft <sup>2</sup>

Computational Time Increment	1.280 min
Time to Peak (Computed)	720.640 min
Flow (Peak, Computed)	26.63 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	26.58 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	688,683.60 ft <sup>2</sup>
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.2 in
Runoff Volume (Pervious)	1.634 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.629 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	9.600 min
Computational Time Increment	1.280 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	111.96 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: Hotels  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	6.400 min
Unit receding limb, $T_r$	25.600 min
Total unit time, $T_b$	32.000 min

---

Subsection: Unit Hydrograph Summary  
 Label: Hotels  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	9.600 min
Area (User Defined)	688,683.60 ft <sup>2</sup>
Computational Time Increment	1.280 min
Time to Peak (Computed)	719.360 min
Flow (Peak, Computed)	55.19 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	54.91 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	74.000
Area (User Defined)	688,683.60 ft <sup>2</sup>
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	2.5 in
Runoff Volume (Pervious)	3.326 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	3.319 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	9.600 min
Computational Time Increment	1.280 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	111.96 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Hotels  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	6.400 min
Unit receding limb, $T_r$	25.600 min
Total unit time, $T_b$	32.000 min

---

Subsection: Unit Hydrograph Summary  
 Label: Hotels  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	9.600 min
Area (User Defined)	688,683.60 ft <sup>2</sup>
Computational Time Increment	1.280 min
Time to Peak (Computed)	719.360 min
Flow (Peak, Computed)	64.13 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	63.73 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	74.000
Area (User Defined)	688,683.60 ft <sup>2</sup>
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	2.9 in
Runoff Volume (Pervious)	3.866 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	3.858 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	9.600 min
Computational Time Increment	1.280 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	111.96 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Hotels  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	6.400 min
Unit receding limb, $T_r$	25.600 min
Total unit time, $T_b$	32.000 min

---

Subsection: Unit Hydrograph Summary  
 Label: Hotels  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	9.600 min
Area (User Defined)	688,683.60 ft <sup>2</sup>
Computational Time Increment	1.280 min
Time to Peak (Computed)	719.360 min
Flow (Peak, Computed)	91.70 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	90.90 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	74.000
Area (User Defined)	688,683.60 ft <sup>2</sup>
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	4.2 in
Runoff Volume (Pervious)	5.556 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	5.545 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	9.600 min
Computational Time Increment	1.280 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	111.96 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Hotels  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	6.400 min
Unit receding limb, $T_r$	25.600 min
Total unit time, $T_b$	32.000 min

---

Subsection: Unit Hydrograph Summary  
 Label: Offsite  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	105.954 min
Area (User Defined)	2,117,016.00 ft <sup>2</sup>

Computational Time Increment	14.127 min
Time to Peak (Computed)	776.996 min
Flow (Peak, Computed)	23.08 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	777.000 min
Flow (Peak Interpolated Output)	23.08 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	2,117,016.00 ft <sup>2</sup>
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.4 in
Runoff Volume (Pervious)	5.794 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.625 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	105.954 min
Computational Time Increment	14.127 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	31.18 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	70.636 min
Unit receding limb, $T_r$	282.544 min
Total unit time, $T_b$	353.180 min

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Subsection: Unit Hydrograph Summary  
 Label: Offsite  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	105.954 min
Area (User Defined)	2,117,016.00 ft <sup>2</sup>

Computational Time Increment	14.127 min
Time to Peak (Computed)	776.996 min
Flow (Peak, Computed)	46.92 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	777.000 min
Flow (Peak Interpolated Output)	46.92 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	2,117,016.00 ft <sup>2</sup>
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.8 in
Runoff Volume (Pervious)	11.304 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	11.019 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	105.954 min
Computational Time Increment	14.127 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	31.18 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	70.636 min
Unit receding limb, $T_r$	282.544 min
Total unit time, $T_b$	353.180 min

---

Subsection: Unit Hydrograph Summary  
 Label: Offsite  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	105.954 min
Area (User Defined)	2,117,016.00 ft <sup>2</sup>
Computational Time Increment	14.127 min
Time to Peak (Computed)	776.996 min
Flow (Peak, Computed)	54.34 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	777.000 min
Flow (Peak Interpolated Output)	54.34 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	77.000
Area (User Defined)	2,117,016.00 ft <sup>2</sup>
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.2 in
Runoff Volume (Pervious)	13.035 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	12.715 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	105.954 min
Computational Time Increment	14.127 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	31.18 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	70.636 min
Unit receding limb, $T_r$	282.544 min
Total unit time, $T_b$	353.180 min

---

Subsection: Unit Hydrograph Summary  
 Label: Offsite  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	105.954 min
Area (User Defined)	2,117,016.00 ft <sup>2</sup>

Computational Time Increment	14.127 min
Time to Peak (Computed)	776.996 min
Flow (Peak, Computed)	77.20 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	777.000 min
Flow (Peak Interpolated Output)	77.20 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	2,117,016.00 ft <sup>2</sup>
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.5 in
Runoff Volume (Pervious)	18.412 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	17.989 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	105.954 min
Computational Time Increment	14.127 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	31.18 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	70.636 min
Unit receding limb, $T_r$	282.544 min
Total unit time, $T_b$	353.180 min

---

Subsection: Unit Hydrograph Summary  
 Label: SOUTHERNSIDE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	33.210 min
Area (User Defined)	496,148.40 ft <sup>2</sup>

Computational Time Increment	4.428 min
Time to Peak (Computed)	735.048 min
Flow (Peak, Computed)	15.03 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	15.03 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	80.651
Area (User Defined)	496,148.40 ft <sup>2</sup>
Maximum Retention (Pervious)	2.4 in
Maximum Retention (Pervious, 20 percent)	0.5 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	1.7 in
Runoff Volume (Pervious)	1.598 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	1.585 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	33.210 min
Computational Time Increment	4.428 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.32 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: SOUTHERNSIDE  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	22.140 min
Unit receding limb, $T_r$	88.560 min
Total unit time, $T_b$	110.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: SOUTHERNSIDE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	33.210 min
Area (User Defined)	496,148.40 ft <sup>2</sup>
<hr/>	
Computational Time Increment	4.428 min
Time to Peak (Computed)	730.620 min
Flow (Peak, Computed)	28.14 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	732.000 min
Flow (Peak Interpolated Output)	28.12 ft <sup>3</sup> /s
<hr/>	
Drainage Area	
SCS CN (Composite)	80.651
Area (User Defined)	496,148.40 ft <sup>2</sup>
Maximum Retention (Pervious)	2.4 in
Maximum Retention (Pervious, 20 percent)	0.5 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	3.1 in
Runoff Volume (Pervious)	2.970 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	2.949 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	33.210 min
Computational Time Increment	4.428 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.32 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: SOUTHERNSIDE  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	22.140 min
Unit receding limb, $T_r$	88.560 min
Total unit time, $T_b$	110.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: SOUTHERNSIDE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	33.210 min
Area (User Defined)	496,148.40 ft <sup>2</sup>
Computational Time Increment	4.428 min
Time to Peak (Computed)	730.620 min
Flow (Peak, Computed)	32.18 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	732.000 min
Flow (Peak Interpolated Output)	32.13 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	80.651
Area (User Defined)	496,148.40 ft <sup>2</sup>
Maximum Retention (Pervious)	2.4 in
Maximum Retention (Pervious, 20 percent)	0.5 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.6 in
Runoff Volume (Pervious)	3.395 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	3.371 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	33.210 min
Computational Time Increment	4.428 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.32 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: SOUTHERNSIDE  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	22.140 min
Unit receding limb, $T_r$	88.560 min
Total unit time, $T_b$	110.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: SOUTHERNSIDE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	33.210 min
Area (User Defined)	496,148.40 ft <sup>2</sup>
Computational Time Increment	4.428 min
Time to Peak (Computed)	730.620 min
Flow (Peak, Computed)	44.45 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	732.000 min
Flow (Peak Interpolated Output)	44.31 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	80.651
Area (User Defined)	496,148.40 ft <sup>2</sup>
Maximum Retention (Pervious)	2.4 in
Maximum Retention (Pervious, 20 percent)	0.5 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	5.0 in
Runoff Volume (Pervious)	4.701 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	4.670 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	33.210 min
Computational Time Increment	4.428 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.32 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: SOUTHERNSIDE  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	22.140 min
Unit receding limb, $T_r$	88.560 min
Total unit time, $T_b$	110.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: Watermark  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	13.200 min
Area (User Defined)	827,640.00 ft <sup>2</sup>

Computational Time Increment	1.760 min
Time to Peak (Computed)	721.600 min
Flow (Peak, Computed)	57.15 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	56.57 ft <sup>3</sup> /s

Drainage Area	
SCS CN (Composite)	89.600
Area (User Defined)	827,640.00 ft <sup>2</sup>
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in

Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	2.4 in
Runoff Volume (Pervious)	3.818 ac-ft

Hydrograph Volume (Area under Hydrograph curve)	
Volume	3.808 ac-ft

SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	13.200 min
Computational Time Increment	1.760 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	97.85 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: Watermark  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	8.800 min
Unit receding limb, $T_r$	35.200 min
Total unit time, $T_b$	44.000 min

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Subsection: Unit Hydrograph Summary  
 Label: Watermark  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	13.200 min
Area (User Defined)	827,640.00 ft <sup>2</sup>
Computational Time Increment	1.760 min
Time to Peak (Computed)	721.600 min
Flow (Peak, Computed)	93.01 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	92.54 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	89.600
Area (User Defined)	827,640.00 ft <sup>2</sup>
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	4.0 in
Runoff Volume (Pervious)	6.376 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	6.360 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	13.200 min
Computational Time Increment	1.760 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	97.85 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Watermark  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	8.800 min
Unit receding limb, $T_r$	35.200 min
Total unit time, $T_b$	44.000 min

---

Subsection: Unit Hydrograph Summary  
 Label: Watermark  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	13.200 min
Area (User Defined)	827,640.00 ft <sup>2</sup>
Computational Time Increment	1.760 min
Time to Peak (Computed)	721.600 min
Flow (Peak, Computed)	103.51 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	103.07 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	89.600
Area (User Defined)	827,640.00 ft <sup>2</sup>
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	4.5 in
Runoff Volume (Pervious)	7.142 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	7.124 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	13.200 min
Computational Time Increment	1.760 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	97.85 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Watermark  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	8.800 min
Unit receding limb, $T_r$	35.200 min
Total unit time, $T_b$	44.000 min

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Subsection: Unit Hydrograph Summary  
 Label: Watermark  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	13.200 min
Area (User Defined)	827,640.00 ft <sup>2</sup>
Computational Time Increment	1.760 min
Time to Peak (Computed)	721.600 min
Flow (Peak, Computed)	134.80 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	134.48 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	89.600
Area (User Defined)	827,640.00 ft <sup>2</sup>
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	6.0 in
Runoff Volume (Pervious)	9.457 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	9.435 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	13.200 min
Computational Time Increment	1.760 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	97.85 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Watermark  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	8.800 min
Unit receding limb, $T_r$	35.200 min
Total unit time, $T_b$	44.000 min

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Subsection: Unit Hydrograph Summary  
 Label: WSR  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Storm Event	2
Return Event	2 years
Duration	1,440.000 min
Depth	3.5 in
Time of Concentration (Composite)	6.000 min
Area (User Defined)	19,863.36 ft <sup>2</sup>
Computational Time Increment	0.800 min
Time to Peak (Computed)	715.200 min
Flow (Peak, Computed)	2.00 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	717.000 min
Flow (Peak Interpolated Output)	1.93 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	98.000
Area (User Defined)	19,863.36 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.3 in
Runoff Volume (Pervious)	0.124 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.124 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	6.000 min
Computational Time Increment	0.800 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.17 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: WSR  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	4.000 min
Unit receding limb, $T_r$	16.000 min
Total unit time, $T_b$	20.000 min

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Subsection: Unit Hydrograph Summary  
 Label: WSR  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Storm Event	15
Return Event	15 years
Duration	1,440.000 min
Depth	5.2 in
Time of Concentration (Composite)	6.000 min
Area (User Defined)	19,863.36 ft <sup>2</sup>
Computational Time Increment	0.800 min
Time to Peak (Computed)	715.200 min
Flow (Peak, Computed)	2.99 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	717.000 min
Flow (Peak Interpolated Output)	2.89 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	98.000
Area (User Defined)	19,863.36 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	5.0 in
Runoff Volume (Pervious)	0.189 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.188 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	6.000 min
Computational Time Increment	0.800 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.17 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: WSR  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	4.000 min
Unit receding limb, $T_r$	16.000 min
Total unit time, $T_b$	20.000 min

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Subsection: Unit Hydrograph Summary  
 Label: WSR  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Storm Event	25
Return Event	25 years
Duration	1,440.000 min
Depth	5.7 in
Time of Concentration (Composite)	6.000 min
Area (User Defined)	19,863.36 ft <sup>2</sup>
Computational Time Increment	0.800 min
Time to Peak (Computed)	715.200 min
Flow (Peak, Computed)	3.28 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	717.000 min
Flow (Peak Interpolated Output)	3.17 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	98.000
Area (User Defined)	19,863.36 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	5.5 in
Runoff Volume (Pervious)	0.208 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.207 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	6.000 min
Computational Time Increment	0.800 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.17 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: WSR  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	4.000 min
Unit receding limb, $T_r$	16.000 min
Total unit time, $T_b$	20.000 min

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Subsection: Unit Hydrograph Summary  
 Label: WSR  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	6.000 min
Area (User Defined)	19,863.36 ft <sup>2</sup>
Computational Time Increment	0.800 min
Time to Peak (Computed)	715.200 min
Flow (Peak, Computed)	4.16 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	717.000 min
Flow (Peak Interpolated Output)	4.01 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	98.000
Area (User Defined)	19,863.36 ft <sup>2</sup>
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	7.0 in
Runoff Volume (Pervious)	0.265 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.264 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	6.000 min
Computational Time Increment	0.800 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.17 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: WSR  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	4.000 min
Unit receding limb, $T_r$	16.000 min
Total unit time, $T_b$	20.000 min

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Subsection: Addition Summary  
 Label: NET OUT  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Summary for Hydrograph Addition at 'NET OUT'**

Upstream Link	Upstream Node
<Catchment to Outflow Node> OUT SOUTH LAKE	BYPASS-DEVELOPED (Area 6) SOUTH LAKE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	BYPASS-DEVELOPED (Area 6)	0.217	729.000	2.33
Flow (From)	OUT SOUTH LAKE	11.026	855.000	21.96
Flow (In)	NET OUT	11.243	855.000	22.16



Subsection: Addition Summary  
 Label: NET OUT  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Summary for Hydrograph Addition at 'NET OUT'**

Upstream Link	Upstream Node
<Catchment to Outflow Node> OUT SOUTH LAKE	BYPASS-DEVELOPED (Area 6) SOUTH LAKE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	BYPASS-DEVELOPED (Area 6)	0.481	729.000	5.55
Flow (From)	OUT SOUTH LAKE	24.707	822.000	55.07
Flow (In)	NET OUT	25.188	822.000	55.55

Subsection: Addition Summary  
 Label: NET OUT  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Summary for Hydrograph Addition at 'NET OUT'**

Upstream Link	Upstream Node
<Catchment to Outflow Node> OUT SOUTH LAKE	BYPASS-DEVELOPED (Area 6) SOUTH LAKE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	BYPASS-DEVELOPED (Area 6)	0.567	729.000	6.58
Flow (From)	OUT SOUTH LAKE	29.047	816.000	65.43
Flow (In)	NET OUT	29.614	816.000	66.02

Subsection: Addition Summary  
 Label: NET OUT  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'NET OUT'**

Upstream Link	Upstream Node
<Catchment to Outflow Node> OUT SOUTH LAKE	BYPASS-DEVELOPED (Area 6) SOUTH LAKE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	BYPASS-DEVELOPED (Area 6)	0.842	726.000	9.90
Flow (From)	OUT SOUTH LAKE	42.543	777.000	119.29
Flow (In)	NET OUT	43.386	777.000	120.63

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	550.40	550.40	550.40	550.40	550.40
15.000	550.40	550.40	550.40	550.40	550.40
30.000	550.40	550.40	550.40	550.40	550.40
45.000	550.40	550.40	550.40	550.40	550.40
60.000	550.40	550.40	550.40	550.40	550.40
75.000	550.40	550.40	550.40	550.40	550.40
90.000	550.40	550.40	550.40	550.40	550.40
105.000	550.40	550.40	550.40	550.40	550.40
120.000	550.40	550.40	550.40	550.40	550.40
135.000	550.40	550.40	550.40	550.40	550.40
150.000	550.40	550.40	550.40	550.40	550.40
165.000	550.40	550.40	550.40	550.40	550.40
180.000	550.40	550.40	550.40	550.40	550.40
195.000	550.40	550.40	550.40	550.40	550.40
210.000	550.40	550.40	550.40	550.40	550.40
225.000	550.40	550.40	550.40	550.40	550.40
240.000	550.40	550.40	550.40	550.40	550.40
255.000	550.40	550.40	550.40	550.40	550.40
270.000	550.40	550.40	550.40	550.40	550.40
285.000	550.40	550.40	550.40	550.40	550.40
300.000	550.40	550.40	550.40	550.40	550.40
315.000	550.40	550.40	550.40	550.40	550.40
330.000	550.40	550.40	550.40	550.40	550.40
345.000	550.40	550.40	550.40	550.40	550.40
360.000	550.40	550.40	550.40	550.40	550.40
375.000	550.40	550.40	550.40	550.40	550.40
390.000	550.40	550.40	550.40	550.40	550.40
405.000	550.40	550.40	550.40	550.40	550.40
420.000	550.40	550.40	550.40	550.40	550.40
435.000	550.40	550.40	550.40	550.40	550.40
450.000	550.40	550.40	550.40	550.40	550.40
465.000	550.40	550.40	550.40	550.40	550.40
480.000	550.40	550.40	550.40	550.40	550.40
495.000	550.40	550.40	550.40	550.40	550.40
510.000	550.40	550.40	550.40	550.40	550.40
525.000	550.40	550.40	550.40	550.40	550.40
540.000	550.40	550.40	550.40	550.40	550.40
555.000	550.40	550.40	550.40	550.40	550.40
570.000	550.40	550.40	550.40	550.40	550.40
585.000	550.40	550.40	550.40	550.40	550.40
600.000	550.40	550.40	550.40	550.40	550.40
615.000	550.40	550.40	550.40	550.40	550.40

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	550.40	550.40	550.40	550.40	550.40
645.000	550.40	550.40	550.40	550.40	550.40
660.000	550.40	550.40	550.40	550.40	550.40
675.000	550.40	550.40	550.40	550.40	550.40
690.000	550.40	550.40	550.40	550.41	550.42
705.000	550.46	550.53	550.61	550.65	550.71
720.000	550.81	550.86	550.94	551.02	551.08
735.000	551.14	551.21	551.25	551.29	551.33
750.000	551.37	551.40	551.42	551.44	551.46
765.000	551.47	551.48	551.49	551.49	551.50
780.000	551.50	551.51	551.51	551.51	551.51
795.000	551.51	551.51	551.50	551.50	551.50
810.000	551.50	551.49	551.49	551.49	551.48
825.000	551.48	551.47	551.47	551.46	551.46
840.000	551.45	551.45	551.44	551.44	551.43
855.000	551.43	551.42	551.42	551.41	551.41
870.000	551.40	551.40	551.39	551.38	551.37
885.000	551.37	551.36	551.35	551.34	551.34
900.000	551.33	551.32	551.32	551.31	551.30
915.000	551.30	551.29	551.28	551.28	551.27
930.000	551.27	551.26	551.25	551.25	551.24
945.000	551.24	551.23	551.23	551.22	551.21
960.000	551.21	551.20	551.20	551.19	551.18
975.000	551.17	551.17	551.16	551.15	551.14
990.000	551.14	551.13	551.13	551.12	551.11
1,005.000	551.11	551.10	551.10	551.09	551.09
1,020.000	551.08	551.08	551.07	551.07	551.06
1,035.000	551.06	551.06	551.05	551.05	551.05
1,050.000	551.04	551.04	551.04	551.03	551.03
1,065.000	551.03	551.02	551.02	551.02	551.02
1,080.000	551.01	551.01	551.01	551.01	551.00
1,095.000	551.00	551.00	550.99	550.99	550.99
1,110.000	550.98	550.98	550.97	550.97	550.97
1,125.000	550.96	550.96	550.96	550.95	550.95
1,140.000	550.95	550.94	550.94	550.94	550.94
1,155.000	550.93	550.93	550.93	550.92	550.92
1,170.000	550.92	550.92	550.91	550.91	550.91
1,185.000	550.91	550.90	550.90	550.90	550.90
1,200.000	550.89	550.89	550.89	550.89	550.88
1,215.000	550.88	550.88	550.88	550.87	550.87
1,230.000	550.87	550.87	550.87	550.86	550.86
1,245.000	550.86	550.86	550.86	550.85	550.85

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	550.85	550.85	550.85	550.85	550.84
1,275.000	550.84	550.84	550.84	550.84	550.84
1,290.000	550.84	550.84	550.83	550.83	550.83
1,305.000	550.83	550.83	550.83	550.83	550.83
1,320.000	550.83	550.82	550.82	550.82	550.82
1,335.000	550.82	550.82	550.82	550.82	550.82
1,350.000	550.82	550.82	550.82	550.82	550.81
1,365.000	550.81	550.81	550.81	550.81	550.81
1,380.000	550.81	550.81	550.81	550.81	550.81
1,395.000	550.81	550.81	550.81	550.81	550.81
1,410.000	550.81	550.81	550.80	550.80	550.80
1,425.000	550.80	550.80	550.80	550.80	550.80
1,440.000	550.80	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	550.40	550.40	550.40	550.40	550.40
15.000	550.40	550.40	550.40	550.40	550.40
30.000	550.40	550.40	550.40	550.40	550.40
45.000	550.40	550.40	550.40	550.40	550.40
60.000	550.40	550.40	550.40	550.40	550.40
75.000	550.40	550.40	550.40	550.40	550.40
90.000	550.40	550.40	550.40	550.40	550.40
105.000	550.40	550.40	550.40	550.40	550.40
120.000	550.40	550.40	550.40	550.40	550.40
135.000	550.40	550.40	550.40	550.40	550.40
150.000	550.40	550.40	550.40	550.40	550.40
165.000	550.40	550.40	550.40	550.40	550.40
180.000	550.40	550.40	550.40	550.40	550.40
195.000	550.40	550.40	550.40	550.40	550.40
210.000	550.40	550.40	550.40	550.40	550.40
225.000	550.40	550.40	550.40	550.40	550.40
240.000	550.40	550.40	550.40	550.40	550.40
255.000	550.40	550.40	550.40	550.40	550.40
270.000	550.40	550.40	550.40	550.40	550.40
285.000	550.40	550.40	550.40	550.40	550.40
300.000	550.40	550.40	550.40	550.40	550.40
315.000	550.40	550.40	550.40	550.40	550.40
330.000	550.40	550.40	550.40	550.40	550.40
345.000	550.40	550.40	550.40	550.40	550.40
360.000	550.40	550.40	550.40	550.40	550.40
375.000	550.40	550.40	550.40	550.40	550.40
390.000	550.40	550.40	550.40	550.40	550.40
405.000	550.40	550.40	550.40	550.40	550.40
420.000	550.40	550.40	550.40	550.40	550.40
435.000	550.40	550.40	550.40	550.40	550.40
450.000	550.40	550.40	550.40	550.40	550.40
465.000	550.40	550.40	550.40	550.40	550.40
480.000	550.40	550.40	550.40	550.40	550.40
495.000	550.40	550.40	550.40	550.40	550.40
510.000	550.40	550.40	550.40	550.40	550.40
525.000	550.40	550.40	550.40	550.40	550.40
540.000	550.40	550.40	550.40	550.40	550.40
555.000	550.40	550.40	550.40	550.40	550.40
570.000	550.40	550.40	550.40	550.40	550.40
585.000	550.40	550.40	550.40	550.40	550.40
600.000	550.40	550.40	550.40	550.40	550.40
615.000	550.40	550.40	550.40	550.40	550.40

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	550.40	550.41	550.41	550.42	550.43
645.000	550.44	550.46	550.48	550.50	550.53
660.000	550.57	550.60	550.61	550.62	550.63
675.000	550.64	550.65	550.66	550.68	550.70
690.000	550.72	550.74	550.77	550.80	550.82
705.000	550.84	550.87	550.92	550.99	551.05
720.000	551.12	551.21	551.29	551.38	551.45
735.000	551.53	551.61	551.67	551.72	551.78
750.000	551.82	551.85	551.88	551.91	551.93
765.000	551.95	551.96	551.98	551.99	552.00
780.000	552.00	552.01	552.01	552.02	552.02
795.000	552.02	552.02	552.02	552.02	552.02
810.000	552.02	552.01	552.01	552.01	552.01
825.000	552.00	552.00	552.00	551.99	551.99
840.000	551.98	551.98	551.97	551.97	551.96
855.000	551.96	551.95	551.95	551.94	551.94
870.000	551.93	551.92	551.92	551.91	551.91
885.000	551.90	551.90	551.89	551.88	551.88
900.000	551.87	551.87	551.86	551.86	551.85
915.000	551.85	551.84	551.83	551.83	551.82
930.000	551.82	551.81	551.81	551.80	551.79
945.000	551.79	551.78	551.77	551.76	551.76
960.000	551.75	551.74	551.74	551.73	551.72
975.000	551.72	551.71	551.70	551.69	551.69
990.000	551.68	551.68	551.67	551.66	551.66
1,005.000	551.65	551.64	551.64	551.63	551.62
1,020.000	551.62	551.61	551.61	551.60	551.59
1,035.000	551.59	551.58	551.57	551.56	551.55
1,050.000	551.55	551.54	551.53	551.53	551.52
1,065.000	551.51	551.51	551.50	551.49	551.49
1,080.000	551.48	551.47	551.47	551.46	551.45
1,095.000	551.45	551.44	551.44	551.43	551.42
1,110.000	551.42	551.41	551.41	551.40	551.39
1,125.000	551.39	551.38	551.37	551.36	551.36
1,140.000	551.35	551.34	551.33	551.33	551.32
1,155.000	551.31	551.31	551.30	551.30	551.29
1,170.000	551.28	551.28	551.27	551.27	551.26
1,185.000	551.25	551.25	551.24	551.24	551.23
1,200.000	551.23	551.22	551.22	551.21	551.21
1,215.000	551.20	551.20	551.19	551.18	551.17
1,230.000	551.17	551.16	551.15	551.15	551.14
1,245.000	551.14	551.13	551.13	551.12	551.12



Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	551.11	551.11	551.10	551.10	551.09
1,275.000	551.09	551.09	551.08	551.08	551.08
1,290.000	551.07	551.07	551.07	551.06	551.06
1,305.000	551.06	551.06	551.05	551.05	551.05
1,320.000	551.05	551.04	551.04	551.04	551.04
1,335.000	551.04	551.03	551.03	551.03	551.03
1,350.000	551.03	551.03	551.02	551.02	551.02
1,365.000	551.02	551.02	551.02	551.02	551.02
1,380.000	551.01	551.01	551.01	551.01	551.01
1,395.000	551.01	551.01	551.01	551.01	551.01
1,410.000	551.00	551.00	551.00	551.00	551.00
1,425.000	551.00	551.00	551.00	551.00	551.00
1,440.000	550.99	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	550.40	550.40	550.40	550.40	550.40
15.000	550.40	550.40	550.40	550.40	550.40
30.000	550.40	550.40	550.40	550.40	550.40
45.000	550.40	550.40	550.40	550.40	550.40
60.000	550.40	550.40	550.40	550.40	550.40
75.000	550.40	550.40	550.40	550.40	550.40
90.000	550.40	550.40	550.40	550.40	550.40
105.000	550.40	550.40	550.40	550.40	550.40
120.000	550.40	550.40	550.40	550.40	550.40
135.000	550.40	550.40	550.40	550.40	550.40
150.000	550.40	550.40	550.40	550.40	550.40
165.000	550.40	550.40	550.40	550.40	550.40
180.000	550.40	550.40	550.40	550.40	550.40
195.000	550.40	550.40	550.40	550.40	550.40
210.000	550.40	550.40	550.40	550.40	550.40
225.000	550.40	550.40	550.40	550.40	550.40
240.000	550.40	550.40	550.40	550.40	550.40
255.000	550.40	550.40	550.40	550.40	550.40
270.000	550.40	550.40	550.40	550.40	550.40
285.000	550.40	550.40	550.40	550.40	550.40
300.000	550.40	550.40	550.40	550.40	550.40
315.000	550.40	550.40	550.40	550.40	550.40
330.000	550.40	550.40	550.40	550.40	550.40
345.000	550.40	550.40	550.40	550.40	550.40
360.000	550.40	550.40	550.40	550.40	550.40
375.000	550.40	550.40	550.40	550.40	550.40
390.000	550.40	550.40	550.40	550.40	550.40
405.000	550.40	550.40	550.40	550.40	550.40
420.000	550.40	550.40	550.40	550.40	550.40
435.000	550.40	550.40	550.40	550.40	550.40
450.000	550.40	550.40	550.40	550.40	550.40
465.000	550.40	550.40	550.40	550.40	550.40
480.000	550.40	550.40	550.40	550.40	550.40
495.000	550.40	550.40	550.40	550.40	550.40
510.000	550.40	550.40	550.40	550.40	550.40
525.000	550.40	550.40	550.40	550.40	550.40
540.000	550.40	550.40	550.40	550.40	550.40
555.000	550.40	550.40	550.40	550.40	550.40
570.000	550.40	550.40	550.40	550.40	550.40
585.000	550.40	550.40	550.40	550.40	550.40
600.000	550.40	550.40	550.40	550.41	550.41
615.000	550.42	550.43	550.44	550.45	550.47

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	550.49	550.51	550.54	550.57	550.60
645.000	550.61	550.61	550.62	550.63	550.64
660.000	550.65	550.66	550.68	550.69	550.71
675.000	550.72	550.74	550.76	550.79	550.81
690.000	550.82	550.83	550.85	550.86	550.89
705.000	550.92	550.97	551.02	551.06	551.13
720.000	551.21	551.28	551.38	551.46	551.55
735.000	551.63	551.70	551.77	551.83	551.88
750.000	551.92	551.96	552.00	552.03	552.05
765.000	552.07	552.09	552.10	552.11	552.12
780.000	552.13	552.14	552.14	552.15	552.15
795.000	552.15	552.15	552.15	552.15	552.15
810.000	552.15	552.15	552.15	552.15	552.14
825.000	552.14	552.14	552.13	552.13	552.13
840.000	552.12	552.12	552.11	552.11	552.10
855.000	552.10	552.09	552.09	552.08	552.08
870.000	552.07	552.07	552.06	552.05	552.05
885.000	552.04	552.04	552.03	552.03	552.02
900.000	552.02	552.01	552.00	552.00	551.99
915.000	551.99	551.98	551.97	551.97	551.96
930.000	551.95	551.95	551.94	551.93	551.93
945.000	551.92	551.91	551.91	551.90	551.90
960.000	551.89	551.88	551.88	551.87	551.86
975.000	551.86	551.85	551.85	551.84	551.83
990.000	551.83	551.82	551.82	551.81	551.80
1,005.000	551.80	551.79	551.78	551.77	551.77
1,020.000	551.76	551.75	551.74	551.74	551.73
1,035.000	551.72	551.72	551.71	551.70	551.70
1,050.000	551.69	551.68	551.68	551.67	551.66
1,065.000	551.66	551.65	551.64	551.64	551.63
1,080.000	551.63	551.62	551.61	551.61	551.60
1,095.000	551.60	551.59	551.58	551.57	551.56
1,110.000	551.56	551.55	551.54	551.54	551.53
1,125.000	551.52	551.51	551.51	551.50	551.49
1,140.000	551.49	551.48	551.47	551.47	551.46
1,155.000	551.46	551.45	551.44	551.44	551.43
1,170.000	551.43	551.42	551.41	551.41	551.40
1,185.000	551.40	551.39	551.38	551.37	551.36
1,200.000	551.36	551.35	551.34	551.34	551.33
1,215.000	551.32	551.31	551.31	551.30	551.29
1,230.000	551.29	551.28	551.28	551.27	551.26
1,245.000	551.26	551.25	551.25	551.24	551.24

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	551.23	551.23	551.22	551.22	551.21
1,275.000	551.21	551.20	551.20	551.19	551.18
1,290.000	551.18	551.17	551.16	551.16	551.15
1,305.000	551.15	551.14	551.14	551.13	551.13
1,320.000	551.12	551.12	551.12	551.11	551.11
1,335.000	551.10	551.10	551.10	551.09	551.09
1,350.000	551.09	551.09	551.08	551.08	551.08
1,365.000	551.07	551.07	551.07	551.07	551.07
1,380.000	551.06	551.06	551.06	551.06	551.06
1,395.000	551.05	551.05	551.05	551.05	551.05
1,410.000	551.05	551.04	551.04	551.04	551.04
1,425.000	551.04	551.04	551.04	551.04	551.03
1,440.000	551.03	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	550.40	550.40	550.40	550.40	550.40
15.000	550.40	550.40	550.40	550.40	550.40
30.000	550.40	550.40	550.40	550.40	550.40
45.000	550.40	550.40	550.40	550.40	550.40
60.000	550.40	550.40	550.40	550.40	550.40
75.000	550.40	550.40	550.40	550.40	550.40
90.000	550.40	550.40	550.40	550.40	550.40
105.000	550.40	550.40	550.40	550.40	550.40
120.000	550.40	550.40	550.40	550.40	550.40
135.000	550.40	550.40	550.40	550.40	550.40
150.000	550.40	550.40	550.40	550.40	550.40
165.000	550.40	550.40	550.40	550.40	550.40
180.000	550.40	550.40	550.40	550.40	550.40
195.000	550.40	550.40	550.40	550.40	550.40
210.000	550.40	550.40	550.40	550.40	550.40
225.000	550.40	550.40	550.40	550.40	550.40
240.000	550.40	550.40	550.40	550.40	550.40
255.000	550.40	550.40	550.40	550.40	550.40
270.000	550.40	550.40	550.40	550.40	550.40
285.000	550.40	550.40	550.40	550.40	550.40
300.000	550.40	550.40	550.40	550.40	550.40
315.000	550.40	550.40	550.40	550.40	550.40
330.000	550.40	550.40	550.40	550.40	550.40
345.000	550.40	550.40	550.40	550.40	550.40
360.000	550.40	550.40	550.40	550.40	550.40
375.000	550.40	550.40	550.40	550.40	550.40
390.000	550.40	550.40	550.40	550.40	550.40
405.000	550.40	550.40	550.40	550.40	550.40
420.000	550.40	550.40	550.40	550.40	550.40
435.000	550.40	550.40	550.40	550.40	550.40
450.000	550.40	550.40	550.40	550.40	550.40
465.000	550.40	550.40	550.40	550.40	550.40
480.000	550.40	550.40	550.40	550.40	550.40
495.000	550.40	550.40	550.40	550.40	550.40
510.000	550.40	550.40	550.40	550.40	550.40
525.000	550.40	550.40	550.40	550.40	550.40
540.000	550.40	550.41	550.41	550.42	550.43
555.000	550.44	550.45	550.47	550.49	550.51
570.000	550.53	550.55	550.58	550.60	550.61
585.000	550.61	550.62	550.62	550.63	550.64
600.000	550.64	550.65	550.66	550.67	550.68
615.000	550.69	550.70	550.71	550.73	550.74

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	550.75	550.77	550.79	550.80	550.81
645.000	550.82	550.82	550.83	550.84	550.85
660.000	550.87	550.88	550.89	550.91	550.92
675.000	550.94	550.96	550.98	551.00	551.02
690.000	551.03	551.05	551.06	551.08	551.11
705.000	551.14	551.18	551.23	551.27	551.34
720.000	551.43	551.51	551.61	551.69	551.79
735.000	551.87	551.96	552.03	552.10	552.17
750.000	552.23	552.29	552.34	552.38	552.41
765.000	552.44	552.47	552.49	552.51	552.53
780.000	552.54	552.56	552.57	552.57	552.58
795.000	552.59	552.59	552.59	552.59	552.60
810.000	552.60	552.60	552.60	552.59	552.59
825.000	552.59	552.59	552.58	552.58	552.58
840.000	552.57	552.57	552.56	552.56	552.55
855.000	552.55	552.54	552.54	552.53	552.53
870.000	552.52	552.51	552.51	552.50	552.50
885.000	552.49	552.48	552.48	552.47	552.46
900.000	552.46	552.45	552.44	552.44	552.43
915.000	552.42	552.42	552.41	552.40	552.39
930.000	552.39	552.38	552.37	552.37	552.36
945.000	552.35	552.34	552.34	552.33	552.32
960.000	552.32	552.31	552.30	552.29	552.29
975.000	552.28	552.27	552.26	552.26	552.25
990.000	552.24	552.23	552.23	552.22	552.21
1,005.000	552.20	552.20	552.19	552.18	552.18
1,020.000	552.17	552.16	552.15	552.15	552.14
1,035.000	552.13	552.12	552.12	552.11	552.10
1,050.000	552.10	552.09	552.08	552.08	552.07
1,065.000	552.06	552.06	552.05	552.04	552.04
1,080.000	552.03	552.02	552.02	552.01	552.00
1,095.000	551.99	551.99	551.98	551.97	551.97
1,110.000	551.96	551.95	551.94	551.94	551.93
1,125.000	551.92	551.92	551.91	551.90	551.90
1,140.000	551.89	551.88	551.88	551.87	551.86
1,155.000	551.86	551.85	551.84	551.84	551.83
1,170.000	551.82	551.82	551.81	551.81	551.80
1,185.000	551.79	551.78	551.78	551.77	551.76
1,200.000	551.75	551.74	551.74	551.73	551.72
1,215.000	551.71	551.71	551.70	551.69	551.69
1,230.000	551.68	551.67	551.67	551.66	551.65
1,245.000	551.65	551.64	551.63	551.63	551.62

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	551.61	551.61	551.60	551.59	551.59
1,275.000	551.58	551.57	551.56	551.56	551.55
1,290.000	551.54	551.53	551.53	551.52	551.51
1,305.000	551.51	551.50	551.49	551.49	551.48
1,320.000	551.47	551.47	551.46	551.46	551.45
1,335.000	551.44	551.44	551.43	551.43	551.42
1,350.000	551.42	551.41	551.41	551.40	551.39
1,365.000	551.39	551.38	551.37	551.37	551.36
1,380.000	551.35	551.35	551.34	551.33	551.33
1,395.000	551.32	551.32	551.31	551.31	551.30
1,410.000	551.30	551.29	551.29	551.28	551.28
1,425.000	551.27	551.27	551.26	551.26	551.25
1,440.000	551.25	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	525.00	525.00	525.00	525.00	525.00
15.000	525.00	525.00	525.00	525.00	525.00
30.000	525.00	525.00	525.00	525.00	525.00
45.000	525.00	525.00	525.00	525.00	525.00
60.000	525.00	525.00	525.00	525.00	525.00
75.000	525.00	525.00	525.00	525.00	525.00
90.000	525.00	525.00	525.00	525.00	525.00
105.000	525.00	525.00	525.00	525.00	525.00
120.000	525.00	525.00	525.00	525.00	525.00
135.000	525.00	525.00	525.00	525.00	525.00
150.000	525.00	525.00	525.00	525.00	525.00
165.000	525.00	525.00	525.00	525.00	525.00
180.000	525.00	525.00	525.00	525.00	525.00
195.000	525.00	525.00	525.00	525.00	525.00
210.000	525.00	525.00	525.00	525.00	525.00
225.000	525.00	525.00	525.00	525.00	525.00
240.000	525.00	525.00	525.00	525.00	525.00
255.000	525.00	525.00	525.00	525.00	525.00
270.000	525.00	525.00	525.00	525.00	525.00
285.000	525.00	525.00	525.00	525.00	525.00
300.000	525.00	525.00	525.00	525.00	525.00
315.000	525.00	525.00	525.00	525.00	525.00
330.000	525.00	525.00	525.00	525.00	525.00
345.000	525.00	525.00	525.00	525.00	525.00
360.000	525.00	525.01	525.01	525.01	525.01
375.000	525.01	525.01	525.01	525.01	525.01
390.000	525.01	525.01	525.01	525.01	525.01
405.000	525.01	525.01	525.01	525.01	525.01
420.000	525.02	525.02	525.02	525.02	525.02
435.000	525.02	525.02	525.02	525.02	525.02
450.000	525.02	525.02	525.02	525.03	525.03
465.000	525.03	525.03	525.03	525.03	525.03
480.000	525.03	525.04	525.04	525.04	525.04
495.000	525.04	525.04	525.04	525.04	525.05
510.000	525.05	525.05	525.05	525.05	525.05
525.000	525.06	525.06	525.06	525.06	525.06
540.000	525.07	525.07	525.07	525.07	525.08
555.000	525.08	525.08	525.08	525.09	525.09
570.000	525.09	525.09	525.10	525.10	525.10
585.000	525.11	525.11	525.11	525.11	525.12
600.000	525.12	525.13	525.13	525.13	525.14
615.000	525.14	525.14	525.15	525.15	525.16



Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	525.16	525.17	525.17	525.18	525.19
645.000	525.19	525.20	525.21	525.21	525.22
660.000	525.23	525.24	525.25	525.26	525.27
675.000	525.28	525.29	525.31	525.32	525.34
690.000	525.36	525.38	525.40	525.43	525.48
705.000	525.54	525.63	525.75	525.92	526.14
720.000	526.41	526.68	526.93	527.13	527.29
735.000	527.42	527.53	527.63	527.73	527.82
750.000	527.90	527.98	528.06	528.13	528.20
765.000	528.27	528.34	528.40	528.46	528.52
780.000	528.58	528.63	528.68	528.73	528.77
795.000	528.81	528.85	528.88	528.91	528.94
810.000	528.97	528.99	529.01	529.03	529.04
825.000	529.05	529.06	529.07	529.07	529.08
840.000	529.08	529.08	529.08	529.07	529.07
855.000	529.06	529.06	529.05	529.04	529.03
870.000	529.02	529.01	529.00	528.99	528.98
885.000	528.97	528.96	528.94	528.93	528.92
900.000	528.90	528.89	528.87	528.86	528.84
915.000	528.83	528.81	528.80	528.79	528.77
930.000	528.76	528.74	528.73	528.71	528.70
945.000	528.68	528.67	528.65	528.64	528.62
960.000	528.61	528.59	528.58	528.57	528.55
975.000	528.54	528.52	528.51	528.50	528.48
990.000	528.47	528.46	528.44	528.43	528.42
1,005.000	528.41	528.39	528.38	528.37	528.36
1,020.000	528.35	528.33	528.32	528.31	528.30
1,035.000	528.29	528.28	528.27	528.26	528.25
1,050.000	528.24	528.23	528.22	528.21	528.20
1,065.000	528.19	528.18	528.17	528.16	528.15
1,080.000	528.14	528.13	528.12	528.11	528.11
1,095.000	528.10	528.09	528.08	528.07	528.06
1,110.000	528.06	528.05	528.04	528.03	528.03
1,125.000	528.02	528.01	528.00	528.00	527.99
1,140.000	527.98	527.97	527.97	527.96	527.95
1,155.000	527.95	527.94	527.93	527.93	527.92
1,170.000	527.91	527.91	527.90	527.89	527.89
1,185.000	527.88	527.88	527.87	527.86	527.86
1,200.000	527.85	527.85	527.84	527.83	527.83
1,215.000	527.82	527.82	527.81	527.81	527.80
1,230.000	527.80	527.79	527.78	527.78	527.77
1,245.000	527.77	527.76	527.76	527.75	527.75

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	527.74	527.74	527.73	527.73	527.73
1,275.000	527.72	527.72	527.71	527.71	527.70
1,290.000	527.70	527.69	527.69	527.69	527.68
1,305.000	527.68	527.67	527.67	527.67	527.66
1,320.000	527.66	527.66	527.65	527.65	527.64
1,335.000	527.64	527.64	527.63	527.63	527.63
1,350.000	527.62	527.62	527.62	527.61	527.61
1,365.000	527.61	527.61	527.60	527.60	527.60
1,380.000	527.59	527.59	527.59	527.59	527.58
1,395.000	527.58	527.58	527.58	527.57	527.57
1,410.000	527.57	527.57	527.56	527.56	527.56
1,425.000	527.56	527.55	527.55	527.55	527.55
1,440.000	527.54	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	525.00	525.00	525.00	525.00	525.00
15.000	525.00	525.00	525.00	525.00	525.00
30.000	525.00	525.00	525.00	525.00	525.00
45.000	525.00	525.00	525.00	525.00	525.00
60.000	525.00	525.00	525.00	525.00	525.00
75.000	525.00	525.00	525.00	525.00	525.00
90.000	525.00	525.00	525.00	525.00	525.00
105.000	525.00	525.00	525.00	525.00	525.00
120.000	525.00	525.00	525.00	525.00	525.00
135.000	525.00	525.00	525.00	525.00	525.00
150.000	525.00	525.00	525.00	525.00	525.00
165.000	525.00	525.00	525.00	525.00	525.00
180.000	525.00	525.00	525.00	525.00	525.00
195.000	525.00	525.00	525.00	525.00	525.00
210.000	525.00	525.00	525.00	525.00	525.00
225.000	525.00	525.00	525.00	525.00	525.00
240.000	525.00	525.00	525.00	525.00	525.00
255.000	525.00	525.00	525.00	525.00	525.01
270.000	525.01	525.01	525.01	525.01	525.01
285.000	525.01	525.01	525.01	525.01	525.01
300.000	525.01	525.01	525.01	525.01	525.01
315.000	525.02	525.02	525.02	525.02	525.02
330.000	525.02	525.02	525.02	525.02	525.02
345.000	525.03	525.03	525.03	525.03	525.03
360.000	525.03	525.03	525.04	525.04	525.04
375.000	525.04	525.04	525.04	525.04	525.05
390.000	525.05	525.05	525.05	525.05	525.06
405.000	525.06	525.06	525.06	525.06	525.07
420.000	525.07	525.07	525.07	525.07	525.08
435.000	525.08	525.08	525.08	525.09	525.09
450.000	525.09	525.09	525.10	525.10	525.10
465.000	525.10	525.11	525.11	525.11	525.12
480.000	525.12	525.12	525.12	525.13	525.13
495.000	525.13	525.14	525.14	525.14	525.15
510.000	525.15	525.16	525.16	525.16	525.17
525.000	525.17	525.18	525.18	525.19	525.19
540.000	525.20	525.20	525.21	525.21	525.22
555.000	525.23	525.23	525.24	525.25	525.25
570.000	525.26	525.27	525.27	525.28	525.29
585.000	525.30	525.31	525.31	525.32	525.33
600.000	525.34	525.35	525.36	525.38	525.39
615.000	525.40	525.41	525.43	525.44	525.45

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	525.47	525.49	525.50	525.52	525.54
645.000	525.56	525.58	525.60	525.62	525.64
660.000	525.66	525.69	525.72	525.74	525.77
675.000	525.80	525.84	525.87	525.91	525.95
690.000	526.00	526.04	526.10	526.17	526.27
705.000	526.40	526.57	526.80	527.11	527.50
720.000	527.93	528.36	528.73	529.03	529.26
735.000	529.44	529.60	529.74	529.87	529.98
750.000	530.09	530.19	530.28	530.36	530.44
765.000	530.52	530.59	530.65	530.71	530.77
780.000	530.83	530.87	530.92	530.96	530.99
795.000	531.02	531.05	531.07	531.09	531.10
810.000	531.11	531.12	531.12	531.12	531.11
825.000	531.10	531.09	531.07	531.05	531.03
840.000	531.01	530.98	530.96	530.93	530.90
855.000	530.87	530.84	530.81	530.78	530.74
870.000	530.71	530.68	530.65	530.61	530.58
885.000	530.55	530.51	530.48	530.45	530.41
900.000	530.38	530.35	530.32	530.29	530.25
915.000	530.22	530.19	530.16	530.13	530.10
930.000	530.07	530.04	530.02	529.99	529.96
945.000	529.93	529.91	529.88	529.86	529.83
960.000	529.81	529.78	529.76	529.73	529.71
975.000	529.68	529.66	529.64	529.62	529.60
990.000	529.57	529.55	529.53	529.51	529.49
1,005.000	529.47	529.45	529.44	529.42	529.40
1,020.000	529.38	529.36	529.35	529.33	529.31
1,035.000	529.30	529.28	529.26	529.25	529.23
1,050.000	529.21	529.18	529.16	529.14	529.11
1,065.000	529.09	529.07	529.05	529.03	529.01
1,080.000	528.99	528.97	528.95	528.93	528.91
1,095.000	528.89	528.87	528.85	528.84	528.82
1,110.000	528.80	528.79	528.77	528.75	528.74
1,125.000	528.72	528.71	528.69	528.68	528.66
1,140.000	528.65	528.63	528.62	528.61	528.59
1,155.000	528.58	528.57	528.56	528.54	528.53
1,170.000	528.52	528.51	528.49	528.48	528.47
1,185.000	528.46	528.45	528.44	528.43	528.42
1,200.000	528.41	528.40	528.38	528.37	528.36
1,215.000	528.35	528.34	528.34	528.33	528.32
1,230.000	528.31	528.30	528.29	528.28	528.27
1,245.000	528.26	528.25	528.24	528.24	528.23

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	528.22	528.21	528.20	528.20	528.19
1,275.000	528.18	528.17	528.17	528.16	528.15
1,290.000	528.15	528.14	528.13	528.13	528.12
1,305.000	528.11	528.11	528.10	528.09	528.09
1,320.000	528.08	528.07	528.07	528.06	528.06
1,335.000	528.05	528.05	528.04	528.04	528.03
1,350.000	528.02	528.02	528.01	528.01	528.00
1,365.000	528.00	528.00	527.99	527.99	527.98
1,380.000	527.98	527.97	527.97	527.96	527.96
1,395.000	527.96	527.95	527.95	527.94	527.94
1,410.000	527.94	527.93	527.93	527.92	527.92
1,425.000	527.92	527.91	527.91	527.91	527.90
1,440.000	527.90	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	525.00	525.00	525.00	525.00	525.00
15.000	525.00	525.00	525.00	525.00	525.00
30.000	525.00	525.00	525.00	525.00	525.00
45.000	525.00	525.00	525.00	525.00	525.00
60.000	525.00	525.00	525.00	525.00	525.00
75.000	525.00	525.00	525.00	525.00	525.00
90.000	525.00	525.00	525.00	525.00	525.00
105.000	525.00	525.00	525.00	525.00	525.00
120.000	525.00	525.00	525.00	525.00	525.00
135.000	525.00	525.00	525.00	525.00	525.00
150.000	525.00	525.00	525.00	525.00	525.00
165.000	525.00	525.00	525.00	525.00	525.00
180.000	525.00	525.00	525.00	525.00	525.00
195.000	525.00	525.00	525.00	525.00	525.00
210.000	525.00	525.00	525.00	525.00	525.00
225.000	525.00	525.00	525.00	525.00	525.00
240.000	525.00	525.00	525.00	525.01	525.01
255.000	525.01	525.01	525.01	525.01	525.01
270.000	525.01	525.01	525.01	525.01	525.01
285.000	525.01	525.01	525.01	525.02	525.02
300.000	525.02	525.02	525.02	525.02	525.02
315.000	525.02	525.02	525.03	525.03	525.03
330.000	525.03	525.03	525.03	525.03	525.04
345.000	525.04	525.04	525.04	525.04	525.04
360.000	525.05	525.05	525.05	525.05	525.05
375.000	525.05	525.06	525.06	525.06	525.06
390.000	525.07	525.07	525.07	525.07	525.07
405.000	525.08	525.08	525.08	525.08	525.09
420.000	525.09	525.09	525.09	525.10	525.10
435.000	525.10	525.11	525.11	525.11	525.11
450.000	525.12	525.12	525.12	525.13	525.13
465.000	525.13	525.14	525.14	525.14	525.15
480.000	525.15	525.15	525.16	525.16	525.17
495.000	525.17	525.17	525.18	525.18	525.19
510.000	525.19	525.20	525.20	525.21	525.21
525.000	525.22	525.22	525.23	525.24	525.24
540.000	525.25	525.26	525.26	525.27	525.28
555.000	525.29	525.30	525.31	525.31	525.32
570.000	525.33	525.34	525.35	525.36	525.37
585.000	525.38	525.40	525.41	525.42	525.43
600.000	525.44	525.46	525.47	525.49	525.50
615.000	525.52	525.53	525.55	525.57	525.58

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	525.60	525.62	525.64	525.66	525.69
645.000	525.71	525.74	525.76	525.79	525.82
660.000	525.85	525.88	525.91	525.94	525.98
675.000	526.02	526.06	526.10	526.15	526.20
690.000	526.25	526.31	526.37	526.46	526.57
705.000	526.72	526.91	527.17	527.51	527.94
720.000	528.41	528.87	529.28	529.60	529.84
735.000	530.04	530.20	530.34	530.47	530.58
750.000	530.69	530.79	530.87	530.95	531.03
765.000	531.10	531.17	531.23	531.29	531.35
780.000	531.40	531.45	531.49	531.52	531.56
795.000	531.59	531.61	531.63	531.64	531.65
810.000	531.66	531.66	531.65	531.65	531.63
825.000	531.62	531.60	531.58	531.55	531.52
840.000	531.49	531.46	531.43	531.40	531.36
855.000	531.32	531.28	531.25	531.21	531.17
870.000	531.13	531.09	531.05	531.01	530.97
885.000	530.92	530.88	530.84	530.80	530.77
900.000	530.73	530.69	530.65	530.61	530.57
915.000	530.54	530.50	530.46	530.43	530.39
930.000	530.36	530.32	530.29	530.26	530.23
945.000	530.19	530.16	530.13	530.10	530.07
960.000	530.04	530.02	529.99	529.96	529.93
975.000	529.91	529.88	529.85	529.83	529.81
990.000	529.78	529.76	529.74	529.71	529.69
1,005.000	529.67	529.65	529.63	529.61	529.59
1,020.000	529.57	529.55	529.53	529.51	529.49
1,035.000	529.47	529.46	529.44	529.42	529.40
1,050.000	529.39	529.37	529.36	529.34	529.32
1,065.000	529.31	529.29	529.28	529.26	529.25
1,080.000	529.23	529.21	529.19	529.17	529.15
1,095.000	529.12	529.10	529.08	529.06	529.04
1,110.000	529.02	529.00	528.99	528.97	528.95
1,125.000	528.93	528.91	528.90	528.88	528.86
1,140.000	528.85	528.83	528.81	528.80	528.78
1,155.000	528.77	528.75	528.74	528.72	528.71
1,170.000	528.69	528.68	528.67	528.65	528.64
1,185.000	528.63	528.61	528.60	528.59	528.58
1,200.000	528.57	528.55	528.54	528.53	528.52
1,215.000	528.51	528.50	528.48	528.47	528.46
1,230.000	528.45	528.44	528.43	528.42	528.41
1,245.000	528.40	528.39	528.38	528.37	528.36

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	528.36	528.35	528.34	528.33	528.32
1,275.000	528.31	528.30	528.30	528.29	528.28
1,290.000	528.27	528.27	528.26	528.25	528.24
1,305.000	528.24	528.23	528.22	528.22	528.21
1,320.000	528.20	528.20	528.19	528.18	528.18
1,335.000	528.17	528.16	528.16	528.15	528.15
1,350.000	528.14	528.14	528.13	528.12	528.12
1,365.000	528.11	528.11	528.10	528.10	528.09
1,380.000	528.09	528.08	528.08	528.07	528.07
1,395.000	528.06	528.06	528.05	528.05	528.05
1,410.000	528.04	528.04	528.03	528.03	528.02
1,425.000	528.02	528.02	528.01	528.01	528.01
1,440.000	528.00	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	525.00	525.00	525.00	525.00	525.00
15.000	525.00	525.00	525.00	525.00	525.00
30.000	525.00	525.00	525.00	525.00	525.00
45.000	525.00	525.00	525.00	525.00	525.00
60.000	525.00	525.00	525.00	525.00	525.00
75.000	525.00	525.00	525.00	525.00	525.00
90.000	525.00	525.00	525.00	525.00	525.00
105.000	525.00	525.00	525.00	525.00	525.00
120.000	525.00	525.00	525.00	525.00	525.00
135.000	525.00	525.00	525.00	525.00	525.00
150.000	525.00	525.00	525.00	525.00	525.00
165.000	525.00	525.00	525.00	525.00	525.00
180.000	525.00	525.00	525.00	525.00	525.00
195.000	525.00	525.00	525.00	525.01	525.01
210.000	525.01	525.01	525.01	525.01	525.01
225.000	525.01	525.01	525.01	525.01	525.01
240.000	525.01	525.02	525.02	525.02	525.02
255.000	525.02	525.02	525.02	525.02	525.03
270.000	525.03	525.03	525.03	525.03	525.03
285.000	525.03	525.04	525.04	525.04	525.04
300.000	525.04	525.05	525.05	525.05	525.05
315.000	525.05	525.06	525.06	525.06	525.06
330.000	525.07	525.07	525.07	525.07	525.08
345.000	525.08	525.08	525.09	525.09	525.09
360.000	525.09	525.10	525.10	525.10	525.11
375.000	525.11	525.11	525.12	525.12	525.12
390.000	525.13	525.13	525.13	525.14	525.14
405.000	525.15	525.15	525.15	525.16	525.16
420.000	525.17	525.17	525.18	525.18	525.18
435.000	525.19	525.19	525.20	525.20	525.21
450.000	525.21	525.22	525.23	525.23	525.24
465.000	525.24	525.25	525.26	525.26	525.27
480.000	525.28	525.28	525.29	525.30	525.31
495.000	525.31	525.32	525.33	525.34	525.35
510.000	525.36	525.37	525.38	525.39	525.40
525.000	525.42	525.43	525.44	525.45	525.47
540.000	525.48	525.49	525.51	525.52	525.54
555.000	525.55	525.57	525.59	525.60	525.62
570.000	525.64	525.65	525.67	525.69	525.71
585.000	525.73	525.75	525.77	525.79	525.81
600.000	525.84	525.86	525.88	525.91	525.94
615.000	525.96	525.99	526.02	526.05	526.08

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	526.11	526.15	526.18	526.22	526.26
645.000	526.29	526.33	526.38	526.42	526.47
660.000	526.51	526.56	526.61	526.67	526.72
675.000	526.78	526.84	526.91	526.98	527.05
690.000	527.12	527.20	527.29	527.40	527.55
705.000	527.74	527.99	528.32	528.74	529.26
720.000	529.83	530.39	530.86	531.22	531.49
735.000	531.69	531.87	532.02	532.15	532.27
750.000	532.37	532.45	532.51	532.57	532.61
765.000	532.64	532.66	532.68	532.70	532.71
780.000	532.71	532.71	532.71	532.70	532.69
795.000	532.68	532.67	532.65	532.63	532.61
810.000	532.59	532.56	532.54	532.51	532.48
825.000	532.45	532.41	532.38	532.35	532.32
840.000	532.28	532.25	532.22	532.18	532.15
855.000	532.12	532.08	532.05	532.01	531.97
870.000	531.93	531.88	531.84	531.80	531.75
885.000	531.70	531.66	531.61	531.57	531.52
900.000	531.47	531.43	531.38	531.33	531.29
915.000	531.24	531.20	531.15	531.11	531.06
930.000	531.02	530.98	530.94	530.90	530.85
945.000	530.81	530.78	530.74	530.70	530.66
960.000	530.62	530.59	530.55	530.52	530.48
975.000	530.45	530.42	530.39	530.35	530.32
990.000	530.29	530.26	530.24	530.21	530.18
1,005.000	530.15	530.13	530.10	530.08	530.05
1,020.000	530.03	530.01	529.98	529.96	529.94
1,035.000	529.92	529.90	529.87	529.85	529.83
1,050.000	529.82	529.80	529.78	529.76	529.74
1,065.000	529.72	529.71	529.69	529.67	529.66
1,080.000	529.64	529.62	529.61	529.59	529.58
1,095.000	529.56	529.55	529.54	529.52	529.51
1,110.000	529.50	529.48	529.47	529.46	529.44
1,125.000	529.43	529.42	529.41	529.40	529.38
1,140.000	529.37	529.36	529.35	529.34	529.33
1,155.000	529.31	529.30	529.29	529.28	529.27
1,170.000	529.26	529.24	529.23	529.22	529.20
1,185.000	529.18	529.16	529.14	529.12	529.11
1,200.000	529.09	529.07	529.05	529.04	529.02
1,215.000	529.00	528.99	528.97	528.96	528.94
1,230.000	528.93	528.91	528.90	528.88	528.87
1,245.000	528.85	528.84	528.83	528.81	528.80

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	528.79	528.77	528.76	528.75	528.74
1,275.000	528.73	528.71	528.70	528.69	528.68
1,290.000	528.67	528.66	528.65	528.64	528.63
1,305.000	528.62	528.61	528.60	528.59	528.58
1,320.000	528.57	528.56	528.55	528.55	528.54
1,335.000	528.53	528.52	528.51	528.51	528.50
1,350.000	528.49	528.48	528.48	528.47	528.46
1,365.000	528.45	528.45	528.44	528.43	528.43
1,380.000	528.42	528.41	528.41	528.40	528.40
1,395.000	528.39	528.38	528.38	528.37	528.37
1,410.000	528.36	528.35	528.35	528.34	528.34
1,425.000	528.33	528.33	528.32	528.32	528.31
1,440.000	528.31	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	521.00	521.00	521.00	521.00	521.00
15.000	521.00	521.00	521.00	521.00	521.00
30.000	521.00	521.00	521.00	521.00	521.00
45.000	521.00	521.00	521.00	521.00	521.00
60.000	521.00	521.00	521.00	521.00	521.00
75.000	521.00	521.00	521.00	521.00	521.00
90.000	521.00	521.00	521.00	521.00	521.00
105.000	521.00	521.00	521.00	521.00	521.00
120.000	521.00	521.00	521.00	521.00	521.00
135.000	521.00	521.00	521.00	521.00	521.00
150.000	521.00	521.00	521.00	521.00	521.00
165.000	521.00	521.00	521.00	521.00	521.00
180.000	521.00	521.00	521.00	521.00	521.00
195.000	521.00	521.00	521.00	521.00	521.00
210.000	521.00	521.00	521.00	521.00	521.00
225.000	521.00	521.00	521.00	521.00	521.00
240.000	521.00	521.00	521.00	521.00	521.00
255.000	521.00	521.00	521.00	521.00	521.00
270.000	521.00	521.00	521.00	521.00	521.00
285.000	521.00	521.00	521.00	521.00	521.00
300.000	521.00	521.00	521.00	521.00	521.00
315.000	521.00	521.00	521.00	521.00	521.00
330.000	521.00	521.00	521.00	521.00	521.00
345.000	521.00	521.00	521.00	521.00	521.00
360.000	521.00	521.00	521.00	521.00	521.00
375.000	521.00	521.00	521.00	521.00	521.00
390.000	521.00	521.00	521.00	521.00	521.00
405.000	521.00	521.00	521.00	521.00	521.00
420.000	521.00	521.00	521.00	521.00	521.00
435.000	521.00	521.00	521.00	521.00	521.00
450.000	521.00	521.00	521.00	521.00	521.00
465.000	521.00	521.00	521.00	521.00	521.00
480.000	521.00	521.00	521.00	521.00	521.00
495.000	521.00	521.00	521.00	521.01	521.01
510.000	521.01	521.01	521.01	521.01	521.01
525.000	521.01	521.01	521.01	521.01	521.01
540.000	521.01	521.01	521.01	521.01	521.01
555.000	521.01	521.01	521.01	521.01	521.01
570.000	521.01	521.01	521.01	521.02	521.02
585.000	521.02	521.02	521.02	521.02	521.02
600.000	521.02	521.02	521.03	521.03	521.03
615.000	521.03	521.03	521.03	521.04	521.04

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	521.04	521.04	521.04	521.05	521.05
645.000	521.05	521.06	521.06	521.06	521.06
660.000	521.07	521.07	521.08	521.08	521.08
675.000	521.09	521.09	521.10	521.10	521.11
690.000	521.12	521.12	521.13	521.14	521.15
705.000	521.16	521.18	521.20	521.23	521.27
720.000	521.32	521.39	521.47	521.56	521.66
735.000	521.78	521.89	522.00	522.11	522.19
750.000	522.27	522.34	522.39	522.44	522.49
765.000	522.53	522.56	522.59	522.62	522.65
780.000	522.67	522.69	522.71	522.73	522.75
795.000	522.77	522.78	522.80	522.81	522.83
810.000	522.84	522.85	522.86	522.87	522.88
825.000	522.89	522.90	522.90	522.91	522.91
840.000	522.92	522.92	522.92	522.92	522.92
855.000	522.92	522.92	522.92	522.92	522.92
870.000	522.92	522.92	522.91	522.91	522.91
885.000	522.90	522.90	522.89	522.89	522.89
900.000	522.88	522.88	522.87	522.87	522.86
915.000	522.85	522.85	522.84	522.84	522.83
930.000	522.83	522.82	522.81	522.81	522.80
945.000	522.79	522.79	522.78	522.78	522.77
960.000	522.76	522.76	522.75	522.74	522.74
975.000	522.73	522.73	522.72	522.71	522.71
990.000	522.70	522.70	522.69	522.69	522.68
1,005.000	522.67	522.67	522.66	522.66	522.65
1,020.000	522.65	522.64	522.64	522.63	522.63
1,035.000	522.62	522.62	522.62	522.61	522.61
1,050.000	522.60	522.60	522.59	522.59	522.59
1,065.000	522.58	522.58	522.57	522.57	522.57
1,080.000	522.56	522.56	522.56	522.55	522.55
1,095.000	522.55	522.54	522.54	522.54	522.54
1,110.000	522.53	522.53	522.53	522.52	522.52
1,125.000	522.52	522.52	522.51	522.51	522.51
1,140.000	522.51	522.50	522.50	522.50	522.50
1,155.000	522.49	522.49	522.49	522.48	522.48
1,170.000	522.48	522.47	522.47	522.47	522.46
1,185.000	522.46	522.46	522.45	522.45	522.45
1,200.000	522.44	522.44	522.44	522.43	522.43
1,215.000	522.43	522.42	522.42	522.42	522.41
1,230.000	522.41	522.41	522.41	522.40	522.40
1,245.000	522.40	522.39	522.39	522.39	522.39

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	522.38	522.38	522.38	522.37	522.37
1,275.000	522.37	522.37	522.37	522.36	522.36
1,290.000	522.36	522.36	522.35	522.35	522.35
1,305.000	522.35	522.34	522.34	522.34	522.34
1,320.000	522.34	522.33	522.33	522.33	522.33
1,335.000	522.33	522.33	522.32	522.32	522.32
1,350.000	522.32	522.32	522.31	522.31	522.31
1,365.000	522.31	522.31	522.31	522.30	522.30
1,380.000	522.30	522.30	522.30	522.30	522.30
1,395.000	522.29	522.29	522.29	522.29	522.29
1,410.000	522.29	522.29	522.29	522.28	522.28
1,425.000	522.28	522.28	522.28	522.28	522.28
1,440.000	522.28	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	521.00	521.00	521.00	521.00	521.00
15.000	521.00	521.00	521.00	521.00	521.00
30.000	521.00	521.00	521.00	521.00	521.00
45.000	521.00	521.00	521.00	521.00	521.00
60.000	521.00	521.00	521.00	521.00	521.00
75.000	521.00	521.00	521.00	521.00	521.00
90.000	521.00	521.00	521.00	521.00	521.00
105.000	521.00	521.00	521.00	521.00	521.00
120.000	521.00	521.00	521.00	521.00	521.00
135.000	521.00	521.00	521.00	521.00	521.00
150.000	521.00	521.00	521.00	521.00	521.00
165.000	521.00	521.00	521.00	521.00	521.00
180.000	521.00	521.00	521.00	521.00	521.00
195.000	521.00	521.00	521.00	521.00	521.00
210.000	521.00	521.00	521.00	521.00	521.00
225.000	521.00	521.00	521.00	521.00	521.00
240.000	521.00	521.00	521.00	521.00	521.00
255.000	521.00	521.00	521.00	521.00	521.00
270.000	521.00	521.00	521.00	521.00	521.00
285.000	521.00	521.00	521.00	521.00	521.00
300.000	521.00	521.00	521.00	521.00	521.00
315.000	521.00	521.00	521.00	521.00	521.00
330.000	521.00	521.00	521.00	521.00	521.00
345.000	521.00	521.00	521.00	521.00	521.00
360.000	521.00	521.00	521.00	521.00	521.00
375.000	521.00	521.00	521.00	521.00	521.00
390.000	521.00	521.00	521.01	521.01	521.01
405.000	521.01	521.01	521.01	521.01	521.01
420.000	521.01	521.01	521.01	521.01	521.01
435.000	521.01	521.01	521.01	521.01	521.01
450.000	521.01	521.01	521.01	521.01	521.01
465.000	521.02	521.02	521.02	521.02	521.02
480.000	521.02	521.02	521.02	521.03	521.03
495.000	521.03	521.03	521.03	521.03	521.03
510.000	521.04	521.04	521.04	521.04	521.04
525.000	521.05	521.05	521.05	521.05	521.06
540.000	521.06	521.06	521.06	521.07	521.07
555.000	521.07	521.08	521.08	521.08	521.09
570.000	521.09	521.09	521.10	521.10	521.10
585.000	521.11	521.11	521.12	521.12	521.12
600.000	521.13	521.13	521.14	521.14	521.15
615.000	521.15	521.16	521.16	521.17	521.17

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	521.18	521.19	521.19	521.20	521.21
645.000	521.21	521.22	521.23	521.24	521.25
660.000	521.26	521.27	521.28	521.29	521.30
675.000	521.31	521.32	521.33	521.35	521.36
690.000	521.38	521.39	521.41	521.43	521.45
705.000	521.48	521.51	521.56	521.62	521.71
720.000	521.85	522.03	522.24	522.47	522.68
735.000	522.86	523.02	523.15	523.25	523.34
750.000	523.40	523.45	523.48	523.51	523.54
765.000	523.56	523.58	523.59	523.61	523.62
780.000	523.63	523.65	523.66	523.67	523.68
795.000	523.69	523.70	523.71	523.72	523.73
810.000	523.73	523.74	523.74	523.74	523.74
825.000	523.74	523.74	523.74	523.73	523.73
840.000	523.72	523.71	523.70	523.69	523.68
855.000	523.67	523.66	523.65	523.64	523.63
870.000	523.61	523.60	523.59	523.57	523.56
885.000	523.55	523.53	523.52	523.50	523.49
900.000	523.47	523.46	523.44	523.43	523.41
915.000	523.40	523.38	523.37	523.35	523.34
930.000	523.32	523.31	523.29	523.28	523.26
945.000	523.25	523.24	523.22	523.21	523.20
960.000	523.19	523.17	523.16	523.15	523.14
975.000	523.13	523.12	523.11	523.09	523.08
990.000	523.07	523.06	523.05	523.05	523.04
1,005.000	523.03	523.02	523.01	523.00	522.99
1,020.000	522.98	522.98	522.97	522.96	522.95
1,035.000	522.95	522.94	522.93	522.92	522.92
1,050.000	522.93	522.93	522.94	522.94	522.94
1,065.000	522.94	522.94	522.93	522.93	522.92
1,080.000	522.92	522.91	522.91	522.90	522.89
1,095.000	522.89	522.88	522.87	522.86	522.86
1,110.000	522.85	522.84	522.84	522.83	522.82
1,125.000	522.82	522.81	522.80	522.80	522.79
1,140.000	522.78	522.78	522.77	522.76	522.76
1,155.000	522.75	522.75	522.74	522.73	522.73
1,170.000	522.72	522.72	522.71	522.71	522.70
1,185.000	522.70	522.69	522.69	522.68	522.68
1,200.000	522.67	522.67	522.66	522.66	522.65
1,215.000	522.65	522.64	522.64	522.64	522.63
1,230.000	522.63	522.62	522.62	522.62	522.61
1,245.000	522.61	522.61	522.60	522.60	522.60



Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	522.59	522.59	522.59	522.58	522.58
1,275.000	522.58	522.57	522.57	522.57	522.56
1,290.000	522.56	522.56	522.56	522.55	522.55
1,305.000	522.55	522.55	522.55	522.54	522.54
1,320.000	522.54	522.54	522.53	522.53	522.53
1,335.000	522.53	522.53	522.52	522.52	522.52
1,350.000	522.52	522.52	522.52	522.51	522.51
1,365.000	522.51	522.51	522.51	522.51	522.50
1,380.000	522.50	522.50	522.50	522.50	522.50
1,395.000	522.49	522.49	522.49	522.49	522.49
1,410.000	522.48	522.48	522.48	522.48	522.48
1,425.000	522.47	522.47	522.47	522.47	522.47
1,440.000	522.47	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	521.00	521.00	521.00	521.00	521.00
15.000	521.00	521.00	521.00	521.00	521.00
30.000	521.00	521.00	521.00	521.00	521.00
45.000	521.00	521.00	521.00	521.00	521.00
60.000	521.00	521.00	521.00	521.00	521.00
75.000	521.00	521.00	521.00	521.00	521.00
90.000	521.00	521.00	521.00	521.00	521.00
105.000	521.00	521.00	521.00	521.00	521.00
120.000	521.00	521.00	521.00	521.00	521.00
135.000	521.00	521.00	521.00	521.00	521.00
150.000	521.00	521.00	521.00	521.00	521.00
165.000	521.00	521.00	521.00	521.00	521.00
180.000	521.00	521.00	521.00	521.00	521.00
195.000	521.00	521.00	521.00	521.00	521.00
210.000	521.00	521.00	521.00	521.00	521.00
225.000	521.00	521.00	521.00	521.00	521.00
240.000	521.00	521.00	521.00	521.00	521.00
255.000	521.00	521.00	521.00	521.00	521.00
270.000	521.00	521.00	521.00	521.00	521.00
285.000	521.00	521.00	521.00	521.00	521.00
300.000	521.00	521.00	521.00	521.00	521.00
315.000	521.00	521.00	521.00	521.00	521.00
330.000	521.00	521.00	521.00	521.00	521.00
345.000	521.00	521.00	521.00	521.00	521.00
360.000	521.00	521.00	521.00	521.00	521.01
375.000	521.01	521.01	521.01	521.01	521.01
390.000	521.01	521.01	521.01	521.01	521.01
405.000	521.01	521.01	521.01	521.01	521.01
420.000	521.01	521.01	521.01	521.01	521.01
435.000	521.02	521.02	521.02	521.02	521.02
450.000	521.02	521.02	521.02	521.02	521.03
465.000	521.03	521.03	521.03	521.03	521.03
480.000	521.04	521.04	521.04	521.04	521.04
495.000	521.04	521.05	521.05	521.05	521.05
510.000	521.06	521.06	521.06	521.06	521.07
525.000	521.07	521.07	521.08	521.08	521.08
540.000	521.08	521.09	521.09	521.10	521.10
555.000	521.10	521.11	521.11	521.11	521.12
570.000	521.12	521.13	521.13	521.14	521.14
585.000	521.15	521.15	521.15	521.16	521.17
600.000	521.17	521.18	521.18	521.19	521.19
615.000	521.20	521.21	521.21	521.22	521.23

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	521.24	521.24	521.25	521.26	521.27
645.000	521.28	521.29	521.30	521.31	521.32
660.000	521.33	521.34	521.35	521.37	521.38
675.000	521.39	521.41	521.42	521.44	521.45
690.000	521.47	521.49	521.51	521.53	521.56
705.000	521.59	521.63	521.69	521.77	521.89
720.000	522.06	522.27	522.51	522.73	522.96
735.000	523.16	523.33	523.46	523.57	523.65
750.000	523.71	523.76	523.79	523.82	523.83
765.000	523.85	523.86	523.87	523.88	523.89
780.000	523.90	523.91	523.92	523.93	523.93
795.000	523.94	523.95	523.95	523.96	523.96
810.000	523.97	523.97	523.97	523.97	523.97
825.000	523.96	523.96	523.95	523.95	523.94
840.000	523.93	523.92	523.91	523.90	523.89
855.000	523.87	523.86	523.85	523.83	523.82
870.000	523.80	523.78	523.77	523.75	523.74
885.000	523.72	523.70	523.68	523.67	523.65
900.000	523.63	523.62	523.60	523.58	523.57
915.000	523.55	523.53	523.52	523.50	523.49
930.000	523.47	523.45	523.43	523.42	523.40
945.000	523.39	523.37	523.35	523.34	523.32
960.000	523.31	523.29	523.28	523.26	523.25
975.000	523.24	523.22	523.21	523.20	523.19
990.000	523.17	523.16	523.15	523.14	523.13
1,005.000	523.12	523.11	523.10	523.09	523.08
1,020.000	523.07	523.06	523.05	523.04	523.03
1,035.000	523.03	523.02	523.01	523.00	522.99
1,050.000	522.99	522.98	522.97	522.96	522.96
1,065.000	522.95	522.94	522.94	522.93	522.92
1,080.000	522.92	522.92	522.93	522.94	522.94
1,095.000	522.94	522.94	522.94	522.94	522.93
1,110.000	522.93	522.92	522.92	522.91	522.91
1,125.000	522.90	522.89	522.89	522.88	522.87
1,140.000	522.87	522.86	522.85	522.85	522.84
1,155.000	522.83	522.83	522.82	522.81	522.81
1,170.000	522.80	522.80	522.79	522.78	522.78
1,185.000	522.77	522.76	522.76	522.75	522.75
1,200.000	522.74	522.74	522.73	522.73	522.72
1,215.000	522.72	522.71	522.71	522.70	522.70
1,230.000	522.69	522.69	522.68	522.68	522.67
1,245.000	522.67	522.66	522.66	522.66	522.65

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	522.65	522.64	522.64	522.64	522.63
1,275.000	522.63	522.63	522.62	522.62	522.62
1,290.000	522.61	522.61	522.61	522.60	522.60
1,305.000	522.60	522.59	522.59	522.59	522.59
1,320.000	522.58	522.58	522.58	522.58	522.57
1,335.000	522.57	522.57	522.57	522.56	522.56
1,350.000	522.56	522.56	522.56	522.55	522.55
1,365.000	522.55	522.55	522.55	522.54	522.54
1,380.000	522.54	522.54	522.54	522.54	522.53
1,395.000	522.53	522.53	522.53	522.53	522.53
1,410.000	522.52	522.52	522.52	522.52	522.52
1,425.000	522.52	522.52	522.51	522.51	522.51
1,440.000	522.51	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	521.00	521.00	521.00	521.00	521.00
15.000	521.00	521.00	521.00	521.00	521.00
30.000	521.00	521.00	521.00	521.00	521.00
45.000	521.00	521.00	521.00	521.00	521.00
60.000	521.00	521.00	521.00	521.00	521.00
75.000	521.00	521.00	521.00	521.00	521.00
90.000	521.00	521.00	521.00	521.00	521.00
105.000	521.00	521.00	521.00	521.00	521.00
120.000	521.00	521.00	521.00	521.00	521.00
135.000	521.00	521.00	521.00	521.00	521.00
150.000	521.00	521.00	521.00	521.00	521.00
165.000	521.00	521.00	521.00	521.00	521.00
180.000	521.00	521.00	521.00	521.00	521.00
195.000	521.00	521.00	521.00	521.00	521.00
210.000	521.00	521.00	521.00	521.00	521.00
225.000	521.00	521.00	521.00	521.00	521.00
240.000	521.00	521.00	521.00	521.00	521.00
255.000	521.00	521.00	521.00	521.00	521.00
270.000	521.00	521.00	521.00	521.00	521.00
285.000	521.00	521.00	521.00	521.00	521.00
300.000	521.00	521.00	521.00	521.00	521.00
315.000	521.00	521.00	521.01	521.01	521.01
330.000	521.01	521.01	521.01	521.01	521.01
345.000	521.01	521.01	521.01	521.01	521.01
360.000	521.01	521.01	521.01	521.01	521.01
375.000	521.02	521.02	521.02	521.02	521.02
390.000	521.02	521.02	521.02	521.03	521.03
405.000	521.03	521.03	521.03	521.04	521.04
420.000	521.04	521.04	521.04	521.05	521.05
435.000	521.05	521.05	521.06	521.06	521.06
450.000	521.06	521.07	521.07	521.07	521.08
465.000	521.08	521.08	521.09	521.09	521.09
480.000	521.10	521.10	521.10	521.11	521.11
495.000	521.11	521.12	521.12	521.13	521.13
510.000	521.13	521.14	521.14	521.15	521.15
525.000	521.16	521.16	521.17	521.17	521.18
540.000	521.18	521.19	521.20	521.20	521.21
555.000	521.21	521.22	521.23	521.24	521.24
570.000	521.25	521.26	521.27	521.27	521.28
585.000	521.29	521.30	521.31	521.32	521.32
600.000	521.33	521.34	521.35	521.36	521.37
615.000	521.38	521.39	521.40	521.41	521.42

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	521.44	521.45	521.46	521.47	521.49
645.000	521.50	521.51	521.53	521.54	521.56
660.000	521.57	521.59	521.61	521.63	521.64
675.000	521.66	521.68	521.71	521.73	521.76
690.000	521.79	521.83	521.87	521.92	521.98
705.000	522.05	522.13	522.24	522.38	522.56
720.000	522.77	523.02	523.29	523.57	523.82
735.000	524.04	524.21	524.34	524.43	524.51
750.000	524.54	524.55	524.55	524.56	524.56
765.000	524.56	524.57	524.57	524.57	524.57
780.000	524.57	524.57	524.57	524.56	524.56
795.000	524.56	524.55	524.55	524.54	524.54
810.000	524.53	524.53	524.52	524.52	524.51
825.000	524.50	524.49	524.48	524.46	524.43
840.000	524.40	524.37	524.34	524.30	524.27
855.000	524.23	524.20	524.18	524.15	524.13
870.000	524.11	524.10	524.08	524.07	524.05
885.000	524.04	524.02	524.00	523.99	523.97
900.000	523.95	523.94	523.92	523.90	523.88
915.000	523.86	523.84	523.83	523.81	523.79
930.000	523.77	523.75	523.73	523.72	523.70
945.000	523.68	523.66	523.64	523.63	523.61
960.000	523.59	523.58	523.56	523.54	523.53
975.000	523.51	523.50	523.48	523.46	523.45
990.000	523.43	523.42	523.40	523.39	523.37
1,005.000	523.36	523.35	523.33	523.32	523.31
1,020.000	523.29	523.28	523.27	523.26	523.25
1,035.000	523.24	523.22	523.21	523.20	523.19
1,050.000	523.18	523.17	523.16	523.16	523.15
1,065.000	523.14	523.13	523.12	523.11	523.11
1,080.000	523.10	523.09	523.08	523.08	523.07
1,095.000	523.06	523.05	523.05	523.04	523.03
1,110.000	523.03	523.02	523.02	523.01	523.01
1,125.000	523.00	522.99	522.99	522.98	522.98
1,140.000	522.97	522.96	522.96	522.95	522.95
1,155.000	522.94	522.94	522.93	522.93	522.92
1,170.000	522.92	522.91	522.91	522.92	522.92
1,185.000	522.93	522.94	522.94	522.94	522.94
1,200.000	522.94	522.94	522.94	522.93	522.93
1,215.000	522.92	522.92	522.91	522.91	522.90
1,230.000	522.90	522.89	522.88	522.88	522.87
1,245.000	522.87	522.86	522.85	522.85	522.84

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	522.84	522.83	522.83	522.82	522.82
1,275.000	522.81	522.81	522.80	522.79	522.79
1,290.000	522.78	522.78	522.78	522.77	522.77
1,305.000	522.76	522.76	522.75	522.75	522.74
1,320.000	522.74	522.74	522.73	522.73	522.72
1,335.000	522.72	522.72	522.71	522.71	522.71
1,350.000	522.70	522.70	522.70	522.69	522.69
1,365.000	522.69	522.68	522.68	522.68	522.67
1,380.000	522.67	522.67	522.67	522.66	522.66
1,395.000	522.66	522.66	522.65	522.65	522.65
1,410.000	522.65	522.64	522.64	522.64	522.64
1,425.000	522.63	522.63	522.63	522.63	522.63
1,440.000	522.62	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.000
300.000	0.000	0.000	0.000	0.000	0.000
315.000	0.000	0.000	0.000	0.000	0.000
330.000	0.000	0.000	0.000	0.000	0.000
345.000	0.000	0.000	0.000	0.000	0.000
360.000	0.000	0.000	0.000	0.000	0.000
375.000	0.000	0.000	0.000	0.000	0.000
390.000	0.000	0.000	0.000	0.000	0.000
405.000	0.000	0.000	0.000	0.000	0.000
420.000	0.000	0.000	0.000	0.000	0.000
435.000	0.000	0.000	0.000	0.000	0.000
450.000	0.000	0.000	0.000	0.000	0.000
465.000	0.000	0.000	0.000	0.000	0.000
480.000	0.000	0.000	0.000	0.000	0.000
495.000	0.000	0.000	0.000	0.000	0.000
510.000	0.000	0.000	0.000	0.000	0.000
525.000	0.000	0.000	0.000	0.000	0.000
540.000	0.000	0.000	0.000	0.000	0.000
555.000	0.000	0.000	0.000	0.000	0.000
570.000	0.000	0.000	0.000	0.000	0.000
585.000	0.000	0.000	0.000	0.000	0.000
600.000	0.000	0.000	0.000	0.000	0.000
615.000	0.000	0.000	0.000	0.000	0.000



Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.000	0.000	0.000	0.000	0.000
645.000	0.000	0.000	0.000	0.000	0.000
660.000	0.000	0.000	0.000	0.000	0.000
675.000	0.000	0.000	0.000	0.000	0.000
690.000	0.000	0.000	0.000	0.000	0.000
705.000	0.000	0.001	0.003	0.004	0.008
720.000	0.018	0.026	0.042	0.064	0.084
735.000	0.111	0.142	0.167	0.193	0.221
750.000	0.249	0.274	0.291	0.306	0.319
765.000	0.330	0.339	0.347	0.353	0.358
780.000	0.362	0.365	0.366	0.367	0.367
795.000	0.367	0.365	0.364	0.362	0.359
810.000	0.356	0.353	0.350	0.346	0.342
825.000	0.338	0.334	0.330	0.326	0.322
840.000	0.317	0.313	0.308	0.304	0.299
855.000	0.295	0.290	0.286	0.282	0.277
870.000	0.273	0.268	0.262	0.256	0.250
885.000	0.244	0.238	0.233	0.228	0.223
900.000	0.218	0.213	0.208	0.204	0.199
915.000	0.195	0.191	0.187	0.183	0.179
930.000	0.175	0.172	0.168	0.165	0.161
945.000	0.158	0.155	0.152	0.149	0.146
960.000	0.143	0.141	0.137	0.133	0.129
975.000	0.125	0.122	0.118	0.115	0.112
990.000	0.109	0.106	0.103	0.101	0.098
1,005.000	0.096	0.094	0.092	0.090	0.088
1,020.000	0.086	0.084	0.082	0.081	0.079
1,035.000	0.078	0.076	0.075	0.074	0.073
1,050.000	0.072	0.070	0.069	0.068	0.067
1,065.000	0.066	0.066	0.065	0.064	0.063
1,080.000	0.062	0.062	0.061	0.060	0.059
1,095.000	0.059	0.058	0.057	0.056	0.054
1,110.000	0.053	0.052	0.051	0.050	0.049
1,125.000	0.049	0.048	0.047	0.046	0.045
1,140.000	0.044	0.044	0.043	0.042	0.042
1,155.000	0.041	0.040	0.040	0.039	0.038
1,170.000	0.038	0.037	0.037	0.036	0.035
1,185.000	0.035	0.034	0.034	0.033	0.033
1,200.000	0.032	0.032	0.031	0.031	0.031
1,215.000	0.030	0.030	0.029	0.029	0.028
1,230.000	0.028	0.028	0.027	0.027	0.027
1,245.000	0.026	0.026	0.026	0.025	0.025

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	0.025	0.024	0.024	0.024	0.024
1,275.000	0.024	0.023	0.023	0.023	0.023
1,290.000	0.022	0.022	0.022	0.022	0.022
1,305.000	0.022	0.021	0.021	0.021	0.021
1,320.000	0.021	0.021	0.021	0.020	0.020
1,335.000	0.020	0.020	0.020	0.020	0.020
1,350.000	0.020	0.020	0.019	0.019	0.019
1,365.000	0.019	0.019	0.019	0.019	0.019
1,380.000	0.019	0.019	0.019	0.019	0.018
1,395.000	0.018	0.018	0.018	0.018	0.018
1,410.000	0.018	0.018	0.018	0.018	0.018
1,425.000	0.018	0.018	0.018	0.018	0.017
1,440.000	0.017	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.000
300.000	0.000	0.000	0.000	0.000	0.000
315.000	0.000	0.000	0.000	0.000	0.000
330.000	0.000	0.000	0.000	0.000	0.000
345.000	0.000	0.000	0.000	0.000	0.000
360.000	0.000	0.000	0.000	0.000	0.000
375.000	0.000	0.000	0.000	0.000	0.000
390.000	0.000	0.000	0.000	0.000	0.000
405.000	0.000	0.000	0.000	0.000	0.000
420.000	0.000	0.000	0.000	0.000	0.000
435.000	0.000	0.000	0.000	0.000	0.000
450.000	0.000	0.000	0.000	0.000	0.000
465.000	0.000	0.000	0.000	0.000	0.000
480.000	0.000	0.000	0.000	0.000	0.000
495.000	0.000	0.000	0.000	0.000	0.000
510.000	0.000	0.000	0.000	0.000	0.000
525.000	0.000	0.000	0.000	0.000	0.000
540.000	0.000	0.000	0.000	0.000	0.000
555.000	0.000	0.000	0.000	0.000	0.000
570.000	0.000	0.000	0.000	0.000	0.000
585.000	0.000	0.000	0.000	0.000	0.000
600.000	0.000	0.000	0.000	0.000	0.000
615.000	0.000	0.000	0.000	0.000	0.000

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.000	0.000	0.000	0.000	0.000
645.000	0.000	0.000	0.000	0.000	0.001
660.000	0.001	0.002	0.002	0.003	0.003
675.000	0.004	0.004	0.005	0.006	0.007
690.000	0.009	0.011	0.013	0.017	0.020
705.000	0.023	0.028	0.038	0.056	0.074
720.000	0.101	0.144	0.187	0.251	0.316
735.000	0.390	0.476	0.548	0.624	0.703
750.000	0.772	0.827	0.879	0.925	0.966
765.000	1.002	1.032	1.059	1.081	1.100
780.000	1.114	1.125	1.133	1.139	1.143
795.000	1.146	1.147	1.147	1.146	1.143
810.000	1.140	1.136	1.132	1.126	1.121
825.000	1.114	1.108	1.099	1.091	1.082
840.000	1.072	1.063	1.053	1.043	1.033
855.000	1.022	1.012	1.001	0.990	0.980
870.000	0.969	0.958	0.948	0.937	0.926
885.000	0.916	0.906	0.895	0.885	0.875
900.000	0.865	0.855	0.845	0.835	0.825
915.000	0.816	0.806	0.797	0.787	0.778
930.000	0.769	0.760	0.751	0.742	0.731
945.000	0.719	0.708	0.697	0.686	0.676
960.000	0.665	0.655	0.645	0.635	0.625
975.000	0.615	0.606	0.596	0.587	0.578
990.000	0.569	0.560	0.552	0.544	0.535
1,005.000	0.527	0.519	0.512	0.504	0.497
1,020.000	0.489	0.482	0.475	0.468	0.460
1,035.000	0.450	0.442	0.433	0.425	0.416
1,050.000	0.409	0.401	0.393	0.386	0.379
1,065.000	0.372	0.365	0.358	0.352	0.346
1,080.000	0.339	0.333	0.328	0.322	0.316
1,095.000	0.311	0.306	0.300	0.295	0.290
1,110.000	0.286	0.281	0.276	0.272	0.266
1,125.000	0.260	0.254	0.248	0.242	0.236
1,140.000	0.231	0.226	0.221	0.216	0.211
1,155.000	0.207	0.202	0.198	0.194	0.190
1,170.000	0.186	0.182	0.179	0.175	0.172
1,185.000	0.168	0.165	0.162	0.159	0.156
1,200.000	0.153	0.150	0.147	0.145	0.142
1,215.000	0.139	0.136	0.132	0.129	0.125
1,230.000	0.122	0.119	0.116	0.113	0.110
1,245.000	0.108	0.105	0.103	0.101	0.099

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	0.097	0.095	0.093	0.092	0.090
1,275.000	0.089	0.087	0.086	0.085	0.083
1,290.000	0.082	0.081	0.080	0.079	0.078
1,305.000	0.077	0.076	0.075	0.074	0.074
1,320.000	0.073	0.072	0.071	0.071	0.070
1,335.000	0.070	0.069	0.068	0.068	0.067
1,350.000	0.067	0.066	0.066	0.065	0.065
1,365.000	0.065	0.064	0.064	0.063	0.063
1,380.000	0.063	0.062	0.062	0.062	0.061
1,395.000	0.061	0.061	0.061	0.060	0.060
1,410.000	0.060	0.060	0.059	0.059	0.059
1,425.000	0.059	0.058	0.058	0.058	0.057
1,440.000	0.057	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.000
300.000	0.000	0.000	0.000	0.000	0.000
315.000	0.000	0.000	0.000	0.000	0.000
330.000	0.000	0.000	0.000	0.000	0.000
345.000	0.000	0.000	0.000	0.000	0.000
360.000	0.000	0.000	0.000	0.000	0.000
375.000	0.000	0.000	0.000	0.000	0.000
390.000	0.000	0.000	0.000	0.000	0.000
405.000	0.000	0.000	0.000	0.000	0.000
420.000	0.000	0.000	0.000	0.000	0.000
435.000	0.000	0.000	0.000	0.000	0.000
450.000	0.000	0.000	0.000	0.000	0.000
465.000	0.000	0.000	0.000	0.000	0.000
480.000	0.000	0.000	0.000	0.000	0.000
495.000	0.000	0.000	0.000	0.000	0.000
510.000	0.000	0.000	0.000	0.000	0.000
525.000	0.000	0.000	0.000	0.000	0.000
540.000	0.000	0.000	0.000	0.000	0.000
555.000	0.000	0.000	0.000	0.000	0.000
570.000	0.000	0.000	0.000	0.000	0.000
585.000	0.000	0.000	0.000	0.000	0.000
600.000	0.000	0.000	0.000	0.000	0.000
615.000	0.000	0.000	0.000	0.000	0.000

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.000	0.000	0.001	0.001	0.002
645.000	0.002	0.003	0.003	0.003	0.004
660.000	0.004	0.005	0.006	0.007	0.008
675.000	0.009	0.011	0.013	0.016	0.018
690.000	0.020	0.021	0.024	0.027	0.031
705.000	0.038	0.049	0.063	0.079	0.105
720.000	0.145	0.187	0.253	0.322	0.406
735.000	0.501	0.591	0.693	0.787	0.870
750.000	0.952	1.031	1.104	1.160	1.209
765.000	1.250	1.286	1.316	1.341	1.362
780.000	1.380	1.394	1.405	1.414	1.420
795.000	1.425	1.428	1.429	1.429	1.427
810.000	1.425	1.421	1.417	1.412	1.406
825.000	1.400	1.393	1.385	1.377	1.369
840.000	1.360	1.351	1.341	1.331	1.321
855.000	1.311	1.300	1.289	1.278	1.267
870.000	1.255	1.244	1.233	1.221	1.209
885.000	1.198	1.186	1.174	1.163	1.151
900.000	1.139	1.127	1.116	1.103	1.090
915.000	1.077	1.064	1.051	1.038	1.025
930.000	1.012	1.000	0.988	0.976	0.963
945.000	0.952	0.940	0.928	0.917	0.905
960.000	0.894	0.883	0.871	0.861	0.850
975.000	0.839	0.828	0.818	0.808	0.797
990.000	0.787	0.777	0.767	0.758	0.748
1,005.000	0.738	0.725	0.713	0.702	0.690
1,020.000	0.679	0.668	0.657	0.647	0.636
1,035.000	0.626	0.616	0.607	0.597	0.588
1,050.000	0.579	0.570	0.561	0.553	0.544
1,065.000	0.536	0.528	0.520	0.513	0.505
1,080.000	0.498	0.491	0.484	0.477	0.470
1,095.000	0.462	0.453	0.444	0.435	0.427
1,110.000	0.419	0.411	0.403	0.395	0.388
1,125.000	0.381	0.374	0.367	0.360	0.354
1,140.000	0.347	0.341	0.335	0.329	0.324
1,155.000	0.318	0.312	0.307	0.302	0.297
1,170.000	0.292	0.287	0.282	0.277	0.273
1,185.000	0.267	0.261	0.254	0.248	0.243
1,200.000	0.237	0.231	0.226	0.221	0.216
1,215.000	0.211	0.207	0.202	0.198	0.193
1,230.000	0.189	0.185	0.182	0.178	0.174
1,245.000	0.171	0.167	0.164	0.161	0.158

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	0.155	0.152	0.150	0.147	0.144
1,275.000	0.142	0.140	0.137	0.133	0.130
1,290.000	0.126	0.123	0.120	0.118	0.115
1,305.000	0.113	0.110	0.108	0.106	0.104
1,320.000	0.102	0.101	0.099	0.097	0.096
1,335.000	0.094	0.093	0.092	0.090	0.089
1,350.000	0.088	0.087	0.086	0.085	0.084
1,365.000	0.083	0.082	0.081	0.080	0.080
1,380.000	0.079	0.078	0.078	0.077	0.076
1,395.000	0.076	0.075	0.074	0.074	0.073
1,410.000	0.073	0.072	0.072	0.071	0.071
1,425.000	0.071	0.070	0.070	0.069	0.069
1,440.000	0.069	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.000
300.000	0.000	0.000	0.000	0.000	0.000
315.000	0.000	0.000	0.000	0.000	0.000
330.000	0.000	0.000	0.000	0.000	0.000
345.000	0.000	0.000	0.000	0.000	0.000
360.000	0.000	0.000	0.000	0.000	0.000
375.000	0.000	0.000	0.000	0.000	0.000
390.000	0.000	0.000	0.000	0.000	0.000
405.000	0.000	0.000	0.000	0.000	0.000
420.000	0.000	0.000	0.000	0.000	0.000
435.000	0.000	0.000	0.000	0.000	0.000
450.000	0.000	0.000	0.000	0.000	0.000
465.000	0.000	0.000	0.000	0.000	0.000
480.000	0.000	0.000	0.000	0.000	0.000
495.000	0.000	0.000	0.000	0.000	0.000
510.000	0.000	0.000	0.000	0.000	0.000
525.000	0.000	0.000	0.000	0.000	0.000
540.000	0.000	0.000	0.000	0.000	0.000
555.000	0.000	0.000	0.000	0.000	0.000
570.000	0.001	0.001	0.002	0.002	0.002
585.000	0.003	0.003	0.003	0.003	0.004
600.000	0.004	0.004	0.005	0.005	0.006
615.000	0.007	0.007	0.008	0.009	0.011

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.012	0.014	0.015	0.017	0.018
645.000	0.019	0.021	0.022	0.024	0.025
660.000	0.027	0.030	0.032	0.035	0.039
675.000	0.043	0.048	0.054	0.059	0.063
690.000	0.068	0.073	0.079	0.086	0.096
705.000	0.110	0.130	0.152	0.181	0.227
720.000	0.291	0.366	0.474	0.583	0.727
735.000	0.864	1.018	1.179	1.326	1.467
750.000	1.597	1.713	1.817	1.908	1.987
765.000	2.054	2.111	2.161	2.204	2.241
780.000	2.272	2.298	2.320	2.338	2.353
795.000	2.364	2.373	2.380	2.385	2.387
810.000	2.389	2.388	2.386	2.384	2.380
825.000	2.375	2.369	2.362	2.354	2.346
840.000	2.337	2.328	2.318	2.307	2.296
855.000	2.284	2.272	2.260	2.247	2.234
870.000	2.221	2.208	2.194	2.180	2.166
885.000	2.152	2.138	2.124	2.109	2.095
900.000	2.080	2.066	2.051	2.036	2.021
915.000	2.006	1.991	1.976	1.961	1.946
930.000	1.930	1.915	1.899	1.884	1.868
945.000	1.852	1.837	1.821	1.805	1.790
960.000	1.774	1.758	1.742	1.727	1.711
975.000	1.695	1.679	1.663	1.648	1.632
990.000	1.616	1.600	1.585	1.569	1.553
1,005.000	1.538	1.522	1.506	1.490	1.475
1,020.000	1.459	1.444	1.428	1.413	1.398
1,035.000	1.383	1.368	1.353	1.338	1.323
1,050.000	1.309	1.294	1.279	1.265	1.251
1,065.000	1.236	1.222	1.208	1.194	1.180
1,080.000	1.166	1.153	1.139	1.125	1.112
1,095.000	1.097	1.082	1.067	1.052	1.038
1,110.000	1.023	1.009	0.996	0.982	0.969
1,125.000	0.956	0.943	0.930	0.917	0.905
1,140.000	0.893	0.881	0.869	0.858	0.846
1,155.000	0.835	0.824	0.813	0.802	0.792
1,170.000	0.781	0.771	0.761	0.751	0.741
1,185.000	0.728	0.716	0.704	0.692	0.680
1,200.000	0.668	0.657	0.646	0.635	0.625
1,215.000	0.614	0.604	0.594	0.585	0.575
1,230.000	0.566	0.557	0.548	0.539	0.531
1,245.000	0.522	0.514	0.506	0.499	0.491

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	0.484	0.477	0.470	0.461	0.452
1,275.000	0.443	0.434	0.425	0.417	0.409
1,290.000	0.401	0.394	0.386	0.379	0.372
1,305.000	0.366	0.359	0.353	0.346	0.340
1,320.000	0.335	0.329	0.323	0.318	0.313
1,335.000	0.308	0.303	0.298	0.293	0.288
1,350.000	0.284	0.280	0.275	0.271	0.266
1,365.000	0.260	0.254	0.249	0.244	0.239
1,380.000	0.234	0.230	0.225	0.221	0.217
1,395.000	0.213	0.209	0.205	0.201	0.198
1,410.000	0.194	0.191	0.188	0.185	0.182
1,425.000	0.179	0.176	0.173	0.171	0.168
1,440.000	0.166	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.001	0.001
165.000	0.001	0.001	0.001	0.001	0.001
180.000	0.001	0.001	0.001	0.001	0.001
195.000	0.001	0.001	0.001	0.001	0.001
210.000	0.001	0.001	0.001	0.001	0.001
225.000	0.001	0.001	0.002	0.002	0.002
240.000	0.002	0.002	0.002	0.002	0.002
255.000	0.002	0.002	0.002	0.002	0.002
270.000	0.002	0.002	0.002	0.002	0.002
285.000	0.003	0.003	0.003	0.003	0.003
300.000	0.003	0.003	0.003	0.003	0.003
315.000	0.003	0.003	0.003	0.003	0.004
330.000	0.004	0.004	0.004	0.004	0.004
345.000	0.005	0.005	0.005	0.005	0.006
360.000	0.006	0.007	0.007	0.007	0.008
375.000	0.008	0.009	0.009	0.010	0.011
390.000	0.011	0.012	0.013	0.013	0.014
405.000	0.015	0.015	0.016	0.017	0.018
420.000	0.019	0.020	0.021	0.022	0.023
435.000	0.024	0.025	0.026	0.027	0.028
450.000	0.029	0.031	0.032	0.033	0.034
465.000	0.036	0.037	0.038	0.040	0.041
480.000	0.043	0.044	0.046	0.047	0.049
495.000	0.051	0.052	0.054	0.056	0.058
510.000	0.060	0.062	0.064	0.066	0.069
525.000	0.071	0.073	0.076	0.078	0.081
540.000	0.084	0.087	0.090	0.093	0.096
555.000	0.099	0.102	0.105	0.108	0.112
570.000	0.115	0.118	0.122	0.125	0.129
585.000	0.132	0.136	0.140	0.144	0.148
600.000	0.152	0.157	0.161	0.166	0.171
615.000	0.176	0.182	0.187	0.193	0.199

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.205	0.212	0.219	0.226	0.233
645.000	0.241	0.250	0.259	0.268	0.279
660.000	0.289	0.301	0.313	0.326	0.340
675.000	0.355	0.371	0.389	0.408	0.429
690.000	0.452	0.477	0.508	0.548	0.605
705.000	0.687	0.801	0.960	1.186	1.490
720.000	1.853	2.235	2.589	2.882	3.114
735.000	3.306	3.473	3.628	3.772	3.910
750.000	4.041	4.167	4.287	4.402	4.514
765.000	4.623	4.728	4.829	4.926	5.020
780.000	5.110	5.195	5.275	5.351	5.423
795.000	5.490	5.552	5.608	5.661	5.708
810.000	5.751	5.789	5.821	5.849	5.872
825.000	5.891	5.907	5.919	5.927	5.932
840.000	5.934	5.934	5.931	5.926	5.919
855.000	5.910	5.900	5.888	5.874	5.860
870.000	5.844	5.827	5.810	5.791	5.771
885.000	5.751	5.730	5.708	5.686	5.664
900.000	5.641	5.618	5.594	5.570	5.546
915.000	5.522	5.498	5.474	5.449	5.425
930.000	5.400	5.375	5.351	5.327	5.303
945.000	5.279	5.255	5.231	5.208	5.184
960.000	5.161	5.138	5.115	5.092	5.069
975.000	5.047	5.025	5.002	4.981	4.959
990.000	4.938	4.917	4.896	4.876	4.856
1,005.000	4.836	4.816	4.796	4.777	4.758
1,020.000	4.739	4.721	4.702	4.684	4.667
1,035.000	4.649	4.632	4.615	4.598	4.582
1,050.000	4.566	4.550	4.534	4.519	4.503
1,065.000	4.488	4.473	4.458	4.444	4.429
1,080.000	4.415	4.401	4.387	4.374	4.360
1,095.000	4.347	4.334	4.321	4.308	4.295
1,110.000	4.283	4.270	4.258	4.246	4.234
1,125.000	4.223	4.211	4.200	4.188	4.177
1,140.000	4.166	4.155	4.144	4.133	4.122
1,155.000	4.112	4.101	4.091	4.081	4.070
1,170.000	4.060	4.050	4.040	4.031	4.021
1,185.000	4.011	4.002	3.993	3.983	3.974
1,200.000	3.965	3.956	3.947	3.938	3.929
1,215.000	3.920	3.912	3.903	3.895	3.886
1,230.000	3.878	3.870	3.862	3.854	3.846
1,245.000	3.838	3.830	3.822	3.815	3.807

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	3.800	3.793	3.785	3.778	3.771
1,275.000	3.764	3.757	3.750	3.744	3.737
1,290.000	3.731	3.724	3.718	3.712	3.705
1,305.000	3.699	3.693	3.687	3.681	3.676
1,320.000	3.670	3.664	3.659	3.654	3.648
1,335.000	3.643	3.638	3.633	3.628	3.623
1,350.000	3.618	3.613	3.608	3.603	3.599
1,365.000	3.594	3.590	3.585	3.581	3.577
1,380.000	3.572	3.568	3.564	3.560	3.556
1,395.000	3.552	3.548	3.544	3.540	3.536
1,410.000	3.532	3.529	3.525	3.521	3.518
1,425.000	3.514	3.511	3.507	3.504	3.501
1,440.000	3.497	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.001	0.001	0.001
120.000	0.001	0.001	0.001	0.001	0.001
135.000	0.001	0.001	0.001	0.001	0.001
150.000	0.001	0.001	0.001	0.001	0.001
165.000	0.002	0.002	0.002	0.002	0.002
180.000	0.002	0.002	0.002	0.002	0.002
195.000	0.002	0.002	0.002	0.003	0.003
210.000	0.003	0.003	0.003	0.003	0.003
225.000	0.003	0.003	0.003	0.003	0.004
240.000	0.004	0.004	0.004	0.004	0.005
255.000	0.005	0.005	0.006	0.006	0.006
270.000	0.007	0.007	0.008	0.009	0.009
285.000	0.010	0.011	0.011	0.012	0.013
300.000	0.014	0.015	0.016	0.017	0.018
315.000	0.019	0.020	0.021	0.023	0.024
330.000	0.025	0.026	0.028	0.029	0.031
345.000	0.032	0.034	0.035	0.037	0.039
360.000	0.041	0.042	0.044	0.046	0.048
375.000	0.050	0.052	0.054	0.056	0.058
390.000	0.061	0.063	0.065	0.067	0.070
405.000	0.072	0.075	0.077	0.080	0.082
420.000	0.085	0.088	0.091	0.093	0.096
435.000	0.099	0.102	0.105	0.108	0.111
450.000	0.114	0.118	0.121	0.124	0.128
465.000	0.131	0.134	0.138	0.141	0.145
480.000	0.149	0.152	0.156	0.160	0.164
495.000	0.168	0.172	0.176	0.181	0.185
510.000	0.190	0.195	0.200	0.205	0.210
525.000	0.216	0.222	0.228	0.234	0.240
540.000	0.247	0.254	0.261	0.269	0.276
555.000	0.284	0.292	0.300	0.309	0.318
570.000	0.327	0.336	0.345	0.355	0.365
585.000	0.375	0.386	0.397	0.409	0.422
600.000	0.434	0.448	0.462	0.476	0.492
615.000	0.507	0.524	0.541	0.559	0.578

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.597	0.617	0.639	0.661	0.684
645.000	0.709	0.735	0.762	0.790	0.819
660.000	0.851	0.883	0.918	0.955	0.994
675.000	1.036	1.080	1.128	1.179	1.233
690.000	1.292	1.356	1.431	1.529	1.659
705.000	1.838	2.080	2.408	2.853	3.427
720.000	4.089	4.763	5.367	5.851	6.234
735.000	6.549	6.821	7.064	7.287	7.494
750.000	7.684	7.861	8.023	8.175	8.319
765.000	8.456	8.584	8.704	8.817	8.925
780.000	9.024	9.114	9.197	9.271	9.339
795.000	9.398	9.448	9.490	9.524	9.550
810.000	9.568	9.577	9.579	9.572	9.559
825.000	9.540	9.515	9.485	9.449	9.410
840.000	9.367	9.320	9.271	9.218	9.164
855.000	9.109	9.052	8.994	8.935	8.875
870.000	8.814	8.753	8.692	8.630	8.569
885.000	8.507	8.446	8.385	8.325	8.266
900.000	8.207	8.148	8.090	8.033	7.976
915.000	7.921	7.866	7.811	7.758	7.705
930.000	7.653	7.602	7.552	7.503	7.454
945.000	7.406	7.359	7.313	7.267	7.223
960.000	7.179	7.135	7.093	7.051	7.009
975.000	6.969	6.929	6.890	6.852	6.815
990.000	6.778	6.742	6.707	6.672	6.638
1,005.000	6.605	6.572	6.540	6.509	6.478
1,020.000	6.448	6.418	6.388	6.359	6.330
1,035.000	6.301	6.273	6.245	6.217	6.185
1,050.000	6.149	6.110	6.070	6.031	5.993
1,065.000	5.956	5.919	5.883	5.848	5.814
1,080.000	5.780	5.747	5.715	5.683	5.652
1,095.000	5.621	5.591	5.562	5.533	5.505
1,110.000	5.477	5.450	5.423	5.396	5.371
1,125.000	5.345	5.321	5.296	5.272	5.249
1,140.000	5.226	5.204	5.181	5.160	5.138
1,155.000	5.117	5.096	5.075	5.055	5.035
1,170.000	5.015	4.996	4.977	4.958	4.940
1,185.000	4.922	4.904	4.886	4.869	4.852
1,200.000	4.835	4.818	4.802	4.785	4.769
1,215.000	4.753	4.737	4.722	4.707	4.692
1,230.000	4.677	4.662	4.648	4.634	4.620
1,245.000	4.606	4.592	4.579	4.566	4.553



Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	4.540	4.528	4.515	4.503	4.491
1,275.000	4.479	4.468	4.456	4.445	4.433
1,290.000	4.422	4.411	4.401	4.390	4.380
1,305.000	4.369	4.359	4.349	4.339	4.330
1,320.000	4.320	4.311	4.302	4.293	4.284
1,335.000	4.275	4.266	4.258	4.250	4.241
1,350.000	4.233	4.225	4.218	4.210	4.202
1,365.000	4.195	4.188	4.180	4.173	4.166
1,380.000	4.159	4.152	4.146	4.139	4.132
1,395.000	4.126	4.120	4.113	4.107	4.101
1,410.000	4.095	4.089	4.084	4.078	4.072
1,425.000	4.067	4.061	4.056	4.051	4.045
1,440.000	4.040	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.001	0.001	0.001	0.001	0.001
120.000	0.001	0.001	0.001	0.001	0.001
135.000	0.001	0.001	0.001	0.001	0.001
150.000	0.001	0.002	0.002	0.002	0.002
165.000	0.002	0.002	0.002	0.002	0.002
180.000	0.002	0.002	0.002	0.003	0.003
195.000	0.003	0.003	0.003	0.003	0.003
210.000	0.003	0.003	0.003	0.004	0.004
225.000	0.004	0.004	0.004	0.005	0.005
240.000	0.005	0.006	0.006	0.007	0.007
255.000	0.008	0.008	0.009	0.010	0.011
270.000	0.011	0.012	0.013	0.014	0.015
285.000	0.016	0.017	0.018	0.019	0.020
300.000	0.022	0.023	0.024	0.026	0.027
315.000	0.029	0.030	0.032	0.033	0.035
330.000	0.037	0.038	0.040	0.042	0.044
345.000	0.046	0.048	0.050	0.052	0.054
360.000	0.057	0.059	0.061	0.064	0.066
375.000	0.069	0.071	0.074	0.076	0.079
390.000	0.082	0.085	0.087	0.090	0.093
405.000	0.096	0.099	0.102	0.106	0.109
420.000	0.112	0.115	0.119	0.122	0.126
435.000	0.129	0.133	0.136	0.140	0.144
450.000	0.148	0.152	0.155	0.159	0.163
465.000	0.168	0.172	0.176	0.180	0.185
480.000	0.189	0.193	0.198	0.203	0.207
495.000	0.212	0.217	0.223	0.228	0.234
510.000	0.240	0.246	0.253	0.260	0.267
525.000	0.274	0.281	0.289	0.298	0.306
540.000	0.315	0.324	0.334	0.344	0.354
555.000	0.365	0.375	0.387	0.398	0.410
570.000	0.422	0.434	0.446	0.459	0.473
585.000	0.487	0.501	0.516	0.531	0.547
600.000	0.564	0.581	0.599	0.617	0.637
615.000	0.657	0.678	0.700	0.722	0.746

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.771	0.797	0.823	0.851	0.880
645.000	0.911	0.944	0.977	1.013	1.050
660.000	1.089	1.130	1.173	1.219	1.268
675.000	1.319	1.374	1.433	1.496	1.563
690.000	1.634	1.711	1.803	1.919	2.075
705.000	2.285	2.567	2.945	3.451	4.101
720.000	4.845	5.596	6.274	6.824	7.248
735.000	7.587	7.875	8.130	8.362	8.575
750.000	8.770	8.949	9.114	9.267	9.412
765.000	9.549	9.678	9.798	9.910	10.017
780.000	10.116	10.204	10.284	10.356	10.420
795.000	10.476	10.522	10.559	10.588	10.607
810.000	10.618	10.619	10.611	10.595	10.571
825.000	10.540	10.503	10.460	10.410	10.357
840.000	10.299	10.238	10.173	10.106	10.036
855.000	9.965	9.892	9.818	9.744	9.668
870.000	9.592	9.516	9.440	9.363	9.287
885.000	9.211	9.135	9.060	8.986	8.912
900.000	8.839	8.767	8.695	8.625	8.556
915.000	8.488	8.421	8.355	8.290	8.227
930.000	8.164	8.103	8.043	7.984	7.926
945.000	7.869	7.813	7.758	7.705	7.652
960.000	7.601	7.550	7.500	7.451	7.404
975.000	7.357	7.311	7.266	7.223	7.180
990.000	7.138	7.097	7.056	7.017	6.979
1,005.000	6.941	6.904	6.868	6.833	6.799
1,020.000	6.764	6.731	6.698	6.666	6.635
1,035.000	6.604	6.574	6.544	6.515	6.487
1,050.000	6.458	6.430	6.403	6.376	6.349
1,065.000	6.322	6.296	6.270	6.244	6.218
1,080.000	6.190	6.157	6.121	6.084	6.047
1,095.000	6.011	5.976	5.942	5.908	5.875
1,110.000	5.843	5.811	5.780	5.749	5.718
1,125.000	5.689	5.659	5.631	5.603	5.575
1,140.000	5.548	5.521	5.495	5.470	5.444
1,155.000	5.419	5.395	5.370	5.347	5.324
1,170.000	5.301	5.278	5.256	5.235	5.213
1,185.000	5.192	5.172	5.151	5.131	5.111
1,200.000	5.091	5.072	5.053	5.034	5.015
1,215.000	4.997	4.979	4.961	4.943	4.926
1,230.000	4.909	4.893	4.877	4.860	4.845
1,245.000	4.829	4.814	4.799	4.784	4.769

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	4.755	4.741	4.727	4.713	4.700
1,275.000	4.687	4.674	4.661	4.648	4.636
1,290.000	4.624	4.612	4.600	4.589	4.577
1,305.000	4.566	4.555	4.544	4.533	4.523
1,320.000	4.512	4.502	4.492	4.482	4.472
1,335.000	4.462	4.453	4.443	4.434	4.425
1,350.000	4.416	4.407	4.398	4.389	4.381
1,365.000	4.372	4.364	4.356	4.347	4.340
1,380.000	4.332	4.324	4.316	4.309	4.301
1,395.000	4.294	4.287	4.280	4.273	4.266
1,410.000	4.259	4.253	4.246	4.240	4.233
1,425.000	4.227	4.221	4.215	4.209	4.203
1,440.000	4.197	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.001	0.001
90.000	0.001	0.001	0.001	0.001	0.001
105.000	0.001	0.001	0.001	0.001	0.001
120.000	0.001	0.002	0.002	0.002	0.002
135.000	0.002	0.002	0.002	0.002	0.002
150.000	0.002	0.003	0.003	0.003	0.003
165.000	0.003	0.003	0.003	0.003	0.003
180.000	0.004	0.004	0.004	0.004	0.005
195.000	0.005	0.005	0.006	0.007	0.007
210.000	0.008	0.009	0.009	0.010	0.011
225.000	0.012	0.013	0.014	0.015	0.016
240.000	0.018	0.019	0.020	0.022	0.023
255.000	0.025	0.026	0.028	0.030	0.031
270.000	0.033	0.035	0.037	0.039	0.041
285.000	0.043	0.046	0.048	0.050	0.053
300.000	0.055	0.058	0.060	0.063	0.066
315.000	0.068	0.071	0.074	0.077	0.080
330.000	0.083	0.086	0.090	0.093	0.096
345.000	0.100	0.103	0.107	0.111	0.114
360.000	0.118	0.122	0.126	0.130	0.134
375.000	0.138	0.143	0.147	0.151	0.156
390.000	0.160	0.165	0.169	0.174	0.179
405.000	0.184	0.189	0.194	0.199	0.204
420.000	0.209	0.215	0.220	0.226	0.232
435.000	0.238	0.244	0.250	0.257	0.263
450.000	0.270	0.277	0.284	0.292	0.299
465.000	0.307	0.315	0.323	0.332	0.340
480.000	0.349	0.358	0.368	0.377	0.387
495.000	0.398	0.409	0.420	0.431	0.444
510.000	0.456	0.469	0.483	0.497	0.512
525.000	0.526	0.542	0.558	0.574	0.591
540.000	0.609	0.627	0.646	0.666	0.685
555.000	0.706	0.727	0.748	0.770	0.792
570.000	0.814	0.837	0.861	0.885	0.910
585.000	0.935	0.962	0.989	1.018	1.047
600.000	1.078	1.109	1.141	1.175	1.210
615.000	1.246	1.284	1.323	1.364	1.406

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	1.450	1.495	1.543	1.592	1.643
645.000	1.696	1.752	1.810	1.870	1.933
660.000	1.999	2.067	2.139	2.214	2.294
675.000	2.378	2.467	2.560	2.659	2.762
690.000	2.870	2.986	3.119	3.287	3.506
705.000	3.797	4.183	4.691	5.368	6.237
720.000	7.228	8.217	9.085	9.767	10.281
735.000	10.686	11.027	11.330	11.604	11.843
750.000	12.045	12.210	12.340	12.445	12.530
765.000	12.598	12.650	12.688	12.716	12.737
780.000	12.748	12.749	12.742	12.730	12.712
795.000	12.688	12.658	12.622	12.583	12.540
810.000	12.492	12.440	12.383	12.323	12.261
825.000	12.198	12.134	12.070	12.003	11.935
840.000	11.868	11.800	11.734	11.666	11.598
855.000	11.529	11.459	11.385	11.309	11.230
870.000	11.148	11.064	10.977	10.888	10.798
885.000	10.708	10.617	10.527	10.436	10.345
900.000	10.254	10.164	10.074	9.984	9.896
915.000	9.810	9.724	9.638	9.555	9.472
930.000	9.391	9.311	9.232	9.155	9.079
945.000	9.004	8.931	8.859	8.788	8.719
960.000	8.651	8.584	8.519	8.455	8.393
975.000	8.332	8.272	8.214	8.158	8.102
990.000	8.048	7.995	7.944	7.894	7.845
1,005.000	7.797	7.750	7.704	7.660	7.616
1,020.000	7.574	7.533	7.492	7.452	7.413
1,035.000	7.375	7.338	7.301	7.266	7.231
1,050.000	7.197	7.163	7.130	7.098	7.066
1,065.000	7.036	7.005	6.976	6.947	6.919
1,080.000	6.891	6.864	6.838	6.812	6.786
1,095.000	6.761	6.736	6.712	6.688	6.665
1,110.000	6.642	6.619	6.597	6.575	6.553
1,125.000	6.532	6.511	6.491	6.471	6.450
1,140.000	6.430	6.410	6.390	6.370	6.351
1,155.000	6.331	6.311	6.292	6.273	6.254
1,170.000	6.235	6.215	6.193	6.167	6.137
1,185.000	6.105	6.073	6.042	6.012	5.982
1,200.000	5.952	5.923	5.895	5.866	5.839
1,215.000	5.811	5.784	5.758	5.732	5.706
1,230.000	5.681	5.656	5.631	5.608	5.584
1,245.000	5.561	5.538	5.516	5.494	5.473

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	5.452	5.431	5.410	5.390	5.371
1,275.000	5.351	5.332	5.314	5.296	5.278
1,290.000	5.260	5.243	5.226	5.210	5.193
1,305.000	5.178	5.162	5.147	5.132	5.117
1,320.000	5.102	5.088	5.074	5.060	5.046
1,335.000	5.033	5.020	5.007	4.994	4.982
1,350.000	4.970	4.958	4.946	4.934	4.923
1,365.000	4.912	4.901	4.890	4.879	4.869
1,380.000	4.859	4.848	4.838	4.828	4.819
1,395.000	4.809	4.799	4.790	4.781	4.771
1,410.000	4.762	4.753	4.744	4.736	4.727
1,425.000	4.719	4.710	4.702	4.694	4.686
1,440.000	4.678	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.000
300.000	0.000	0.000	0.000	0.000	0.000
315.000	0.000	0.000	0.000	0.000	0.000
330.000	0.000	0.000	0.000	0.000	0.000
345.000	0.000	0.000	0.000	0.000	0.000
360.000	0.000	0.000	0.000	0.000	0.000
375.000	0.000	0.000	0.000	0.001	0.001
390.000	0.001	0.001	0.001	0.001	0.001
405.000	0.001	0.001	0.001	0.001	0.001
420.000	0.001	0.001	0.001	0.001	0.001
435.000	0.001	0.001	0.001	0.001	0.001
450.000	0.001	0.002	0.002	0.002	0.002
465.000	0.002	0.002	0.002	0.002	0.002
480.000	0.002	0.002	0.002	0.003	0.003
495.000	0.003	0.003	0.003	0.003	0.003
510.000	0.003	0.004	0.004	0.004	0.004
525.000	0.004	0.004	0.005	0.005	0.005
540.000	0.005	0.005	0.006	0.006	0.006
555.000	0.006	0.007	0.007	0.007	0.008
570.000	0.008	0.009	0.009	0.010	0.010
585.000	0.011	0.012	0.012	0.013	0.014
600.000	0.014	0.015	0.016	0.017	0.018
615.000	0.019	0.020	0.021	0.022	0.023



Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.025	0.026	0.028	0.029	0.031
645.000	0.032	0.034	0.036	0.038	0.040
660.000	0.042	0.045	0.047	0.050	0.052
675.000	0.055	0.058	0.061	0.065	0.068
690.000	0.072	0.076	0.081	0.086	0.092
705.000	0.100	0.110	0.124	0.143	0.168
720.000	0.201	0.243	0.295	0.355	0.423
735.000	0.496	0.573	0.649	0.718	0.778
750.000	0.831	0.876	0.917	0.953	0.985
765.000	1.013	1.037	1.059	1.078	1.096
780.000	1.112	1.127	1.142	1.156	1.169
795.000	1.181	1.193	1.204	1.215	1.225
810.000	1.234	1.243	1.251	1.258	1.265
825.000	1.271	1.276	1.281	1.285	1.288
840.000	1.291	1.293	1.295	1.296	1.297
855.000	1.297	1.297	1.296	1.295	1.294
870.000	1.293	1.291	1.289	1.286	1.284
885.000	1.281	1.278	1.275	1.272	1.269
900.000	1.265	1.261	1.258	1.254	1.250
915.000	1.246	1.242	1.237	1.233	1.229
930.000	1.225	1.220	1.216	1.211	1.207
945.000	1.202	1.197	1.193	1.188	1.184
960.000	1.179	1.175	1.170	1.166	1.161
975.000	1.157	1.153	1.148	1.144	1.140
990.000	1.136	1.132	1.128	1.124	1.120
1,005.000	1.116	1.112	1.108	1.104	1.101
1,020.000	1.097	1.094	1.090	1.087	1.083
1,035.000	1.080	1.077	1.074	1.070	1.067
1,050.000	1.064	1.061	1.058	1.055	1.052
1,065.000	1.049	1.047	1.044	1.042	1.039
1,080.000	1.037	1.034	1.032	1.030	1.027
1,095.000	1.025	1.023	1.021	1.019	1.017
1,110.000	1.015	1.013	1.011	1.009	1.007
1,125.000	1.005	1.003	1.001	0.999	0.998
1,140.000	0.996	0.994	0.993	0.991	0.989
1,155.000	0.987	0.985	0.983	0.981	0.979
1,170.000	0.976	0.974	0.972	0.969	0.967
1,185.000	0.965	0.962	0.960	0.958	0.955
1,200.000	0.953	0.951	0.948	0.946	0.944
1,215.000	0.941	0.939	0.937	0.934	0.932
1,230.000	0.930	0.928	0.925	0.923	0.921
1,245.000	0.919	0.917	0.915	0.913	0.911

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	0.910	0.908	0.906	0.904	0.902
1,275.000	0.901	0.899	0.897	0.896	0.894
1,290.000	0.892	0.891	0.889	0.888	0.886
1,305.000	0.885	0.883	0.882	0.880	0.879
1,320.000	0.877	0.876	0.875	0.873	0.872
1,335.000	0.871	0.870	0.868	0.867	0.866
1,350.000	0.865	0.863	0.862	0.861	0.860
1,365.000	0.859	0.858	0.857	0.855	0.854
1,380.000	0.853	0.852	0.851	0.850	0.849
1,395.000	0.848	0.847	0.846	0.845	0.845
1,410.000	0.844	0.843	0.842	0.841	0.840
1,425.000	0.839	0.838	0.838	0.837	0.836
1,440.000	0.835	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.001
300.000	0.001	0.001	0.001	0.001	0.001
315.000	0.001	0.001	0.001	0.001	0.001
330.000	0.001	0.001	0.001	0.001	0.001
345.000	0.001	0.001	0.001	0.002	0.002
360.000	0.002	0.002	0.002	0.002	0.002
375.000	0.002	0.002	0.003	0.003	0.003
390.000	0.003	0.003	0.003	0.003	0.004
405.000	0.004	0.004	0.004	0.004	0.004
420.000	0.005	0.005	0.005	0.005	0.006
435.000	0.006	0.006	0.007	0.007	0.007
450.000	0.008	0.008	0.009	0.009	0.010
465.000	0.010	0.011	0.011	0.012	0.013
480.000	0.014	0.014	0.015	0.016	0.017
495.000	0.018	0.018	0.019	0.020	0.021
510.000	0.022	0.024	0.025	0.026	0.027
525.000	0.029	0.030	0.031	0.033	0.034
540.000	0.036	0.038	0.039	0.041	0.043
555.000	0.045	0.047	0.049	0.051	0.053
570.000	0.055	0.057	0.060	0.062	0.064
585.000	0.067	0.069	0.071	0.074	0.077
600.000	0.079	0.082	0.085	0.088	0.091
615.000	0.094	0.097	0.100	0.104	0.108

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.111	0.115	0.120	0.124	0.128
645.000	0.133	0.138	0.143	0.149	0.154
660.000	0.160	0.166	0.173	0.179	0.186
675.000	0.194	0.201	0.209	0.218	0.227
690.000	0.237	0.247	0.258	0.271	0.285
705.000	0.303	0.325	0.353	0.394	0.454
720.000	0.543	0.664	0.808	0.968	1.117
735.000	1.249	1.367	1.463	1.541	1.602
750.000	1.650	1.687	1.716	1.739	1.757
765.000	1.772	1.786	1.798	1.809	1.820
780.000	1.830	1.840	1.850	1.859	1.868
795.000	1.876	1.884	1.891	1.897	1.902
810.000	1.907	1.910	1.913	1.914	1.915
825.000	1.914	1.913	1.910	1.907	1.903
840.000	1.898	1.892	1.885	1.878	1.871
855.000	1.862	1.854	1.844	1.835	1.825
870.000	1.815	1.805	1.795	1.784	1.774
885.000	1.763	1.752	1.741	1.730	1.719
900.000	1.707	1.695	1.683	1.672	1.660
915.000	1.648	1.637	1.625	1.614	1.602
930.000	1.591	1.580	1.570	1.559	1.549
945.000	1.538	1.528	1.519	1.509	1.499
960.000	1.490	1.481	1.472	1.463	1.455
975.000	1.446	1.438	1.430	1.422	1.415
990.000	1.407	1.400	1.393	1.386	1.379
1,005.000	1.372	1.366	1.360	1.353	1.347
1,020.000	1.341	1.335	1.329	1.323	1.317
1,035.000	1.312	1.307	1.301	1.297	1.295
1,050.000	1.297	1.302	1.306	1.308	1.308
1,065.000	1.307	1.306	1.303	1.300	1.297
1,080.000	1.292	1.288	1.283	1.279	1.274
1,095.000	1.269	1.264	1.258	1.253	1.248
1,110.000	1.243	1.238	1.233	1.228	1.223
1,125.000	1.218	1.213	1.208	1.203	1.198
1,140.000	1.193	1.189	1.184	1.180	1.175
1,155.000	1.171	1.167	1.162	1.158	1.154
1,170.000	1.150	1.146	1.143	1.139	1.135
1,185.000	1.131	1.128	1.124	1.121	1.117
1,200.000	1.114	1.110	1.107	1.104	1.101
1,215.000	1.098	1.095	1.092	1.089	1.086
1,230.000	1.083	1.080	1.077	1.075	1.072
1,245.000	1.069	1.067	1.064	1.062	1.059

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	1.057	1.054	1.052	1.050	1.048
1,275.000	1.046	1.043	1.041	1.039	1.038
1,290.000	1.036	1.034	1.032	1.030	1.029
1,305.000	1.027	1.025	1.024	1.022	1.021
1,320.000	1.019	1.018	1.016	1.015	1.013
1,335.000	1.012	1.011	1.009	1.008	1.007
1,350.000	1.005	1.004	1.003	1.001	1.000
1,365.000	0.999	0.998	0.997	0.996	0.995
1,380.000	0.993	0.992	0.991	0.990	0.989
1,395.000	0.988	0.986	0.985	0.984	0.983
1,410.000	0.981	0.980	0.978	0.977	0.976
1,425.000	0.974	0.973	0.971	0.970	0.969
1,440.000	0.967	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.001	0.001
285.000	0.001	0.001	0.001	0.001	0.001
300.000	0.001	0.001	0.001	0.001	0.001
315.000	0.001	0.001	0.001	0.001	0.001
330.000	0.001	0.002	0.002	0.002	0.002
345.000	0.002	0.002	0.002	0.002	0.002
360.000	0.003	0.003	0.003	0.003	0.003
375.000	0.003	0.003	0.004	0.004	0.004
390.000	0.004	0.004	0.005	0.005	0.005
405.000	0.005	0.006	0.006	0.006	0.007
420.000	0.007	0.008	0.008	0.008	0.009
435.000	0.010	0.010	0.011	0.011	0.012
450.000	0.013	0.013	0.014	0.015	0.016
465.000	0.017	0.018	0.019	0.020	0.021
480.000	0.022	0.023	0.024	0.025	0.026
495.000	0.028	0.029	0.030	0.032	0.033
510.000	0.035	0.036	0.038	0.039	0.041
525.000	0.043	0.045	0.047	0.049	0.051
540.000	0.053	0.055	0.057	0.059	0.061
555.000	0.064	0.066	0.069	0.071	0.074
570.000	0.076	0.079	0.082	0.085	0.088
585.000	0.090	0.093	0.096	0.100	0.103
600.000	0.106	0.110	0.113	0.117	0.121
615.000	0.125	0.129	0.133	0.138	0.142

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.147	0.152	0.157	0.163	0.168
645.000	0.174	0.180	0.186	0.193	0.200
660.000	0.207	0.214	0.221	0.229	0.238
675.000	0.246	0.256	0.265	0.275	0.286
690.000	0.298	0.310	0.323	0.337	0.354
705.000	0.374	0.400	0.437	0.493	0.575
720.000	0.690	0.833	0.996	1.159	1.320
735.000	1.467	1.595	1.701	1.784	1.847
750.000	1.894	1.929	1.954	1.973	1.987
765.000	1.999	2.009	2.017	2.025	2.032
780.000	2.040	2.047	2.054	2.060	2.066
795.000	2.072	2.077	2.082	2.086	2.089
810.000	2.092	2.094	2.094	2.094	2.093
825.000	2.090	2.087	2.082	2.077	2.071
840.000	2.065	2.057	2.049	2.040	2.030
855.000	2.020	2.009	1.998	1.986	1.974
870.000	1.961	1.949	1.936	1.923	1.910
885.000	1.897	1.884	1.871	1.858	1.845
900.000	1.831	1.818	1.805	1.793	1.780
915.000	1.767	1.754	1.742	1.730	1.717
930.000	1.704	1.691	1.678	1.666	1.653
945.000	1.641	1.629	1.617	1.605	1.593
960.000	1.582	1.571	1.560	1.549	1.539
975.000	1.529	1.519	1.509	1.499	1.490
990.000	1.481	1.472	1.464	1.456	1.447
1,005.000	1.440	1.432	1.424	1.417	1.410
1,020.000	1.403	1.396	1.390	1.383	1.377
1,035.000	1.371	1.365	1.359	1.354	1.348
1,050.000	1.342	1.336	1.331	1.325	1.320
1,065.000	1.315	1.310	1.305	1.300	1.295
1,080.000	1.294	1.296	1.301	1.305	1.308
1,095.000	1.309	1.309	1.308	1.306	1.303
1,110.000	1.300	1.296	1.292	1.288	1.284
1,125.000	1.279	1.274	1.270	1.265	1.260
1,140.000	1.255	1.250	1.245	1.240	1.236
1,155.000	1.231	1.226	1.221	1.217	1.212
1,170.000	1.207	1.203	1.198	1.194	1.189
1,185.000	1.185	1.181	1.177	1.172	1.168
1,200.000	1.164	1.160	1.156	1.153	1.149
1,215.000	1.145	1.142	1.138	1.134	1.131
1,230.000	1.128	1.124	1.121	1.118	1.115
1,245.000	1.112	1.108	1.106	1.103	1.100

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	1.097	1.094	1.092	1.089	1.086
1,275.000	1.084	1.081	1.079	1.077	1.074
1,290.000	1.072	1.070	1.067	1.065	1.063
1,305.000	1.061	1.059	1.057	1.055	1.053
1,320.000	1.051	1.049	1.047	1.045	1.043
1,335.000	1.042	1.040	1.038	1.037	1.035
1,350.000	1.034	1.032	1.031	1.030	1.028
1,365.000	1.027	1.026	1.024	1.023	1.022
1,380.000	1.020	1.019	1.018	1.017	1.016
1,395.000	1.014	1.013	1.012	1.011	1.010
1,410.000	1.009	1.008	1.007	1.006	1.005
1,425.000	1.004	1.003	1.002	1.001	1.000
1,440.000	0.999	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.001
240.000	0.001	0.001	0.001	0.001	0.001
255.000	0.001	0.001	0.001	0.001	0.001
270.000	0.001	0.001	0.001	0.001	0.001
285.000	0.002	0.002	0.002	0.002	0.002
300.000	0.002	0.002	0.002	0.003	0.003
315.000	0.003	0.003	0.003	0.003	0.004
330.000	0.004	0.004	0.004	0.004	0.005
345.000	0.005	0.005	0.006	0.006	0.007
360.000	0.007	0.007	0.008	0.009	0.009
375.000	0.010	0.010	0.011	0.012	0.013
390.000	0.014	0.015	0.015	0.016	0.017
405.000	0.019	0.020	0.021	0.022	0.023
420.000	0.024	0.026	0.027	0.029	0.030
435.000	0.032	0.033	0.035	0.037	0.038
450.000	0.040	0.042	0.044	0.045	0.047
465.000	0.049	0.051	0.053	0.055	0.057
480.000	0.060	0.062	0.064	0.066	0.068
495.000	0.071	0.073	0.076	0.078	0.081
510.000	0.083	0.086	0.089	0.092	0.094
525.000	0.097	0.101	0.104	0.107	0.111
540.000	0.114	0.118	0.122	0.126	0.130
555.000	0.134	0.138	0.143	0.147	0.152
570.000	0.157	0.162	0.167	0.172	0.177
585.000	0.182	0.187	0.192	0.198	0.203
600.000	0.209	0.215	0.221	0.227	0.233
615.000	0.240	0.246	0.253	0.260	0.268

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.275	0.283	0.291	0.299	0.308
645.000	0.317	0.326	0.335	0.344	0.354
660.000	0.365	0.375	0.386	0.398	0.410
675.000	0.423	0.437	0.452	0.468	0.487
690.000	0.508	0.532	0.560	0.592	0.632
705.000	0.680	0.737	0.812	0.911	1.034
720.000	1.181	1.365	1.570	1.781	1.976
735.000	2.149	2.287	2.393	2.471	2.531
750.000	2.559	2.564	2.569	2.574	2.577
765.000	2.580	2.582	2.583	2.584	2.584
780.000	2.584	2.583	2.581	2.579	2.577
795.000	2.574	2.571	2.568	2.564	2.559
810.000	2.555	2.550	2.546	2.540	2.535
825.000	2.530	2.522	2.509	2.491	2.470
840.000	2.445	2.419	2.391	2.362	2.335
855.000	2.309	2.284	2.263	2.244	2.227
870.000	2.212	2.198	2.185	2.173	2.161
885.000	2.149	2.136	2.123	2.110	2.096
900.000	2.083	2.069	2.055	2.040	2.026
915.000	2.011	1.996	1.981	1.967	1.952
930.000	1.937	1.923	1.909	1.894	1.880
945.000	1.866	1.853	1.839	1.826	1.813
960.000	1.800	1.787	1.774	1.762	1.749
975.000	1.737	1.725	1.713	1.701	1.689
990.000	1.677	1.665	1.654	1.643	1.632
1,005.000	1.621	1.610	1.600	1.590	1.580
1,020.000	1.571	1.562	1.553	1.544	1.535
1,035.000	1.527	1.519	1.511	1.503	1.496
1,050.000	1.488	1.481	1.474	1.467	1.461
1,065.000	1.454	1.448	1.442	1.436	1.430
1,080.000	1.424	1.418	1.413	1.408	1.402
1,095.000	1.397	1.392	1.387	1.383	1.378
1,110.000	1.373	1.369	1.365	1.360	1.356
1,125.000	1.352	1.347	1.343	1.339	1.334
1,140.000	1.330	1.326	1.322	1.318	1.314
1,155.000	1.310	1.307	1.303	1.299	1.296
1,170.000	1.292	1.289	1.289	1.291	1.297
1,185.000	1.302	1.306	1.309	1.310	1.310
1,200.000	1.309	1.307	1.305	1.302	1.299
1,215.000	1.295	1.292	1.288	1.284	1.280
1,230.000	1.275	1.271	1.267	1.263	1.258
1,245.000	1.254	1.250	1.246	1.242	1.238

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	1.233	1.229	1.225	1.222	1.218
1,275.000	1.214	1.210	1.206	1.203	1.199
1,290.000	1.195	1.192	1.188	1.185	1.182
1,305.000	1.178	1.175	1.172	1.169	1.166
1,320.000	1.163	1.160	1.157	1.154	1.152
1,335.000	1.149	1.146	1.144	1.141	1.139
1,350.000	1.136	1.134	1.132	1.129	1.127
1,365.000	1.125	1.123	1.120	1.118	1.116
1,380.000	1.114	1.112	1.110	1.108	1.106
1,395.000	1.104	1.103	1.101	1.099	1.097
1,410.000	1.096	1.094	1.092	1.090	1.089
1,425.000	1.087	1.086	1.084	1.083	1.081
1,440.000	1.080	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Area Volume Curve  
 Label: EX Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
550.40	0.0	0.00	0.00	0.000	0.000
552.00	0.0	90,439.27	90,439.27	1.107	1.107
554.00	0.0	112,119.08	303,255.77	4.641	5.749
555.00	0.0	116,871.48	343,461.19	2.628	8.377

Subsection: Volume Equations  
Label: EX Lake #1  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: EX Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
550.40	0.0	0.00	0.00	0.000	0.000
552.00	0.0	90,439.27	90,439.27	1.107	1.107
554.00	0.0	112,119.08	303,255.77	4.641	5.749
555.00	0.0	116,871.48	343,461.19	2.628	8.377

Subsection: Volume Equations  
Label: EX Lake #1  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: EX Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
550.40	0.0	0.00	0.00	0.000	0.000
552.00	0.0	90,439.27	90,439.27	1.107	1.107
554.00	0.0	112,119.08	303,255.77	4.641	5.749
555.00	0.0	116,871.48	343,461.19	2.628	8.377



Subsection: Volume Equations  
Label: EX Lake #1  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume              Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
550.40	0.0	0.00	0.00	0.000	0.000
552.00	0.0	90,439.27	90,439.27	1.107	1.107
554.00	0.0	112,119.08	303,255.77	4.641	5.749
555.00	0.0	116,871.48	343,461.19	2.628	8.377

Subsection: Volume Equations  
Label: EX Lake #1  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2            Lower and upper elevations of the increment  
              Area1, Area2      Areas computed for EL1, EL2, respectively  
              Volume            Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: KB-LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
525.00	0.0	54,390.67	0.00	0.000	0.000
526.00	0.0	58,575.39	169,410.32	1.296	1.296
528.00	0.0	67,787.05	189,375.56	2.898	4.195
530.00	0.0	77,270.45	217,431.09	3.328	7.522
532.00	0.0	87,155.59	246,490.35	3.772	11.295
534.00	0.0	97,440.72	276,751.09	4.236	15.530

Subsection: Volume Equations  
Label: KB-LAKE  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: KB-LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
525.00	0.0	54,390.67	0.00	0.000	0.000
526.00	0.0	58,575.39	169,410.32	1.296	1.296
528.00	0.0	67,787.05	189,375.56	2.898	4.195
530.00	0.0	77,270.45	217,431.09	3.328	7.522
532.00	0.0	87,155.59	246,490.35	3.772	11.295
534.00	0.0	97,440.72	276,751.09	4.236	15.530

Subsection: Volume Equations  
Label: KB-LAKE  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume              Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: KB-LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
525.00	0.0	54,390.67	0.00	0.000	0.000
526.00	0.0	58,575.39	169,410.32	1.296	1.296
528.00	0.0	67,787.05	189,375.56	2.898	4.195
530.00	0.0	77,270.45	217,431.09	3.328	7.522
532.00	0.0	87,155.59	246,490.35	3.772	11.295
534.00	0.0	97,440.72	276,751.09	4.236	15.530



Subsection: Volume Equations  
Label: KB-LAKE  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume              Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sq (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
525.00	0.0	54,390.67	0.00	0.000	0.000
526.00	0.0	58,575.39	169,410.32	1.296	1.296
528.00	0.0	67,787.05	189,375.56	2.898	4.195
530.00	0.0	77,270.45	217,431.09	3.328	7.522
532.00	0.0	87,155.59	246,490.35	3.772	11.295
534.00	0.0	97,440.72	276,751.09	4.236	15.530

Subsection: Volume Equations  
Label: KB-LAKE  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2            Lower and upper elevations of the increment  
              Area1, Area2      Areas computed for EL1, EL2, respectively  
              Volume            Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: SOUTH LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
521.00	0.0	26,920.08	0.00	0.000	0.000
525.00	0.0	37,644.55	96,398.49	2.951	2.951
526.00	0.0	40,410.61	117,058.23	0.896	3.846

Subsection: Volume Equations  
Label: SOUTH LAKE  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: SOUTH LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
521.00	0.0	26,920.08	0.00	0.000	0.000
525.00	0.0	37,644.55	96,398.49	2.951	2.951
526.00	0.0	40,410.61	117,058.23	0.896	3.846

Subsection: Volume Equations  
Label: SOUTH LAKE  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: SOUTH LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
521.00	0.0	26,920.08	0.00	0.000	0.000
525.00	0.0	37,644.55	96,398.49	2.951	2.951
526.00	0.0	40,410.61	117,058.23	0.896	3.846



Subsection: Volume Equations  
Label: SOUTH LAKE  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2            Lower and upper elevations of the increment  
              Area1, Area2       Areas computed for EL1, EL2, respectively  
              Volume            Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (ft <sup>2</sup> )	A1+A2+sqr (A1*A2) (ft <sup>2</sup> )	Volume (ac-ft)	Volume (Total) (ac-ft)
521.00	0.0	26,920.08	0.00	0.000	0.000
525.00	0.0	37,644.55	96,398.49	2.951	2.951
526.00	0.0	40,410.61	117,058.23	0.896	3.846

Subsection: Volume Equations  
Label: SOUTH LAKE  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Requested Pond Water Surface Elevations	
Minimum (Headwater)	525.00 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	534.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - low	Forward	C1	526.81	534.00
Rectangular Weir	Weir - New	Forward	C1	528.00	529.25
Rectangular Weir	Weir - high	Forward	C1	529.25	534.00
Inlet Box	R0	Forward	C1	532.10	534.00
Orifice-Circular	Orifice - WQv	Forward	C1	525.00	532.00
Culvert-Circular	C1	Forward	TW	522.20	534.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
Label: Outlet KB  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

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Structure ID: R0	
Structure Type: Inlet Box	
<hr/>	
Number of Openings	1
Elevation	532.10 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	20.63 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

---

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	54.0 in
Length	47.00 ft
Length (Computed Barrel)	47.00 ft
Slope (Computed)	0.014 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.004
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.154
T2 ratio (HW/D)	1.300
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	527.39 ft	T1 Flow	118.08 ft <sup>3</sup> /s
T2 Elevation	528.05 ft	T2 Flow	134.95 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Structure ID: Weir - high	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	529.25 ft
Weir Length	2.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - New	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	528.00 ft
Weir Length	1.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - low	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	526.81 ft
Weir Length	2.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - WQv	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	525.00 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Requested Pond Water Surface Elevations	
Minimum (Headwater)	525.00 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	534.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - low	Forward	C1	526.81	534.00
Rectangular Weir	Weir - New	Forward	C1	528.00	529.25
Rectangular Weir	Weir - high	Forward	C1	529.25	534.00
Inlet Box	R0	Forward	C1	532.10	534.00
Orifice-Circular	Orifice - WQv	Forward	C1	525.00	532.00
Culvert-Circular	C1	Forward	TW	522.20	534.00
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
Label: Outlet KB  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

---

Structure ID: R0	
Structure Type: Inlet Box	
<hr/>	
Number of Openings	1
Elevation	532.10 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	20.63 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

---

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	54.0 in
Length	47.00 ft
Length (Computed Barrel)	47.00 ft
Slope (Computed)	0.014 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.004
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.154
T2 ratio (HW/D)	1.300
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	527.39 ft	T1 Flow	118.08 ft <sup>3</sup> /s
T2 Elevation	528.05 ft	T2 Flow	134.95 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Structure ID: Weir - high	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	529.25 ft
Weir Length	2.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - New	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	528.00 ft
Weir Length	1.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - low	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	526.81 ft
Weir Length	2.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - WQv	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	525.00 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Requested Pond Water Surface Elevations	
Minimum (Headwater)	525.00 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	534.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - low	Forward	C1	526.81	534.00
Rectangular Weir	Weir - New	Forward	C1	528.00	529.25
Rectangular Weir	Weir - high	Forward	C1	529.25	534.00
Inlet Box	R0	Forward	C1	532.10	534.00
Orifice-Circular	Orifice - WQv	Forward	C1	525.00	532.00
Culvert-Circular	C1	Forward	TW	522.20	534.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
Label: Outlet KB  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

---

Structure ID: R0	
Structure Type: Inlet Box	
<hr/>	
Number of Openings	1
Elevation	532.10 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	20.63 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

---

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	54.0 in
Length	47.00 ft
Length (Computed Barrel)	47.00 ft
Slope (Computed)	0.014 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.004
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.154
T2 ratio (HW/D)	1.300
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	527.39 ft	T1 Flow	118.08 ft <sup>3</sup> /s
T2 Elevation	528.05 ft	T2 Flow	134.95 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Structure ID: Weir - high	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	529.25 ft
Weir Length	2.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - New	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	528.00 ft
Weir Length	1.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - low	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	526.81 ft
Weir Length	2.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - WQv	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	525.00 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	525.00 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	534.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Rectangular Weir	Weir - low	Forward	C1	526.81	534.00
Rectangular Weir	Weir - New	Forward	C1	528.00	529.25
Rectangular Weir	Weir - high	Forward	C1	529.25	534.00
Inlet Box	R0	Forward	C1	532.10	534.00
Orifice-Circular	Orifice - WQv	Forward	C1	525.00	532.00
Culvert-Circular	C1	Forward	TW	522.20	534.00
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
Label: Outlet KB  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

---

Structure ID: R0	
Structure Type: Inlet Box	
<hr/>	
Number of Openings	1
Elevation	532.10 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	20.63 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

---

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	54.0 in
Length	47.00 ft
Length (Computed Barrel)	47.00 ft
Slope (Computed)	0.014 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.004
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.154
T2 ratio (HW/D)	1.300
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	527.39 ft	T1 Flow	118.08 ft <sup>3</sup> /s
T2 Elevation	528.05 ft	T2 Flow	134.95 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Structure ID: Weir - high	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	529.25 ft
Weir Length	2.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - New	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	528.00 ft
Weir Length	1.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Weir - low	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	526.81 ft
Weir Length	2.00 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: Orifice - WQv	
Structure Type: Orifice-Circular	
Number of Openings	1
Elevation	525.00 ft
Orifice Diameter	3.0 in
Orifice Coefficient	0.600
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Requested Pond Water Surface Elevations	
Minimum (Headwater)	550.40 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	555.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular Tailwater Settings	C1 Tailwater	Forward	TW	550.40 (N/A)	555.00 (N/A)

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	127.00 ft
Length (Computed Barrel)	128.05 ft
Slope (Computed)	0.129 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.096
T2 ratio (HW/D)	1.242
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	551.77 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	551.95 ft	T2 Flow	5.49 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
Label: Outlet Ex Lake #1  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Requested Pond Water Surface Elevations	
Minimum (Headwater)	550.40 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	555.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular Tailwater Settings	C1 Tailwater	Forward	TW	550.40 (N/A)	555.00 (N/A)

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	127.00 ft
Length (Computed Barrel)	128.05 ft
Slope (Computed)	0.129 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.096
T2 ratio (HW/D)	1.242
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	551.77 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	551.95 ft	T2 Flow	5.49 ft <sup>3</sup> /s



Subsection: Outlet Input Data  
Label: Outlet Ex Lake #1  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Requested Pond Water Surface Elevations	
Minimum (Headwater)	550.40 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	555.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular Tailwater Settings	C1 Tailwater	Forward	TW	550.40 (N/A)	555.00 (N/A)

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	127.00 ft
Length (Computed Barrel)	128.05 ft
Slope (Computed)	0.129 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.096
T2 ratio (HW/D)	1.242
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	551.77 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	551.95 ft	T2 Flow	5.49 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
Label: Outlet Ex Lake #1  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	550.40 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	555.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular Tailwater Settings	C1 Tailwater	Forward	TW	550.40 (N/A)	555.00 (N/A)

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	127.00 ft
Length (Computed Barrel)	128.05 ft
Slope (Computed)	0.129 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.096
T2 ratio (HW/D)	1.242
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	551.77 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	551.95 ft	T2 Flow	5.49 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
Label: Outlet Ex Lake #1  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Requested Pond Water Surface Elevations	
Minimum (Headwater)	521.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	526.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 1	Forward	TW	524.50	526.00
Rectangular Weir	Weir - 1	Forward	TW	522.00	526.00
Tailwater Settings	Tailwater			(N/A)	(N/A)



Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

---

Structure ID: Riser - 1	
Structure Type: Inlet Box	
Number of Openings	1
Elevation	524.50 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	524.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

---

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	522.00 ft
Weir Length	7.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

---

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

---

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

---

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Requested Pond Water Surface Elevations	
Minimum (Headwater)	521.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	526.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 1	Forward	TW	524.50	526.00
Rectangular Weir	Weir - 1	Forward	TW	522.00	526.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Structure ID: Riser - 1 Structure Type: Inlet Box	
Number of Openings	1
Elevation	524.50 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	524.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True
Structure ID: Weir - 1 Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	522.00 ft
Weir Length	7.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Requested Pond Water Surface Elevations	
Minimum (Headwater)	521.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	526.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 1	Forward	TW	524.50	526.00
Rectangular Weir	Weir - 1	Forward	TW	522.00	526.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Structure ID: Riser - 1 Structure Type: Inlet Box	
Number of Openings	1
Elevation	524.50 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	524.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True
Structure ID: Weir - 1 Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	522.00 ft
Weir Length	7.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	521.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	526.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 1	Forward	TW	524.50	526.00
Rectangular Weir	Weir - 1	Forward	TW	522.00	526.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

---

Structure ID: Riser - 1	
Structure Type: Inlet Box	
Number of Openings	1
Elevation	524.50 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	524.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

---

Structure ID: Weir - 1	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	522.00 ft
Weir Length	7.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

---

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall

---

Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

---

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX Lake #1  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
550.40	0.00	0.000	0.00	0.00	0.00	0.00
550.60	0.08	0.002	1,413.11	0.00	0.08	1.13
550.80	0.43	0.017	5,652.45	0.00	0.43	8.80
551.00	0.85	0.058	12,718.02	0.00	0.85	29.11
551.20	1.68	0.138	22,609.82	0.00	1.68	68.67
551.40	2.46	0.270	35,327.84	0.00	2.46	133.31
551.60	3.31	0.467	50,872.09	0.00	3.31	229.41
551.80	4.30	0.742	69,242.57	0.00	4.30	363.34
552.00	5.26	1.107	90,439.27	0.00	5.26	541.20
552.20	6.14	1.527	92,502.53	0.00	6.14	745.34
552.40	6.86	1.957	94,589.07	0.00	6.86	953.94
552.60	7.39	2.396	96,698.87	0.00	7.39	1,167.00
552.80	7.89	2.845	98,831.95	0.00	7.89	1,384.75
553.00	8.35	3.303	100,988.29	0.00	8.35	1,607.23
553.20	8.79	3.772	103,167.91	0.00	8.79	1,834.51
553.40	9.21	4.251	105,370.80	0.00	9.21	2,066.64
553.60	9.61	4.740	107,596.96	0.00	9.61	2,303.67
553.80	10.00	5.239	109,846.38	0.00	10.00	2,545.65
554.00	10.37	5.749	112,119.08	0.00	10.37	2,792.65
554.20	10.73	6.265	113,061.67	0.00	10.73	3,043.21
554.40	11.08	6.787	114,008.21	0.00	11.08	3,295.85
554.60	11.41	7.312	114,958.68	0.00	11.41	3,550.60
554.80	11.74	7.842	115,913.11	0.00	11.74	3,807.45
555.00	12.06	8.377	116,871.48	0.00	12.06	4,066.41



Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX Lake #1  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
550.40	0.00	0.000	0.00	0.00	0.00	0.00
550.60	0.08	0.002	1,413.11	0.00	0.08	1.13
550.80	0.43	0.017	5,652.45	0.00	0.43	8.80
551.00	0.85	0.058	12,718.02	0.00	0.85	29.11
551.20	1.68	0.138	22,609.82	0.00	1.68	68.67
551.40	2.46	0.270	35,327.84	0.00	2.46	133.31
551.60	3.31	0.467	50,872.09	0.00	3.31	229.41
551.80	4.30	0.742	69,242.57	0.00	4.30	363.34
552.00	5.26	1.107	90,439.27	0.00	5.26	541.20
552.20	6.14	1.527	92,502.53	0.00	6.14	745.34
552.40	6.86	1.957	94,589.07	0.00	6.86	953.94
552.60	7.39	2.396	96,698.87	0.00	7.39	1,167.00
552.80	7.89	2.845	98,831.95	0.00	7.89	1,384.75
553.00	8.35	3.303	100,988.29	0.00	8.35	1,607.23
553.20	8.79	3.772	103,167.91	0.00	8.79	1,834.51
553.40	9.21	4.251	105,370.80	0.00	9.21	2,066.64
553.60	9.61	4.740	107,596.96	0.00	9.61	2,303.67
553.80	10.00	5.239	109,846.38	0.00	10.00	2,545.65
554.00	10.37	5.749	112,119.08	0.00	10.37	2,792.65
554.20	10.73	6.265	113,061.67	0.00	10.73	3,043.21
554.40	11.08	6.787	114,008.21	0.00	11.08	3,295.85
554.60	11.41	7.312	114,958.68	0.00	11.41	3,550.60
554.80	11.74	7.842	115,913.11	0.00	11.74	3,807.45
555.00	12.06	8.377	116,871.48	0.00	12.06	4,066.41

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX Lake #1  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
550.40	0.00	0.000	0.00	0.00	0.00	0.00
550.60	0.08	0.002	1,413.11	0.00	0.08	1.13
550.80	0.43	0.017	5,652.45	0.00	0.43	8.80
551.00	0.85	0.058	12,718.02	0.00	0.85	29.11
551.20	1.68	0.138	22,609.82	0.00	1.68	68.67
551.40	2.46	0.270	35,327.84	0.00	2.46	133.31
551.60	3.31	0.467	50,872.09	0.00	3.31	229.41
551.80	4.30	0.742	69,242.57	0.00	4.30	363.34
552.00	5.26	1.107	90,439.27	0.00	5.26	541.20
552.20	6.14	1.527	92,502.53	0.00	6.14	745.34
552.40	6.86	1.957	94,589.07	0.00	6.86	953.94
552.60	7.39	2.396	96,698.87	0.00	7.39	1,167.00
552.80	7.89	2.845	98,831.95	0.00	7.89	1,384.75
553.00	8.35	3.303	100,988.29	0.00	8.35	1,607.23
553.20	8.79	3.772	103,167.91	0.00	8.79	1,834.51
553.40	9.21	4.251	105,370.80	0.00	9.21	2,066.64
553.60	9.61	4.740	107,596.96	0.00	9.61	2,303.67
553.80	10.00	5.239	109,846.38	0.00	10.00	2,545.65
554.00	10.37	5.749	112,119.08	0.00	10.37	2,792.65
554.20	10.73	6.265	113,061.67	0.00	10.73	3,043.21
554.40	11.08	6.787	114,008.21	0.00	11.08	3,295.85
554.60	11.41	7.312	114,958.68	0.00	11.41	3,550.60
554.80	11.74	7.842	115,913.11	0.00	11.74	3,807.45
555.00	12.06	8.377	116,871.48	0.00	12.06	4,066.41

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
550.40	0.00	0.000	0.00	0.00	0.00	0.00
550.60	0.08	0.002	1,413.11	0.00	0.08	1.13
550.80	0.43	0.017	5,652.45	0.00	0.43	8.80
551.00	0.85	0.058	12,718.02	0.00	0.85	29.11
551.20	1.68	0.138	22,609.82	0.00	1.68	68.67
551.40	2.46	0.270	35,327.84	0.00	2.46	133.31
551.60	3.31	0.467	50,872.09	0.00	3.31	229.41
551.80	4.30	0.742	69,242.57	0.00	4.30	363.34
552.00	5.26	1.107	90,439.27	0.00	5.26	541.20
552.20	6.14	1.527	92,502.53	0.00	6.14	745.34
552.40	6.86	1.957	94,589.07	0.00	6.86	953.94
552.60	7.39	2.396	96,698.87	0.00	7.39	1,167.00
552.80	7.89	2.845	98,831.95	0.00	7.89	1,384.75
553.00	8.35	3.303	100,988.29	0.00	8.35	1,607.23
553.20	8.79	3.772	103,167.91	0.00	8.79	1,834.51
553.40	9.21	4.251	105,370.80	0.00	9.21	2,066.64
553.60	9.61	4.740	107,596.96	0.00	9.61	2,303.67
553.80	10.00	5.239	109,846.38	0.00	10.00	2,545.65
554.00	10.37	5.749	112,119.08	0.00	10.37	2,792.65
554.20	10.73	6.265	113,061.67	0.00	10.73	3,043.21
554.40	11.08	6.787	114,008.21	0.00	11.08	3,295.85
554.60	11.41	7.312	114,958.68	0.00	11.41	3,550.60
554.80	11.74	7.842	115,913.11	0.00	11.74	3,807.45
555.00	12.06	8.377	116,871.48	0.00	12.06	4,066.41

Subsection: Level Pool Pond Routing Summary  
 Label: EX Lake #1 (IN)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	8.80 ft <sup>3</sup> /s	Time to Peak (Flow, In)	744.000 min
Flow (Peak Outlet)	2.92 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	792.000 min

---

Elevation (Water Surface, Peak)	551.51 ft
Volume (Peak)	0.367 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	1.281 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	1.264 ac-ft
Volume (Retained)	0.015 ac-ft
Volume (Unrouted)	-0.003 ac-ft
Error (Mass Balance)	0.2 %

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Subsection: Level Pool Pond Routing Summary  
 Label: EX Lake #1 (IN)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---

Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	22.78 ft <sup>3</sup> /s	Time to Peak (Flow, In)	738.000 min
Flow (Peak Outlet)	5.35 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	798.000 min

---

Elevation (Water Surface, Peak)	552.02 ft
Volume (Peak)	1.147 ac-ft

---

Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	2.938 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	2.880 ac-ft
Volume (Retained)	0.052 ac-ft
Volume (Unrouted)	-0.005 ac-ft
Error (Mass Balance)	0.2 %

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Subsection: Level Pool Pond Routing Summary  
 Label: EX Lake #1 (IN)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---

Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	27.46 ft <sup>3</sup> /s	Time to Peak (Flow, In)	738.000 min
Flow (Peak Outlet)	5.93 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	801.000 min

---

Elevation (Water Surface, Peak)	552.15 ft
Volume (Peak)	1.429 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	3.487 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	3.415 ac-ft
Volume (Retained)	0.065 ac-ft
Volume (Unrouted)	-0.006 ac-ft
Error (Mass Balance)	0.2 %

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Subsection: Level Pool Pond Routing Summary  
 Label: EX Lake #1 (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	42.35 ft <sup>3</sup> /s	Time to Peak (Flow, In)	738.000 min
Flow (Peak Outlet)	7.38 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	810.000 min

---

Elevation (Water Surface, Peak)	552.60 ft
Volume (Peak)	2.389 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	5.248 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	5.077 ac-ft
Volume (Retained)	0.159 ac-ft
Volume (Unrouted)	-0.012 ac-ft
Error (Mass Balance)	0.2 %

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Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Peak Discharge	2.92 ft <sup>3</sup> /s
Time to Peak	792.000 min
Hydrograph Volume	1.264 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
696.000	0.00	0.00	0.01	0.02	0.05
711.000	0.10	0.17	0.28	0.44	0.56
726.000	0.71	0.92	1.16	1.44	1.71
741.000	1.88	2.05	2.21	2.35	2.48
756.000	2.57	2.64	2.70	2.75	2.80
771.000	2.83	2.86	2.88	2.90	2.91
786.000	2.92	2.92	2.92	2.92	2.91
801.000	2.90	2.90	2.88	2.87	2.86
816.000	2.84	2.83	2.81	2.79	2.77
831.000	2.75	2.74	2.72	2.69	2.67
846.000	2.65	2.63	2.61	2.59	2.56
861.000	2.54	2.52	2.50	2.48	2.45
876.000	2.42	2.39	2.36	2.33	2.30
891.000	2.27	2.24	2.22	2.19	2.16
906.000	2.14	2.11	2.08	2.06	2.03
921.000	2.01	1.98	1.96	1.94	1.91
936.000	1.89	1.87	1.84	1.82	1.80
951.000	1.78	1.76	1.74	1.72	1.69
966.000	1.67	1.64	1.60	1.57	1.54
981.000	1.51	1.48	1.45	1.42	1.39
996.000	1.37	1.34	1.32	1.29	1.27
1,011.000	1.25	1.23	1.21	1.19	1.17
1,026.000	1.15	1.13	1.11	1.10	1.08
1,041.000	1.07	1.05	1.04	1.02	1.01
1,056.000	0.99	0.98	0.97	0.96	0.94
1,071.000	0.93	0.92	0.91	0.90	0.89
1,086.000	0.88	0.87	0.86	0.85	0.84
1,101.000	0.83	0.82	0.82	0.81	0.80
1,116.000	0.79	0.79	0.78	0.77	0.76
1,131.000	0.76	0.75	0.74	0.74	0.73
1,146.000	0.72	0.72	0.71	0.71	0.70
1,161.000	0.69	0.69	0.68	0.68	0.67
1,176.000	0.67	0.66	0.65	0.65	0.64
1,191.000	0.64	0.63	0.63	0.62	0.62
1,206.000	0.61	0.61	0.60	0.60	0.59
1,221.000	0.59	0.58	0.58	0.58	0.57
1,236.000	0.57	0.56	0.56	0.55	0.55
1,251.000	0.55	0.54	0.54	0.54	0.53
1,266.000	0.53	0.53	0.52	0.52	0.52



Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,281.000	0.51	0.51	0.51	0.51	0.50
1,296.000	0.50	0.50	0.50	0.49	0.49
1,311.000	0.49	0.49	0.48	0.48	0.48
1,326.000	0.48	0.48	0.48	0.47	0.47
1,341.000	0.47	0.47	0.47	0.47	0.46
1,356.000	0.46	0.46	0.46	0.46	0.46
1,371.000	0.46	0.45	0.45	0.45	0.45
1,386.000	0.45	0.45	0.45	0.45	0.45
1,401.000	0.44	0.44	0.44	0.44	0.44
1,416.000	0.44	0.44	0.44	0.44	0.44
1,431.000	0.43	0.43	0.43	0.43	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Peak Discharge	5.35 ft <sup>3</sup> /s
Time to Peak	798.000 min
Hydrograph Volume	2.880 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
627.000	0.00	0.00	0.00	0.01	0.01
642.000	0.01	0.02	0.02	0.03	0.04
657.000	0.06	0.07	0.08	0.10	0.11
672.000	0.13	0.15	0.17	0.19	0.22
687.000	0.25	0.28	0.32	0.37	0.43
702.000	0.46	0.51	0.58	0.68	0.83
717.000	1.05	1.35	1.72	2.01	2.37
732.000	2.69	3.02	3.35	3.64	3.92
747.000	4.18	4.39	4.55	4.69	4.82
762.000	4.92	5.01	5.09	5.15	5.20
777.000	5.25	5.28	5.30	5.32	5.33
792.000	5.34	5.34	5.35	5.35	5.34
807.000	5.34	5.33	5.33	5.32	5.30
822.000	5.29	5.28	5.26	5.25	5.23
837.000	5.20	5.18	5.16	5.14	5.11
852.000	5.09	5.06	5.04	5.01	4.98
867.000	4.96	4.93	4.90	4.87	4.85
882.000	4.82	4.79	4.76	4.74	4.71
897.000	4.68	4.65	4.63	4.60	4.57
912.000	4.55	4.52	4.49	4.46	4.44
927.000	4.41	4.38	4.36	4.33	4.30
942.000	4.27	4.23	4.20	4.16	4.12
957.000	4.09	4.05	4.02	3.99	3.95
972.000	3.92	3.88	3.85	3.82	3.78
987.000	3.75	3.72	3.68	3.65	3.62
1,002.000	3.59	3.56	3.53	3.50	3.47
1,017.000	3.44	3.41	3.38	3.35	3.32
1,032.000	3.29	3.25	3.22	3.19	3.15
1,047.000	3.12	3.09	3.06	3.03	3.00
1,062.000	2.97	2.94	2.91	2.88	2.85
1,077.000	2.82	2.80	2.77	2.74	2.72
1,092.000	2.69	2.66	2.64	2.61	2.59
1,107.000	2.56	2.54	2.52	2.49	2.47
1,122.000	2.44	2.41	2.38	2.35	2.32
1,137.000	2.29	2.26	2.23	2.21	2.18
1,152.000	2.15	2.13	2.10	2.08	2.05
1,167.000	2.03	2.00	1.98	1.96	1.93
1,182.000	1.91	1.89	1.87	1.85	1.83
1,197.000	1.81	1.78	1.76	1.74	1.73

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,212.000	1.71	1.69	1.66	1.63	1.60
1,227.000	1.57	1.54	1.51	1.49	1.46
1,242.000	1.44	1.41	1.39	1.37	1.35
1,257.000	1.33	1.31	1.29	1.27	1.25
1,272.000	1.23	1.22	1.20	1.19	1.17
1,287.000	1.16	1.15	1.13	1.12	1.11
1,302.000	1.10	1.09	1.08	1.07	1.06
1,317.000	1.05	1.04	1.03	1.02	1.01
1,332.000	1.00	1.00	0.99	0.98	0.97
1,347.000	0.97	0.96	0.95	0.95	0.94
1,362.000	0.94	0.93	0.93	0.92	0.92
1,377.000	0.91	0.91	0.90	0.90	0.89
1,392.000	0.89	0.88	0.88	0.88	0.87
1,407.000	0.87	0.87	0.86	0.86	0.86
1,422.000	0.85	0.85	0.85	0.84	0.84
1,437.000	0.84	0.83	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Peak Discharge	5.93 ft <sup>3</sup> /s
Time to Peak	801.000 min
Hydrograph Volume	3.415 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
603.000	0.00	0.00	0.00	0.00	0.01
618.000	0.01	0.02	0.02	0.03	0.04
633.000	0.05	0.06	0.07	0.08	0.09
648.000	0.10	0.12	0.13	0.15	0.17
663.000	0.19	0.21	0.24	0.27	0.30
678.000	0.33	0.37	0.41	0.44	0.46
693.000	0.49	0.52	0.56	0.61	0.68
708.000	0.77	0.91	1.11	1.38	1.73
723.000	2.01	2.37	2.72	3.08	3.45
738.000	3.80	4.15	4.44	4.67	4.89
753.000	5.08	5.26	5.38	5.48	5.56
768.000	5.64	5.70	5.75	5.80	5.83
783.000	5.86	5.88	5.90	5.92	5.92
798.000	5.93	5.93	5.93	5.93	5.92
813.000	5.92	5.91	5.90	5.89	5.87
828.000	5.86	5.84	5.83	5.81	5.79
843.000	5.77	5.75	5.73	5.71	5.69
858.000	5.67	5.64	5.62	5.60	5.57
873.000	5.55	5.53	5.50	5.48	5.45
888.000	5.43	5.40	5.38	5.36	5.33
903.000	5.31	5.28	5.26	5.22	5.19
918.000	5.16	5.13	5.10	5.07	5.04
933.000	5.01	4.98	4.95	4.92	4.88
948.000	4.85	4.82	4.79	4.76	4.73
963.000	4.70	4.67	4.64	4.61	4.58
978.000	4.55	4.52	4.50	4.47	4.44
993.000	4.41	4.38	4.35	4.32	4.29
1,008.000	4.25	4.21	4.17	4.14	4.10
1,023.000	4.06	4.03	3.99	3.96	3.92
1,038.000	3.89	3.85	3.82	3.79	3.75
1,053.000	3.72	3.69	3.66	3.62	3.59
1,068.000	3.56	3.53	3.50	3.47	3.44
1,083.000	3.41	3.38	3.35	3.33	3.29
1,098.000	3.26	3.23	3.19	3.16	3.13
1,113.000	3.10	3.07	3.04	3.01	2.98
1,128.000	2.95	2.92	2.89	2.86	2.83
1,143.000	2.81	2.78	2.75	2.72	2.70
1,158.000	2.67	2.65	2.62	2.60	2.57
1,173.000	2.55	2.52	2.50	2.47	2.45

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,188.000	2.41	2.38	2.35	2.32	2.29
1,203.000	2.26	2.24	2.21	2.18	2.15
1,218.000	2.13	2.10	2.07	2.05	2.02
1,233.000	2.00	1.98	1.95	1.93	1.91
1,248.000	1.88	1.86	1.84	1.82	1.80
1,263.000	1.78	1.76	1.74	1.72	1.71
1,278.000	1.69	1.66	1.63	1.61	1.58
1,293.000	1.55	1.53	1.50	1.48	1.46
1,308.000	1.44	1.42	1.40	1.38	1.36
1,323.000	1.34	1.33	1.31	1.29	1.28
1,338.000	1.26	1.25	1.24	1.22	1.21
1,353.000	1.20	1.19	1.18	1.17	1.16
1,368.000	1.15	1.14	1.13	1.12	1.11
1,383.000	1.10	1.09	1.09	1.08	1.07
1,398.000	1.06	1.06	1.05	1.04	1.04
1,413.000	1.03	1.03	1.02	1.01	1.01
1,428.000	1.00	1.00	0.99	0.99	0.98

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	7.38 ft <sup>3</sup> /s
Time to Peak	810.000 min
Hydrograph Volume	5.077 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
534.000	0.00	0.00	0.00	0.00	0.01
549.000	0.01	0.01	0.02	0.02	0.03
564.000	0.04	0.04	0.05	0.06	0.07
579.000	0.09	0.09	0.10	0.11	0.12
594.000	0.13	0.15	0.16	0.17	0.19
609.000	0.21	0.22	0.24	0.26	0.28
624.000	0.30	0.33	0.35	0.38	0.40
639.000	0.43	0.45	0.46	0.48	0.50
654.000	0.52	0.54	0.57	0.59	0.62
669.000	0.65	0.69	0.73	0.77	0.81
684.000	0.86	0.91	0.97	1.03	1.11
699.000	1.19	1.30	1.43	1.61	1.78
714.000	1.97	2.24	2.57	2.91	3.34
729.000	3.77	4.25	4.65	5.05	5.41
744.000	5.72	6.01	6.25	6.45	6.63
759.000	6.78	6.90	6.98	7.05	7.11
774.000	7.16	7.21	7.24	7.27	7.30
789.000	7.32	7.34	7.35	7.36	7.37
804.000	7.38	7.38	7.38	7.38	7.38
819.000	7.38	7.37	7.37	7.36	7.35
834.000	7.34	7.33	7.32	7.31	7.30
849.000	7.28	7.27	7.26	7.24	7.23
864.000	7.21	7.20	7.18	7.17	7.15
879.000	7.13	7.12	7.10	7.08	7.06
894.000	7.05	7.03	7.01	6.99	6.98
909.000	6.96	6.94	6.92	6.90	6.88
924.000	6.87	6.84	6.82	6.79	6.76
939.000	6.74	6.71	6.69	6.66	6.63
954.000	6.61	6.58	6.55	6.53	6.50
969.000	6.47	6.45	6.42	6.39	6.37
984.000	6.34	6.31	6.29	6.26	6.23
999.000	6.21	6.18	6.15	6.12	6.09
1,014.000	6.06	6.03	6.00	5.96	5.93
1,029.000	5.90	5.87	5.84	5.81	5.78
1,044.000	5.75	5.71	5.68	5.65	5.62
1,059.000	5.59	5.56	5.53	5.50	5.48
1,074.000	5.45	5.42	5.39	5.36	5.33
1,089.000	5.30	5.27	5.24	5.20	5.17
1,104.000	5.13	5.10	5.06	5.03	5.00

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,119.000	4.96	4.93	4.90	4.86	4.83
1,134.000	4.80	4.76	4.73	4.70	4.67
1,149.000	4.64	4.60	4.57	4.54	4.51
1,164.000	4.48	4.45	4.42	4.39	4.36
1,179.000	4.33	4.30	4.26	4.22	4.18
1,194.000	4.14	4.10	4.07	4.03	3.99
1,209.000	3.95	3.92	3.88	3.84	3.81
1,224.000	3.77	3.74	3.71	3.67	3.64
1,239.000	3.60	3.57	3.54	3.51	3.48
1,254.000	3.44	3.41	3.38	3.35	3.32
1,269.000	3.29	3.26	3.22	3.19	3.16
1,284.000	3.12	3.09	3.06	3.03	3.00
1,299.000	2.97	2.94	2.91	2.88	2.86
1,314.000	2.83	2.80	2.78	2.75	2.72
1,329.000	2.70	2.67	2.65	2.62	2.60
1,344.000	2.58	2.55	2.53	2.51	2.49
1,359.000	2.47	2.44	2.41	2.38	2.36
1,374.000	2.33	2.30	2.28	2.25	2.23
1,389.000	2.21	2.18	2.16	2.14	2.12
1,404.000	2.09	2.07	2.05	2.03	2.01
1,419.000	2.00	1.98	1.96	1.94	1.92
1,434.000	1.91	1.89	1.87	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
Label: EX Lake #1 (IN)  
Scenario: 2 yr

Return Event: 2 years  
Storm Event: 2

**Summary for Hydrograph Addition at 'EX Lake #1'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EX-64K

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EX-64K	1.281	744.000	8.80
Flow (In)	EX Lake #1	1.281	744.000	8.80



Subsection: Pond Inflow Summary  
Label: EX Lake #1 (IN)  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

**Summary for Hydrograph Addition at 'EX Lake #1'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EX-64K

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EX-64K	2.938	738.000	22.78
Flow (In)	EX Lake #1	2.938	738.000	22.78

Subsection: Pond Inflow Summary  
Label: EX Lake #1 (IN)  
Scenario: 25 yr

Return Event: 25 years  
Storm Event: 25

**Summary for Hydrograph Addition at 'EX Lake #1'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EX-64K

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EX-64K	3.487	738.000	27.46
Flow (In)	EX Lake #1	3.487	738.000	27.46

Subsection: Pond Inflow Summary  
Label: EX Lake #1 (IN)  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

**Summary for Hydrograph Addition at 'EX Lake #1'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EX-64K

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EX-64K	5.248	738.000	42.35
Flow (In)	EX Lake #1	5.248	738.000	42.35

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
525.00	0.00	0.000	54,390.67	0.00	0.00	0.00
525.20	0.14	0.252	55,215.21	0.00	0.14	121.93
525.40	0.14	0.507	56,045.95	0.00	0.14	245.55
525.60	0.24	0.766	56,882.89	0.00	0.24	371.12
525.80	0.24	1.029	57,726.04	0.00	0.24	498.46
526.00	0.24	1.296	58,575.39	0.00	0.24	627.68
526.20	0.24	1.567	59,466.30	0.00	0.24	758.84
526.40	0.24	1.842	60,363.93	0.00	0.24	891.98
526.60	0.24	2.122	61,268.28	0.00	0.24	1,027.13
526.80	0.24	2.405	62,179.36	0.00	0.24	1,164.29
526.81	0.24	2.419	62,225.09	0.00	0.24	1,171.20
527.00	0.86	2.693	63,097.17	0.00	0.86	1,304.11
527.20	1.91	2.984	64,021.70	0.00	1.91	1,446.40
527.40	3.14	3.281	64,952.95	0.00	3.14	1,590.94
527.60	4.68	3.581	65,890.92	0.00	4.68	1,737.85
527.80	6.26	3.886	66,835.63	0.00	6.26	1,886.91
528.00	8.11	4.195	67,787.05	0.00	8.11	2,038.34
528.20	10.08	4.508	68,707.46	0.00	10.08	2,191.96
528.40	12.43	4.826	69,634.08	0.00	12.43	2,348.03
528.60	14.90	5.147	70,566.90	0.00	14.90	2,506.27
528.80	17.47	5.474	71,505.93	0.00	17.47	2,666.70
529.00	19.94	5.804	72,451.17	0.00	19.94	2,829.13
529.20	22.45	6.139	73,402.61	0.00	22.45	2,993.69
529.25	19.67	6.223	73,641.44	0.00	19.67	3,031.76
529.40	21.45	6.478	74,360.26	0.00	21.45	3,156.87
529.60	24.63	6.822	75,324.12	0.00	24.63	3,326.37
529.80	27.97	7.170	76,294.18	0.00	27.97	3,498.18
530.00	31.46	7.522	77,270.45	0.00	31.46	3,672.29
530.20	35.10	7.879	78,232.20	0.00	35.10	3,848.71
530.40	38.83	8.241	79,199.89	0.00	38.83	4,027.36

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
530.60	42.72	8.607	80,173.54	0.00	42.72	4,208.33
530.80	46.49	8.977	81,153.13	0.00	46.49	4,391.35
531.00	50.26	9.352	82,138.67	0.00	50.26	4,576.55
531.20	53.96	9.731	83,130.16	0.00	53.96	4,763.89
531.40	57.76	10.115	84,127.59	0.00	57.76	4,953.53
531.60	61.18	10.504	85,130.98	0.00	61.18	5,145.01
531.80	64.71	10.897	86,140.31	0.00	64.71	5,338.85
532.00	67.29	11.295	87,155.59	0.00	67.29	5,533.97
532.10	68.90	11.495	87,656.23	0.00	68.90	5,632.70
532.20	72.52	11.697	88,158.30	0.00	72.52	5,734.00
532.40	84.55	12.104	89,166.74	0.00	84.55	5,943.05
532.60	100.58	12.516	90,180.91	0.00	100.58	6,158.35
532.80	118.48	12.932	91,200.82	0.00	118.48	6,377.79
533.00	138.25	13.354	92,226.47	0.00	138.25	6,601.37
533.20	159.12	13.779	93,257.85	0.00	159.12	6,828.33
533.40	178.81	14.210	94,294.96	0.00	178.81	7,056.41
533.60	196.83	14.645	95,337.81	0.00	196.83	7,285.13
533.80	213.05	15.085	96,386.40	0.00	213.05	7,514.38
534.00	226.83	15.530	97,440.72	0.00	226.83	7,743.52

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
525.00	0.00	0.000	54,390.67	0.00	0.00	0.00
525.20	0.14	0.252	55,215.21	0.00	0.14	121.93
525.40	0.14	0.507	56,045.95	0.00	0.14	245.55
525.60	0.24	0.766	56,882.89	0.00	0.24	371.12
525.80	0.24	1.029	57,726.04	0.00	0.24	498.46
526.00	0.24	1.296	58,575.39	0.00	0.24	627.68
526.20	0.24	1.567	59,466.30	0.00	0.24	758.84
526.40	0.24	1.842	60,363.93	0.00	0.24	891.98
526.60	0.24	2.122	61,268.28	0.00	0.24	1,027.13
526.80	0.24	2.405	62,179.36	0.00	0.24	1,164.29
526.81	0.24	2.419	62,225.09	0.00	0.24	1,171.20
527.00	0.86	2.693	63,097.17	0.00	0.86	1,304.11
527.20	1.91	2.984	64,021.70	0.00	1.91	1,446.40
527.40	3.14	3.281	64,952.95	0.00	3.14	1,590.94
527.60	4.68	3.581	65,890.92	0.00	4.68	1,737.85
527.80	6.26	3.886	66,835.63	0.00	6.26	1,886.91
528.00	8.11	4.195	67,787.05	0.00	8.11	2,038.34
528.20	10.08	4.508	68,707.46	0.00	10.08	2,191.96
528.40	12.43	4.826	69,634.08	0.00	12.43	2,348.03
528.60	14.90	5.147	70,566.90	0.00	14.90	2,506.27
528.80	17.47	5.474	71,505.93	0.00	17.47	2,666.70
529.00	19.94	5.804	72,451.17	0.00	19.94	2,829.13
529.20	22.45	6.139	73,402.61	0.00	22.45	2,993.69
529.25	19.67	6.223	73,641.44	0.00	19.67	3,031.76
529.40	21.45	6.478	74,360.26	0.00	21.45	3,156.87
529.60	24.63	6.822	75,324.12	0.00	24.63	3,326.37
529.80	27.97	7.170	76,294.18	0.00	27.97	3,498.18
530.00	31.46	7.522	77,270.45	0.00	31.46	3,672.29
530.20	35.10	7.879	78,232.20	0.00	35.10	3,848.71
530.40	38.83	8.241	79,199.89	0.00	38.83	4,027.36

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
530.60	42.72	8.607	80,173.54	0.00	42.72	4,208.33
530.80	46.49	8.977	81,153.13	0.00	46.49	4,391.35
531.00	50.26	9.352	82,138.67	0.00	50.26	4,576.55
531.20	53.96	9.731	83,130.16	0.00	53.96	4,763.89
531.40	57.76	10.115	84,127.59	0.00	57.76	4,953.53
531.60	61.18	10.504	85,130.98	0.00	61.18	5,145.01
531.80	64.71	10.897	86,140.31	0.00	64.71	5,338.85
532.00	67.29	11.295	87,155.59	0.00	67.29	5,533.97
532.10	68.90	11.495	87,656.23	0.00	68.90	5,632.70
532.20	72.52	11.697	88,158.30	0.00	72.52	5,734.00
532.40	84.55	12.104	89,166.74	0.00	84.55	5,943.05
532.60	100.58	12.516	90,180.91	0.00	100.58	6,158.35
532.80	118.48	12.932	91,200.82	0.00	118.48	6,377.79
533.00	138.25	13.354	92,226.47	0.00	138.25	6,601.37
533.20	159.12	13.779	93,257.85	0.00	159.12	6,828.33
533.40	178.81	14.210	94,294.96	0.00	178.81	7,056.41
533.60	196.83	14.645	95,337.81	0.00	196.83	7,285.13
533.80	213.05	15.085	96,386.40	0.00	213.05	7,514.38
534.00	226.83	15.530	97,440.72	0.00	226.83	7,743.52

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
525.00	0.00	0.000	54,390.67	0.00	0.00	0.00
525.20	0.14	0.252	55,215.21	0.00	0.14	121.93
525.40	0.14	0.507	56,045.95	0.00	0.14	245.55
525.60	0.24	0.766	56,882.89	0.00	0.24	371.12
525.80	0.24	1.029	57,726.04	0.00	0.24	498.46
526.00	0.24	1.296	58,575.39	0.00	0.24	627.68
526.20	0.24	1.567	59,466.30	0.00	0.24	758.84
526.40	0.24	1.842	60,363.93	0.00	0.24	891.98
526.60	0.24	2.122	61,268.28	0.00	0.24	1,027.13
526.80	0.24	2.405	62,179.36	0.00	0.24	1,164.29
526.81	0.24	2.419	62,225.09	0.00	0.24	1,171.20
527.00	0.86	2.693	63,097.17	0.00	0.86	1,304.11
527.20	1.91	2.984	64,021.70	0.00	1.91	1,446.40
527.40	3.14	3.281	64,952.95	0.00	3.14	1,590.94
527.60	4.68	3.581	65,890.92	0.00	4.68	1,737.85
527.80	6.26	3.886	66,835.63	0.00	6.26	1,886.91
528.00	8.11	4.195	67,787.05	0.00	8.11	2,038.34
528.20	10.08	4.508	68,707.46	0.00	10.08	2,191.96
528.40	12.43	4.826	69,634.08	0.00	12.43	2,348.03
528.60	14.90	5.147	70,566.90	0.00	14.90	2,506.27
528.80	17.47	5.474	71,505.93	0.00	17.47	2,666.70
529.00	19.94	5.804	72,451.17	0.00	19.94	2,829.13
529.20	22.45	6.139	73,402.61	0.00	22.45	2,993.69
529.25	19.67	6.223	73,641.44	0.00	19.67	3,031.76
529.40	21.45	6.478	74,360.26	0.00	21.45	3,156.87
529.60	24.63	6.822	75,324.12	0.00	24.63	3,326.37
529.80	27.97	7.170	76,294.18	0.00	27.97	3,498.18
530.00	31.46	7.522	77,270.45	0.00	31.46	3,672.29
530.20	35.10	7.879	78,232.20	0.00	35.10	3,848.71
530.40	38.83	8.241	79,199.89	0.00	38.83	4,027.36



Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
530.60	42.72	8.607	80,173.54	0.00	42.72	4,208.33
530.80	46.49	8.977	81,153.13	0.00	46.49	4,391.35
531.00	50.26	9.352	82,138.67	0.00	50.26	4,576.55
531.20	53.96	9.731	83,130.16	0.00	53.96	4,763.89
531.40	57.76	10.115	84,127.59	0.00	57.76	4,953.53
531.60	61.18	10.504	85,130.98	0.00	61.18	5,145.01
531.80	64.71	10.897	86,140.31	0.00	64.71	5,338.85
532.00	67.29	11.295	87,155.59	0.00	67.29	5,533.97
532.10	68.90	11.495	87,656.23	0.00	68.90	5,632.70
532.20	72.52	11.697	88,158.30	0.00	72.52	5,734.00
532.40	84.55	12.104	89,166.74	0.00	84.55	5,943.05
532.60	100.58	12.516	90,180.91	0.00	100.58	6,158.35
532.80	118.48	12.932	91,200.82	0.00	118.48	6,377.79
533.00	138.25	13.354	92,226.47	0.00	138.25	6,601.37
533.20	159.12	13.779	93,257.85	0.00	159.12	6,828.33
533.40	178.81	14.210	94,294.96	0.00	178.81	7,056.41
533.60	196.83	14.645	95,337.81	0.00	196.83	7,285.13
533.80	213.05	15.085	96,386.40	0.00	213.05	7,514.38
534.00	226.83	15.530	97,440.72	0.00	226.83	7,743.52

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
525.00	0.00	0.000	54,390.67	0.00	0.00	0.00
525.20	0.14	0.252	55,215.21	0.00	0.14	121.93
525.40	0.14	0.507	56,045.95	0.00	0.14	245.55
525.60	0.24	0.766	56,882.89	0.00	0.24	371.12
525.80	0.24	1.029	57,726.04	0.00	0.24	498.46
526.00	0.24	1.296	58,575.39	0.00	0.24	627.68
526.20	0.24	1.567	59,466.30	0.00	0.24	758.84
526.40	0.24	1.842	60,363.93	0.00	0.24	891.98
526.60	0.24	2.122	61,268.28	0.00	0.24	1,027.13
526.80	0.24	2.405	62,179.36	0.00	0.24	1,164.29
526.81	0.24	2.419	62,225.09	0.00	0.24	1,171.20
527.00	0.86	2.693	63,097.17	0.00	0.86	1,304.11
527.20	1.91	2.984	64,021.70	0.00	1.91	1,446.40
527.40	3.14	3.281	64,952.95	0.00	3.14	1,590.94
527.60	4.68	3.581	65,890.92	0.00	4.68	1,737.85
527.80	6.26	3.886	66,835.63	0.00	6.26	1,886.91
528.00	8.11	4.195	67,787.05	0.00	8.11	2,038.34
528.20	10.08	4.508	68,707.46	0.00	10.08	2,191.96
528.40	12.43	4.826	69,634.08	0.00	12.43	2,348.03
528.60	14.90	5.147	70,566.90	0.00	14.90	2,506.27
528.80	17.47	5.474	71,505.93	0.00	17.47	2,666.70
529.00	19.94	5.804	72,451.17	0.00	19.94	2,829.13
529.20	22.45	6.139	73,402.61	0.00	22.45	2,993.69
529.25	19.67	6.223	73,641.44	0.00	19.67	3,031.76
529.40	21.45	6.478	74,360.26	0.00	21.45	3,156.87
529.60	24.63	6.822	75,324.12	0.00	24.63	3,326.37
529.80	27.97	7.170	76,294.18	0.00	27.97	3,498.18
530.00	31.46	7.522	77,270.45	0.00	31.46	3,672.29
530.20	35.10	7.879	78,232.20	0.00	35.10	3,848.71
530.40	38.83	8.241	79,199.89	0.00	38.83	4,027.36

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
530.60	42.72	8.607	80,173.54	0.00	42.72	4,208.33
530.80	46.49	8.977	81,153.13	0.00	46.49	4,391.35
531.00	50.26	9.352	82,138.67	0.00	50.26	4,576.55
531.20	53.96	9.731	83,130.16	0.00	53.96	4,763.89
531.40	57.76	10.115	84,127.59	0.00	57.76	4,953.53
531.60	61.18	10.504	85,130.98	0.00	61.18	5,145.01
531.80	64.71	10.897	86,140.31	0.00	64.71	5,338.85
532.00	67.29	11.295	87,155.59	0.00	67.29	5,533.97
532.10	68.90	11.495	87,656.23	0.00	68.90	5,632.70
532.20	72.52	11.697	88,158.30	0.00	72.52	5,734.00
532.40	84.55	12.104	89,166.74	0.00	84.55	5,943.05
532.60	100.58	12.516	90,180.91	0.00	100.58	6,158.35
532.80	118.48	12.932	91,200.82	0.00	118.48	6,377.79
533.00	138.25	13.354	92,226.47	0.00	138.25	6,601.37
533.20	159.12	13.779	93,257.85	0.00	159.12	6,828.33
533.40	178.81	14.210	94,294.96	0.00	178.81	7,056.41
533.60	196.83	14.645	95,337.81	0.00	196.83	7,285.13
533.80	213.05	15.085	96,386.40	0.00	213.05	7,514.38
534.00	226.83	15.530	97,440.72	0.00	226.83	7,743.52

Subsection: Level Pool Pond Routing Summary  
 Label: KB-LAKE (IN)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	93.07 ft <sup>3</sup> /s	Time to Peak (Flow, In)	720.000 min
Flow (Peak Outlet)	20.92 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	840.000 min

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Elevation (Water Surface, Peak)	529.08 ft
Volume (Peak)	5.934 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	13.776 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	10.278 ac-ft
Volume (Retained)	3.480 ac-ft
Volume (Unrouted)	-0.018 ac-ft
Error (Mass Balance)	0.1 %

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Subsection: Level Pool Pond Routing Summary  
 Label: KB-LAKE (IN)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	173.87 ft <sup>3</sup> /s	Time to Peak (Flow, In)	720.000 min
Flow (Peak Outlet)	52.48 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	816.000 min

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Elevation (Water Surface, Peak)	531.12 ft
Volume (Peak)	9.579 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	26.766 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	22.725 ac-ft
Volume (Retained)	4.011 ac-ft
Volume (Unrouted)	-0.030 ac-ft
Error (Mass Balance)	0.1 %

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Subsection: Level Pool Pond Routing Summary  
 Label: KB-LAKE (IN)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	198.88 ft <sup>3</sup> /s	Time to Peak (Flow, In)	720.000 min
Flow (Peak Outlet)	62.22 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	813.000 min

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Elevation (Water Surface, Peak)	531.66 ft
Volume (Peak)	10.619 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	30.871 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	26.674 ac-ft
Volume (Retained)	4.164 ac-ft
Volume (Unrouted)	-0.033 ac-ft
Error (Mass Balance)	0.1 %

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Subsection: Level Pool Pond Routing Summary  
 Label: KB-LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	525.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	275.25 ft <sup>3</sup> /s	Time to Peak (Flow, In)	720.000 min
Flow (Peak Outlet)	110.62 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	783.000 min

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Elevation (Water Surface, Peak)	532.71 ft
Volume (Peak)	12.749 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	43.633 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	38.954 ac-ft
Volume (Retained)	4.632 ac-ft
Volume (Unrouted)	-0.047 ac-ft
Error (Mass Balance)	0.1 %

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Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Peak Discharge	20.92 ft <sup>3</sup> /s
Time to Peak	840.000 min
Hydrograph Volume	10.278 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
249.000	0.00	0.00	0.00	0.00	0.00
264.000	0.00	0.00	0.00	0.00	0.00
279.000	0.00	0.00	0.00	0.00	0.00
294.000	0.00	0.00	0.00	0.00	0.00
309.000	0.00	0.00	0.00	0.00	0.00
324.000	0.00	0.00	0.00	0.00	0.00
339.000	0.00	0.00	0.00	0.00	0.00
354.000	0.00	0.00	0.00	0.00	0.00
369.000	0.00	0.00	0.00	0.01	0.01
384.000	0.01	0.01	0.01	0.01	0.01
399.000	0.01	0.01	0.01	0.01	0.01
414.000	0.01	0.01	0.01	0.01	0.01
429.000	0.01	0.01	0.01	0.01	0.01
444.000	0.02	0.02	0.02	0.02	0.02
459.000	0.02	0.02	0.02	0.02	0.02
474.000	0.02	0.02	0.02	0.03	0.03
489.000	0.03	0.03	0.03	0.03	0.03
504.000	0.03	0.03	0.03	0.04	0.04
519.000	0.04	0.04	0.04	0.04	0.04
534.000	0.04	0.05	0.05	0.05	0.05
549.000	0.05	0.05	0.06	0.06	0.06
564.000	0.06	0.06	0.07	0.07	0.07
579.000	0.07	0.07	0.08	0.08	0.08
594.000	0.08	0.08	0.09	0.09	0.09
609.000	0.09	0.10	0.10	0.10	0.11
624.000	0.11	0.11	0.12	0.12	0.12
639.000	0.13	0.13	0.14	0.14	0.14
654.000	0.14	0.14	0.14	0.14	0.14
669.000	0.14	0.14	0.14	0.14	0.14
684.000	0.14	0.14	0.14	0.14	0.14
699.000	0.16	0.18	0.21	0.24	0.24
714.000	0.24	0.24	0.24	0.24	0.63
729.000	1.54	2.45	3.27	4.13	4.92
744.000	5.67	6.41	7.20	7.94	8.69
759.000	9.41	10.12	10.93	11.71	12.46
774.000	13.21	13.93	14.61	15.28	15.91
789.000	16.51	17.07	17.59	18.06	18.48
804.000	18.87	19.23	19.55	19.83	20.07
819.000	20.28	20.45	20.60	20.71	20.80



Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
834.000	20.86	20.90	20.92	20.92	20.90
849.000	20.86	20.80	20.74	20.66	20.57
864.000	20.47	20.36	20.24	20.12	19.98
879.000	19.84	19.70	19.55	19.39	19.23
894.000	19.06	18.90	18.72	18.55	18.37
909.000	18.20	18.02	17.84	17.65	17.47
924.000	17.28	17.08	16.89	16.70	16.51
939.000	16.32	16.13	15.94	15.75	15.56
954.000	15.37	15.19	15.01	14.83	14.65
969.000	14.47	14.30	14.13	13.96	13.79
984.000	13.62	13.46	13.30	13.13	12.98
999.000	12.82	12.66	12.51	12.36	12.22
1,014.000	12.07	11.93	11.79	11.66	11.52
1,029.000	11.39	11.26	11.13	11.00	10.87
1,044.000	10.75	10.63	10.51	10.39	10.27
1,059.000	10.16	10.05	9.95	9.86	9.77
1,074.000	9.68	9.59	9.50	9.41	9.32
1,089.000	9.24	9.15	9.07	8.98	8.90
1,104.000	8.82	8.74	8.66	8.59	8.51
1,119.000	8.43	8.36	8.29	8.21	8.14
1,134.000	8.07	8.00	7.94	7.87	7.81
1,149.000	7.74	7.68	7.62	7.55	7.49
1,164.000	7.43	7.37	7.31	7.25	7.19
1,179.000	7.13	7.07	7.02	6.96	6.90
1,194.000	6.85	6.79	6.74	6.68	6.63
1,209.000	6.58	6.52	6.47	6.42	6.37
1,224.000	6.32	6.27	6.22	6.18	6.14
1,239.000	6.10	6.06	6.02	5.98	5.94
1,254.000	5.90	5.86	5.82	5.78	5.74
1,269.000	5.71	5.67	5.63	5.60	5.56
1,284.000	5.53	5.49	5.46	5.42	5.39
1,299.000	5.36	5.33	5.29	5.26	5.23
1,314.000	5.20	5.17	5.14	5.11	5.08
1,329.000	5.06	5.03	5.00	4.97	4.95
1,344.000	4.92	4.89	4.87	4.84	4.82
1,359.000	4.79	4.77	4.75	4.72	4.70
1,374.000	4.68	4.65	4.63	4.61	4.59
1,389.000	4.57	4.55	4.53	4.51	4.49
1,404.000	4.47	4.45	4.43	4.41	4.39
1,419.000	4.37	4.36	4.34	4.32	4.30
1,434.000	4.29	4.27	4.25	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Peak Discharge	52.48 ft <sup>3</sup> /s
Time to Peak	816.000 min
Hydrograph Volume	22.725 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
174.000	0.00	0.00	0.00	0.00	0.00
189.000	0.00	0.00	0.00	0.00	0.00
204.000	0.00	0.00	0.00	0.00	0.00
219.000	0.00	0.00	0.00	0.00	0.00
234.000	0.00	0.00	0.00	0.00	0.00
249.000	0.00	0.00	0.00	0.00	0.00
264.000	0.00	0.00	0.00	0.00	0.00
279.000	0.00	0.01	0.01	0.01	0.01
294.000	0.01	0.01	0.01	0.01	0.01
309.000	0.01	0.01	0.01	0.01	0.01
324.000	0.01	0.01	0.01	0.02	0.02
339.000	0.02	0.02	0.02	0.02	0.02
354.000	0.02	0.02	0.02	0.02	0.03
369.000	0.03	0.03	0.03	0.03	0.03
384.000	0.03	0.03	0.03	0.04	0.04
399.000	0.04	0.04	0.04	0.04	0.04
414.000	0.05	0.05	0.05	0.05	0.05
429.000	0.05	0.05	0.06	0.06	0.06
444.000	0.06	0.06	0.07	0.07	0.07
459.000	0.07	0.07	0.07	0.08	0.08
474.000	0.08	0.08	0.08	0.09	0.09
489.000	0.09	0.09	0.10	0.10	0.10
504.000	0.10	0.11	0.11	0.11	0.11
519.000	0.12	0.12	0.12	0.13	0.13
534.000	0.13	0.14	0.14	0.14	0.14
549.000	0.14	0.14	0.14	0.14	0.14
564.000	0.14	0.14	0.14	0.14	0.14
579.000	0.14	0.14	0.14	0.14	0.14
594.000	0.14	0.14	0.14	0.14	0.14
609.000	0.14	0.14	0.14	0.15	0.16
624.000	0.16	0.17	0.18	0.18	0.19
639.000	0.20	0.21	0.22	0.23	0.24
654.000	0.24	0.24	0.24	0.24	0.24
669.000	0.24	0.24	0.24	0.24	0.24
684.000	0.24	0.24	0.24	0.24	0.24
699.000	0.24	0.24	0.24	0.24	0.24
714.000	1.44	3.90	7.48	11.97	16.63
729.000	20.30	19.74	22.11	24.63	26.97
744.000	29.14	31.18	33.12	34.91	36.59

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
759.000	38.15	39.67	41.12	42.48	43.72
774.000	44.87	45.96	46.97	47.88	48.70
789.000	49.45	50.13	50.71	51.20	51.61
804.000	51.94	52.20	52.37	52.46	52.48
819.000	52.42	52.29	52.10	51.86	51.56
834.000	51.21	50.82	50.40	49.94	49.44
849.000	48.92	48.38	47.82	47.25	46.66
864.000	46.06	45.45	44.84	44.22	43.59
879.000	42.96	42.32	41.67	41.02	40.37
894.000	39.73	39.10	38.48	37.88	37.28
909.000	36.69	36.11	35.53	34.97	34.41
924.000	33.87	33.33	32.80	32.28	31.77
939.000	31.27	30.79	30.32	29.85	29.40
954.000	28.94	28.50	28.06	27.65	27.24
969.000	26.83	26.44	26.05	25.67	25.29
984.000	24.93	24.57	24.23	23.90	23.57
999.000	23.25	22.93	22.62	22.32	22.03
1,014.000	21.73	21.45	21.24	21.03	20.82
1,029.000	20.62	20.41	20.21	20.01	19.82
1,044.000	19.89	20.92	22.11	22.23	21.93
1,059.000	21.64	21.36	21.08	20.81	20.54
1,074.000	20.28	20.02	19.77	19.52	19.28
1,089.000	19.04	18.80	18.58	18.35	18.13
1,104.000	17.92	17.70	17.50	17.28	17.07
1,119.000	16.86	16.66	16.46	16.27	16.08
1,134.000	15.89	15.70	15.52	15.34	15.17
1,149.000	14.99	14.83	14.66	14.50	14.35
1,164.000	14.19	14.04	13.89	13.74	13.60
1,179.000	13.45	13.31	13.17	13.03	12.90
1,194.000	12.77	12.63	12.50	12.38	12.25
1,209.000	12.13	12.01	11.90	11.78	11.67
1,224.000	11.55	11.44	11.33	11.22	11.12
1,239.000	11.01	10.91	10.81	10.70	10.61
1,254.000	10.51	10.41	10.32	10.22	10.13
1,269.000	10.05	9.97	9.90	9.82	9.75
1,284.000	9.68	9.61	9.54	9.47	9.40
1,299.000	9.34	9.27	9.21	9.14	9.08
1,314.000	9.02	8.96	8.90	8.84	8.78
1,329.000	8.73	8.67	8.62	8.56	8.51
1,344.000	8.46	8.40	8.35	8.30	8.25
1,359.000	8.21	8.16	8.11	8.07	8.02
1,374.000	7.98	7.94	7.90	7.86	7.82
1,389.000	7.78	7.74	7.70	7.66	7.63

Subsection: Pond Routed Hydrograph (total out)  
Label: KB-LAKE (OUT)  
Scenario: 15 yr

Return Event: 15 years  
Storm Event: 15

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,404.000	7.59	7.55	7.52	7.48	7.45
1,419.000	7.41	7.38	7.35	7.31	7.28
1,434.000	7.25	7.22	7.19	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Peak Discharge	62.22 ft <sup>3</sup> /s
Time to Peak	813.000 min
Hydrograph Volume	26.674 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
162.000	0.00	0.00	0.00	0.00	0.00
177.000	0.00	0.00	0.00	0.00	0.00
192.000	0.00	0.00	0.00	0.00	0.00
207.000	0.00	0.00	0.00	0.00	0.00
222.000	0.00	0.00	0.00	0.00	0.00
237.000	0.00	0.00	0.00	0.00	0.00
252.000	0.00	0.00	0.00	0.01	0.01
267.000	0.01	0.01	0.01	0.01	0.01
282.000	0.01	0.01	0.01	0.01	0.01
297.000	0.01	0.01	0.01	0.01	0.01
312.000	0.02	0.02	0.02	0.02	0.02
327.000	0.02	0.02	0.02	0.02	0.02
342.000	0.03	0.03	0.03	0.03	0.03
357.000	0.03	0.03	0.03	0.04	0.04
372.000	0.04	0.04	0.04	0.04	0.04
387.000	0.05	0.05	0.05	0.05	0.05
402.000	0.05	0.05	0.06	0.06	0.06
417.000	0.06	0.06	0.07	0.07	0.07
432.000	0.07	0.07	0.08	0.08	0.08
447.000	0.08	0.08	0.09	0.09	0.09
462.000	0.09	0.10	0.10	0.10	0.10
477.000	0.11	0.11	0.11	0.11	0.12
492.000	0.12	0.12	0.12	0.13	0.13
507.000	0.13	0.14	0.14	0.14	0.14
522.000	0.14	0.14	0.14	0.14	0.14
537.000	0.14	0.14	0.14	0.14	0.14
552.000	0.14	0.14	0.14	0.14	0.14
567.000	0.14	0.14	0.14	0.14	0.14
582.000	0.14	0.14	0.14	0.15	0.15
597.000	0.16	0.16	0.17	0.18	0.18
612.000	0.19	0.20	0.21	0.21	0.22
627.000	0.23	0.24	0.24	0.24	0.24
642.000	0.24	0.24	0.24	0.24	0.24
657.000	0.24	0.24	0.24	0.24	0.24
672.000	0.24	0.24	0.24	0.24	0.24
687.000	0.24	0.24	0.24	0.24	0.24
702.000	0.24	0.24	0.58	1.77	4.02
717.000	7.55	12.58	18.39	20.02	24.66
732.000	28.75	32.12	35.06	37.69	40.12

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
747.000	42.39	44.39	46.21	47.87	49.40
762.000	50.84	52.18	53.44	54.62	55.74
777.000	56.79	57.76	58.54	59.25	59.88
792.000	60.45	60.94	61.35	61.68	61.94
807.000	62.11	62.21	62.22	62.15	62.00
822.000	61.78	61.51	61.17	60.79	60.36
837.000	59.89	59.38	58.85	58.28	57.67
852.000	56.98	56.28	55.56	54.83	54.09
867.000	53.35	52.61	51.87	51.12	50.37
882.000	49.60	48.84	48.08	47.33	46.58
897.000	45.83	45.09	44.35	43.63	42.91
912.000	42.19	41.46	40.75	40.05	39.36
927.000	38.69	38.05	37.41	36.79	36.18
942.000	35.59	35.00	34.43	33.87	33.33
957.000	32.79	32.26	31.75	31.25	30.76
972.000	30.29	29.83	29.38	28.93	28.50
987.000	28.08	27.67	27.28	26.89	26.51
1,002.000	26.14	25.78	25.43	25.08	24.74
1,017.000	24.42	24.10	23.79	23.49	23.19
1,032.000	22.90	22.62	22.34	22.06	21.79
1,047.000	21.53	21.31	21.11	20.92	20.73
1,062.000	20.54	20.36	20.17	19.99	19.81
1,077.000	19.83	20.76	21.84	22.32	22.04
1,092.000	21.76	21.50	21.23	20.98	20.72
1,107.000	20.48	20.23	19.99	19.76	19.53
1,122.000	19.30	19.08	18.86	18.65	18.44
1,137.000	18.23	18.03	17.83	17.63	17.44
1,152.000	17.24	17.04	16.85	16.66	16.47
1,167.000	16.29	16.11	15.93	15.76	15.59
1,182.000	15.42	15.25	15.09	14.93	14.77
1,197.000	14.62	14.47	14.32	14.17	14.03
1,212.000	13.89	13.75	13.61	13.47	13.34
1,227.000	13.21	13.08	12.95	12.82	12.70
1,242.000	12.58	12.46	12.35	12.23	12.12
1,257.000	12.02	11.91	11.81	11.70	11.60
1,272.000	11.50	11.40	11.31	11.21	11.12
1,287.000	11.03	10.94	10.85	10.76	10.68
1,302.000	10.59	10.51	10.43	10.34	10.26
1,317.000	10.19	10.11	10.04	9.98	9.91
1,332.000	9.85	9.79	9.73	9.67	9.61
1,347.000	9.56	9.50	9.44	9.39	9.33
1,362.000	9.28	9.23	9.17	9.12	9.07
1,377.000	9.02	8.97	8.92	8.88	8.83

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,392.000	8.78	8.74	8.69	8.65	8.60
1,407.000	8.56	8.52	8.48	8.43	8.39
1,422.000	8.35	8.31	8.27	8.24	8.20
1,437.000	8.16	8.12	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	110.62 ft <sup>3</sup> /s
Time to Peak	783.000 min
Hydrograph Volume	38.954 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
132.000	0.00	0.00	0.00	0.00	0.00
147.000	0.00	0.00	0.00	0.00	0.00
162.000	0.00	0.00	0.00	0.00	0.00
177.000	0.00	0.00	0.00	0.00	0.00
192.000	0.00	0.00	0.00	0.00	0.00
207.000	0.00	0.00	0.00	0.01	0.01
222.000	0.01	0.01	0.01	0.01	0.01
237.000	0.01	0.01	0.01	0.01	0.01
252.000	0.01	0.01	0.02	0.02	0.02
267.000	0.02	0.02	0.02	0.02	0.02
282.000	0.02	0.02	0.03	0.03	0.03
297.000	0.03	0.03	0.03	0.03	0.04
312.000	0.04	0.04	0.04	0.04	0.04
327.000	0.05	0.05	0.05	0.05	0.05
342.000	0.06	0.06	0.06	0.06	0.06
357.000	0.07	0.07	0.07	0.07	0.07
372.000	0.08	0.08	0.08	0.08	0.09
387.000	0.09	0.09	0.09	0.10	0.10
402.000	0.10	0.10	0.11	0.11	0.11
417.000	0.12	0.12	0.12	0.13	0.13
432.000	0.13	0.14	0.14	0.14	0.14
447.000	0.14	0.14	0.14	0.14	0.14
462.000	0.14	0.14	0.14	0.14	0.14
477.000	0.14	0.14	0.14	0.14	0.14
492.000	0.14	0.14	0.14	0.14	0.14
507.000	0.14	0.14	0.14	0.14	0.14
522.000	0.14	0.15	0.16	0.16	0.17
537.000	0.17	0.18	0.19	0.19	0.20
552.000	0.21	0.22	0.22	0.23	0.24
567.000	0.24	0.24	0.24	0.24	0.24
582.000	0.24	0.24	0.24	0.24	0.24
597.000	0.24	0.24	0.24	0.24	0.24
612.000	0.24	0.24	0.24	0.24	0.24
627.000	0.24	0.24	0.24	0.24	0.24
642.000	0.24	0.24	0.24	0.24	0.24
657.000	0.24	0.24	0.24	0.24	0.24
672.000	0.24	0.24	0.35	0.56	0.79
687.000	1.11	1.50	1.92	2.47	3.18
702.000	4.29	5.80	8.04	11.44	16.64



Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
717.000	19.77	28.55	38.58	47.58	54.32
732.000	59.23	62.82	65.56	67.57	70.84
747.000	76.84	82.82	88.68	93.76	97.81
762.000	101.17	104.11	106.34	107.99	109.20
777.000	110.08	110.57	110.62	110.33	109.78
792.000	109.01	107.98	106.68	105.17	103.48
807.000	101.63	99.66	97.62	95.41	93.07
822.000	90.65	88.19	85.72	83.53	81.56
837.000	79.57	77.58	75.59	73.60	71.97
852.000	70.75	69.51	68.60	68.02	67.41
867.000	66.87	66.34	65.80	65.23	64.64
882.000	63.83	63.02	62.20	61.39	60.58
897.000	59.78	58.99	58.19	57.35	56.47
912.000	55.60	54.74	53.89	53.06	52.24
927.000	51.44	50.64	49.85	49.06	48.28
942.000	47.52	46.77	46.02	45.29	44.57
957.000	43.87	43.18	42.49	41.79	41.11
972.000	40.45	39.80	39.17	38.56	37.98
987.000	37.41	36.85	36.31	35.77	35.26
1,002.000	34.76	34.27	33.79	33.33	32.87
1,017.000	32.43	31.99	31.57	31.16	30.77
1,032.000	30.39	30.01	29.64	29.28	28.93
1,047.000	28.58	28.24	27.91	27.60	27.29
1,062.000	26.99	26.69	26.40	26.12	25.84
1,077.000	25.57	25.30	25.04	24.78	24.54
1,092.000	24.30	24.07	23.84	23.62	23.40
1,107.000	23.18	22.97	22.76	22.55	22.35
1,122.000	22.15	21.95	21.76	21.57	21.39
1,137.000	21.25	21.11	20.97	20.83	20.70
1,152.000	20.56	20.42	20.28	20.15	20.01
1,167.000	19.88	19.75	19.95	20.67	21.53
1,182.000	22.43	22.20	21.96	21.73	21.50
1,197.000	21.28	21.06	20.84	20.62	20.41
1,212.000	20.20	20.00	19.79	19.60	19.40
1,227.000	19.21	19.02	18.84	18.65	18.47
1,242.000	18.30	18.13	17.96	17.79	17.63
1,257.000	17.46	17.30	17.13	16.97	16.82
1,272.000	16.66	16.51	16.36	16.21	16.07
1,287.000	15.93	15.79	15.65	15.52	15.39
1,302.000	15.26	15.14	15.01	14.89	14.78
1,317.000	14.66	14.55	14.44	14.33	14.23
1,332.000	14.12	14.02	13.92	13.82	13.73
1,347.000	13.63	13.54	13.45	13.36	13.27

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,362.000	13.18	13.10	13.01	12.93	12.85
1,377.000	12.77	12.69	12.61	12.53	12.45
1,392.000	12.38	12.31	12.24	12.17	12.10
1,407.000	12.03	11.96	11.90	11.83	11.77
1,422.000	11.71	11.64	11.58	11.52	11.46
1,437.000	11.40	11.34	(N/A)	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
 Label: KB-LAKE (IN)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Summary for Hydrograph Addition at 'KB-LAKE'**

Upstream Link	Upstream Node
OUT EX LAKE	EX Lake #1
<Catchment to Outflow Node>	EX64 K-3
<Catchment to Outflow Node>	EX-K40
<Catchment to Outflow Node>	Hotels
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	WSR
<Catchment to Outflow Node>	Watermark

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT EX LAKE	1.264	792.000	2.92
Flow (From)	EX64 K-3	0.496	741.000	3.39
Flow (From)	EX-K40	0.829	738.000	6.75
Flow (From)	Hotels	1.629	720.000	26.58
Flow (From)	Offsite	5.625	777.000	23.08
Flow (From)	WSR	0.124	717.000	1.93
Flow (From)	Watermark	3.808	720.000	56.57
Flow (In)	KB-LAKE	13.776	720.000	93.07

Subsection: Pond Inflow Summary  
 Label: KB-LAKE (IN)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Summary for Hydrograph Addition at 'KB-LAKE'**

Upstream Link	Upstream Node
OUT EX LAKE	EX Lake #1
<Catchment to Outflow Node>	EX64 K-3
<Catchment to Outflow Node>	EX-K40
<Catchment to Outflow Node>	Hotels
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	WSR
<Catchment to Outflow Node>	Watermark

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT EX LAKE	2.880	798.000	5.35
Flow (From)	EX64 K-3	1.219	735.000	9.94
Flow (From)	EX-K40	1.779	735.000	15.58
Flow (From)	Hotels	3.319	720.000	54.91
Flow (From)	Offsite	11.019	777.000	46.92
Flow (From)	WSR	0.188	717.000	2.89
Flow (From)	Watermark	6.360	720.000	92.54
Flow (In)	KB-LAKE	26.766	720.000	173.87

Subsection: Pond Inflow Summary  
 Label: KB-LAKE (IN)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Summary for Hydrograph Addition at 'KB-LAKE'**

Upstream Link	Upstream Node
OUT EX LAKE	EX Lake #1
<Catchment to Outflow Node>	EX64 K-3
<Catchment to Outflow Node>	EX-K40
<Catchment to Outflow Node>	Hotels
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	WSR
<Catchment to Outflow Node>	Watermark

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT EX LAKE	3.415	801.000	5.93
Flow (From)	EX64 K-3	1.464	735.000	12.21
Flow (From)	EX-K40	2.087	735.000	18.43
Flow (From)	Hotels	3.858	720.000	63.73
Flow (From)	Offsite	12.715	777.000	54.34
Flow (From)	WSR	0.207	717.000	3.17
Flow (From)	Watermark	7.124	720.000	103.07
Flow (In)	KB-LAKE	30.871	720.000	198.88

Subsection: Pond Inflow Summary  
 Label: KB-LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'KB-LAKE'**

Upstream Link	Upstream Node
OUT EX LAKE	EX Lake #1
<Catchment to Outflow Node>	EX64 K-3
<Catchment to Outflow Node>	EX-K40
<Catchment to Outflow Node>	Hotels
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	WSR
<Catchment to Outflow Node>	Watermark

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT EX LAKE	5.077	810.000	7.38
Flow (From)	EX64 K-3	2.260	735.000	19.56
Flow (From)	EX-K40	3.063	735.000	27.37
Flow (From)	Hotels	5.545	720.000	90.90
Flow (From)	Offsite	17.989	777.000	77.20
Flow (From)	WSR	0.264	717.000	4.01
Flow (From)	Watermark	9.435	720.000	134.48
Flow (In)	KB-LAKE	43.633	720.000	275.25

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Peak Discharge	21.96 ft <sup>3</sup> /s
Time to Peak	855.000 min
Hydrograph Volume	11.026 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
738.000	0.00	0.07	1.83	3.37	4.69
753.000	5.84	6.85	7.74	8.54	9.64
768.000	10.71	11.66	12.50	13.28	13.99
783.000	14.65	15.28	15.88	16.45	16.99
798.000	17.50	17.98	18.44	18.87	19.27
813.000	19.64	19.98	20.29	20.58	20.83
828.000	21.06	21.26	21.43	21.58	21.70
843.000	21.80	21.87	21.92	21.95	21.96
858.000	21.96	21.93	21.89	21.84	21.78
873.000	21.70	21.61	21.51	21.40	21.29
888.000	21.16	21.03	20.89	20.74	20.59
903.000	20.44	20.28	20.11	19.94	19.77
918.000	19.59	19.41	19.23	19.05	18.86
933.000	18.67	18.47	18.28	18.08	17.89
948.000	17.69	17.49	17.30	17.10	16.90
963.000	16.71	16.51	16.32	16.13	15.94
978.000	15.75	15.57	15.38	15.20	15.02
993.000	14.84	14.66	14.49	14.32	14.15
1,008.000	13.98	13.81	13.65	13.49	13.34
1,023.000	13.18	13.03	12.88	12.73	12.59
1,038.000	12.44	12.30	12.16	12.03	11.89
1,053.000	11.76	11.63	11.50	11.37	11.25
1,068.000	11.13	11.01	10.90	10.79	10.68
1,083.000	10.58	10.48	10.38	10.28	10.18
1,098.000	10.09	9.99	9.90	9.81	9.72
1,113.000	9.63	9.55	9.46	9.38	9.29
1,128.000	9.21	9.13	9.05	8.97	8.89
1,143.000	8.82	8.74	8.68	8.64	8.59
1,158.000	8.54	8.49	8.44	8.38	8.33
1,173.000	8.27	8.21	8.16	8.10	8.04
1,188.000	7.98	7.92	7.87	7.81	7.75
1,203.000	7.69	7.63	7.57	7.51	7.46
1,218.000	7.40	7.34	7.28	7.23	7.17
1,233.000	7.12	7.06	7.01	6.96	6.91
1,248.000	6.86	6.81	6.76	6.71	6.67
1,263.000	6.62	6.58	6.53	6.49	6.44
1,278.000	6.40	6.36	6.32	6.28	6.24
1,293.000	6.20	6.16	6.12	6.08	6.05
1,308.000	6.01	5.97	5.94	5.90	5.87

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,323.000	5.83	5.80	5.76	5.73	5.70
1,338.000	5.67	5.64	5.60	5.57	5.54
1,353.000	5.51	5.48	5.45	5.43	5.40
1,368.000	5.37	5.34	5.31	5.29	5.26
1,383.000	5.23	5.21	5.18	5.16	5.13
1,398.000	5.11	5.09	5.06	5.04	5.02
1,413.000	4.99	4.97	4.95	4.93	4.91
1,428.000	4.89	4.87	4.84	4.82	4.80



Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Peak Discharge	55.07 ft <sup>3</sup> /s
Time to Peak	822.000 min
Hydrograph Volume	24.707 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
720.000	0.00	0.44	4.11	8.12	14.21
735.000	19.93	25.09	30.21	34.32	37.54
750.000	40.03	41.94	43.43	44.69	45.78
765.000	46.69	47.49	48.21	48.88	49.50
780.000	50.11	50.69	51.26	51.80	52.31
795.000	52.80	53.25	53.65	54.02	54.33
810.000	54.59	54.80	54.95	55.04	55.07
825.000	55.03	54.94	54.80	54.60	54.36
840.000	54.06	53.73	53.34	52.92	52.47
855.000	51.98	51.47	50.94	50.38	49.81
870.000	49.22	48.61	48.00	47.38	46.75
885.000	46.12	45.47	44.82	44.17	43.57
900.000	42.96	42.36	41.75	41.14	40.53
915.000	39.92	39.32	38.72	38.13	37.54
930.000	36.97	36.39	35.83	35.27	34.73
945.000	34.19	33.67	33.15	32.64	32.14
960.000	31.65	31.17	30.70	30.23	29.78
975.000	29.33	28.90	28.47	28.05	27.64
990.000	27.24	26.85	26.47	26.10	25.74
1,005.000	25.39	25.04	24.70	24.37	24.09
1,020.000	23.82	23.57	23.31	23.07	22.83
1,035.000	22.60	22.37	22.14	21.94	21.86
1,050.000	21.98	22.18	22.34	22.42	22.44
1,065.000	22.41	22.33	22.23	22.09	21.94
1,080.000	21.77	21.58	21.38	21.18	20.97
1,095.000	20.75	20.53	20.31	20.09	19.87
1,110.000	19.65	19.43	19.21	18.99	18.78
1,125.000	18.56	18.35	18.14	17.93	17.72
1,140.000	17.52	17.32	17.12	16.92	16.73
1,155.000	16.54	16.36	16.18	16.00	15.82
1,170.000	15.65	15.48	15.31	15.15	14.99
1,185.000	14.83	14.67	14.52	14.36	14.21
1,200.000	14.06	13.92	13.78	13.63	13.50
1,215.000	13.36	13.23	13.09	12.97	12.84
1,230.000	12.71	12.59	12.47	12.35	12.23
1,245.000	12.12	12.01	11.89	11.79	11.68
1,260.000	11.57	11.47	11.37	11.27	11.17
1,275.000	11.07	10.98	10.90	10.81	10.73
1,290.000	10.65	10.57	10.49	10.41	10.34

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,305.000	10.26	10.19	10.12	10.05	9.98
1,320.000	9.92	9.85	9.78	9.72	9.66
1,335.000	9.60	9.54	9.48	9.42	9.36
1,350.000	9.30	9.24	9.19	9.13	9.08
1,365.000	9.03	8.98	8.93	8.88	8.83
1,380.000	8.78	8.73	8.70	8.67	8.64
1,395.000	8.61	8.58	8.55	8.51	8.48
1,410.000	8.45	8.41	8.38	8.34	8.31
1,425.000	8.28	8.24	8.21	8.17	8.14
1,440.000	8.11	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Peak Discharge	65.43 ft <sup>3</sup> /s
Time to Peak	816.000 min
Hydrograph Volume	29.047 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
717.000	0.00	1.11	4.76	8.91	16.02
732.000	22.95	30.44	37.14	42.66	47.38
747.000	51.10	53.86	55.87	57.34	58.44
762.000	59.28	59.95	60.51	61.00	61.45
777.000	61.88	62.31	62.73	63.12	63.49
792.000	63.84	64.17	64.47	64.73	64.97
807.000	65.16	65.30	65.40	65.43	65.41
822.000	65.33	65.20	65.01	64.76	64.46
837.000	64.12	63.73	63.29	62.82	62.31
852.000	61.76	61.16	60.53	59.87	59.19
867.000	58.48	57.76	57.03	56.29	55.54
882.000	54.78	54.02	53.25	52.48	51.71
897.000	50.94	50.17	49.40	48.64	47.88
912.000	47.13	46.37	45.62	44.88	44.14
927.000	43.47	42.80	42.14	41.48	40.82
942.000	40.18	39.53	38.90	38.28	37.67
957.000	37.06	36.47	35.89	35.32	34.76
972.000	34.21	33.67	33.15	32.64	32.14
987.000	31.65	31.17	30.71	30.26	29.82
1,002.000	29.39	28.97	28.56	28.17	27.78
1,017.000	27.40	27.03	26.67	26.32	25.98
1,032.000	25.64	25.32	25.00	24.68	24.38
1,047.000	24.12	23.87	23.62	23.39	23.16
1,062.000	22.93	22.71	22.50	22.29	22.08
1,077.000	21.89	21.81	21.91	22.12	22.31
1,092.000	22.42	22.47	22.46	22.41	22.33
1,107.000	22.22	22.08	21.93	21.76	21.58
1,122.000	21.39	21.20	20.99	20.79	20.58
1,137.000	20.37	20.17	19.96	19.75	19.54
1,152.000	19.33	19.13	18.92	18.72	18.51
1,167.000	18.31	18.11	17.92	17.72	17.53
1,182.000	17.34	17.15	16.97	16.79	16.61
1,197.000	16.43	16.26	16.09	15.92	15.75
1,212.000	15.59	15.43	15.27	15.11	14.96
1,227.000	14.81	14.66	14.52	14.38	14.24
1,242.000	14.10	13.96	13.83	13.70	13.57
1,257.000	13.45	13.33	13.21	13.09	12.98
1,272.000	12.87	12.75	12.65	12.54	12.44
1,287.000	12.33	12.23	12.13	12.03	11.94

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,302.000	11.84	11.75	11.66	11.57	11.48
1,317.000	11.39	11.30	11.22	11.14	11.06
1,332.000	10.98	10.91	10.84	10.77	10.70
1,347.000	10.63	10.57	10.50	10.44	10.38
1,362.000	10.31	10.25	10.20	10.14	10.08
1,377.000	10.02	9.97	9.91	9.86	9.81
1,392.000	9.76	9.70	9.65	9.60	9.55
1,407.000	9.51	9.46	9.41	9.36	9.32
1,422.000	9.27	9.23	9.19	9.14	9.10
1,437.000	9.06	9.02	(N/A)	(N/A)	(N/A)

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	119.29 ft <sup>3</sup> /s
Time to Peak	777.000 min
Hydrograph Volume	42.543 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
702.000	0.00	0.85	2.33	4.21	6.70
717.000	10.55	16.99	25.00	35.83	47.18
732.000	58.62	68.73	77.39	83.94	88.76
747.000	94.19	107.52	110.00	112.40	114.46
762.000	115.99	117.30	118.33	118.92	119.20
777.000	119.29	119.16	118.73	118.03	117.11
792.000	116.01	114.74	113.24	111.54	109.67
807.000	107.67	105.55	103.35	101.04	98.60
822.000	96.07	93.50	91.86	91.08	89.98
837.000	88.66	87.17	85.55	83.82	82.05
852.000	80.35	78.74	77.23	75.89	74.70
867.000	73.63	72.68	71.82	71.01	70.25
882.000	69.49	68.72	67.93	67.12	66.34
897.000	65.56	64.77	63.98	63.17	62.35
912.000	61.51	60.65	59.79	58.93	58.08
927.000	57.22	56.38	55.53	54.70	53.87
942.000	53.04	52.23	51.42	50.63	49.84
957.000	49.06	48.30	47.54	46.80	46.06
972.000	45.33	44.61	43.91	43.28	42.65
987.000	42.03	41.41	40.81	40.21	39.63
1,002.000	39.06	38.50	37.96	37.42	36.90
1,017.000	36.39	35.90	35.41	34.94	34.48
1,032.000	34.03	33.59	33.16	32.75	32.34
1,047.000	31.94	31.56	31.18	30.81	30.45
1,062.000	30.09	29.75	29.42	29.09	28.77
1,077.000	28.46	28.15	27.85	27.56	27.27
1,092.000	26.99	26.72	26.45	26.19	25.94
1,107.000	25.69	25.44	25.20	24.97	24.74
1,122.000	24.51	24.29	24.10	23.92	23.73
1,137.000	23.54	23.36	23.19	23.02	22.85
1,152.000	22.69	22.53	22.37	22.22	22.06
1,167.000	21.91	21.76	21.64	21.61	21.71
1,182.000	21.94	22.19	22.36	22.46	22.50
1,197.000	22.50	22.46	22.38	22.29	22.17
1,212.000	22.04	21.89	21.73	21.56	21.39
1,227.000	21.22	21.04	20.85	20.67	20.49
1,242.000	20.31	20.12	19.94	19.77	19.59
1,257.000	19.41	19.24	19.07	18.90	18.73
1,272.000	18.56	18.39	18.23	18.07	17.91

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**

**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,287.000	17.75	17.60	17.45	17.30	17.15
1,302.000	17.01	16.87	16.73	16.59	16.46
1,317.000	16.33	16.20	16.07	15.95	15.83
1,332.000	15.71	15.59	15.48	15.37	15.26
1,347.000	15.15	15.04	14.94	14.84	14.74
1,362.000	14.64	14.54	14.45	14.35	14.26
1,377.000	14.17	14.08	13.99	13.91	13.82
1,392.000	13.74	13.66	13.58	13.50	13.42
1,407.000	13.34	13.27	13.19	13.12	13.05
1,422.000	12.97	12.90	12.84	12.77	12.70
1,437.000	12.63	12.57	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: SOUTH LAKE  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
521.00	0.00	0.000	26,920.08	0.00	0.00	0.00
521.50	0.00	0.316	28,162.54	0.00	0.00	152.99
522.00	0.00	0.647	29,433.03	0.00	0.00	312.97
522.50	8.71	0.992	30,731.54	0.00	8.71	488.79
523.00	24.31	1.352	32,058.09	0.00	24.31	678.79
523.50	44.05	1.728	33,412.66	0.00	44.05	880.38
524.00	66.87	2.119	34,795.26	0.00	66.87	1,092.66
524.50	92.14	2.527	36,205.89	0.00	92.14	1,315.14
525.00	290.44	2.951	37,644.55	0.00	290.44	1,718.57
525.50	390.17	3.391	39,015.33	0.00	390.17	2,031.23
526.00	474.76	3.846	40,410.61	0.00	474.76	2,336.43

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: SOUTH LAKE  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
521.00	0.00	0.000	26,920.08	0.00	0.00	0.00
521.50	0.00	0.316	28,162.54	0.00	0.00	152.99
522.00	0.00	0.647	29,433.03	0.00	0.00	312.97
522.50	8.71	0.992	30,731.54	0.00	8.71	488.79
523.00	24.31	1.352	32,058.09	0.00	24.31	678.79
523.50	44.05	1.728	33,412.66	0.00	44.05	880.38
524.00	66.87	2.119	34,795.26	0.00	66.87	1,092.66
524.50	92.14	2.527	36,205.89	0.00	92.14	1,315.14
525.00	290.44	2.951	37,644.55	0.00	290.44	1,718.57
525.50	390.17	3.391	39,015.33	0.00	390.17	2,031.23
526.00	474.76	3.846	40,410.61	0.00	474.76	2,336.43



Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: SOUTH LAKE  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
521.00	0.00	0.000	26,920.08	0.00	0.00	0.00
521.50	0.00	0.316	28,162.54	0.00	0.00	152.99
522.00	0.00	0.647	29,433.03	0.00	0.00	312.97
522.50	8.71	0.992	30,731.54	0.00	8.71	488.79
523.00	24.31	1.352	32,058.09	0.00	24.31	678.79
523.50	44.05	1.728	33,412.66	0.00	44.05	880.38
524.00	66.87	2.119	34,795.26	0.00	66.87	1,092.66
524.50	92.14	2.527	36,205.89	0.00	92.14	1,315.14
525.00	290.44	2.951	37,644.55	0.00	290.44	1,718.57
525.50	390.17	3.391	39,015.33	0.00	390.17	2,031.23
526.00	474.76	3.846	40,410.61	0.00	474.76	2,336.43

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Infiltration	
Infiltration Method (Computed)	No Infiltration

---

Initial Conditions	
Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (ft <sup>2</sup> )	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
521.00	0.00	0.000	26,920.08	0.00	0.00	0.00
521.50	0.00	0.316	28,162.54	0.00	0.00	152.99
522.00	0.00	0.647	29,433.03	0.00	0.00	312.97
522.50	8.71	0.992	30,731.54	0.00	8.71	488.79
523.00	24.31	1.352	32,058.09	0.00	24.31	678.79
523.50	44.05	1.728	33,412.66	0.00	44.05	880.38
524.00	66.87	2.119	34,795.26	0.00	66.87	1,092.66
524.50	92.14	2.527	36,205.89	0.00	92.14	1,315.14
525.00	290.44	2.951	37,644.55	0.00	290.44	1,718.57
525.50	390.17	3.391	39,015.33	0.00	390.17	2,031.23
526.00	474.76	3.846	40,410.61	0.00	474.76	2,336.43

Subsection: Level Pool Pond Routing Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

---

Infiltration

---

Infiltration Method (Computed)	No Infiltration
-----------------------------------	-----------------

---

Initial Conditions

---

Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---



---

Inflow/Outflow Hydrograph Summary

---

Flow (Peak In)	22.32 ft <sup>3</sup> /s	Time to Peak (Flow, In)	837.000 min
Flow (Peak Outlet)	21.96 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	855.000 min

---

Elevation (Water Surface, Peak)	522.92 ft
Volume (Peak)	1.297 ac-ft

---

Mass Balance (ac-ft)

---

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	11.863 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	11.026 ac-ft
Volume (Retained)	0.816 ac-ft
Volume (Unrouted)	-0.021 ac-ft
Error (Mass Balance)	0.2 %

---

Subsection: Level Pool Pond Routing Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

---

Infiltration

---

Infiltration Method (Computed)	No Infiltration
-----------------------------------	-----------------

---

Initial Conditions

---

Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---

Inflow/Outflow Hydrograph Summary

---

Flow (Peak In)	55.58 ft <sup>3</sup> /s	Time to Peak (Flow, In)	810.000 min
Flow (Peak Outlet)	55.07 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	822.000 min

---

Elevation (Water Surface, Peak)	523.74 ft
Volume (Peak)	1.915 ac-ft

---

Mass Balance (ac-ft)

---

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	25.674 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	24.707 ac-ft
Volume (Retained)	0.935 ac-ft
Volume (Unrouted)	-0.033 ac-ft
Error (Mass Balance)	0.1 %

---

Subsection: Level Pool Pond Routing Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

---

Infiltration

---

Infiltration Method (Computed)	No Infiltration
-----------------------------------	-----------------

---

Initial Conditions

---

Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---

Inflow/Outflow Hydrograph Summary

---

Flow (Peak In)	65.86 ft <sup>3</sup> /s	Time to Peak (Flow, In)	807.000 min
Flow (Peak Outlet)	65.43 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	816.000 min

---

Elevation (Water Surface, Peak)	523.97 ft
Volume (Peak)	2.094 ac-ft

---

Mass Balance (ac-ft)

---

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	30.046 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	29.047 ac-ft
Volume (Retained)	0.963 ac-ft
Volume (Unrouted)	-0.036 ac-ft
Error (Mass Balance)	0.1 %

---

Subsection: Level Pool Pond Routing Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

---

Infiltration

---

Infiltration Method (Computed)	No Infiltration
-----------------------------------	-----------------

---

Initial Conditions

---

Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---

Inflow/Outflow Hydrograph Summary

---

Flow (Peak In)	119.30 ft <sup>3</sup> /s	Time to Peak (Flow, In)	777.000 min
Flow (Peak Outlet)	119.29 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	777.000 min

---

Elevation (Water Surface, Peak)	524.57 ft
Volume (Peak)	2.584 ac-ft

---

Mass Balance (ac-ft)

---

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	43.624 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	42.543 ac-ft
Volume (Retained)	1.033 ac-ft
Volume (Unrouted)	-0.048 ac-ft
Error (Mass Balance)	0.1 %

---

Subsection: Pond Inflow Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 2 yr

Return Event: 2 years  
 Storm Event: 2

**Summary for Hydrograph Addition at 'SOUTH LAKE'**

Upstream Link	Upstream Node
OUT KB	KB-LAKE
<Catchment to Outflow Node>	SOUTHERNSIDE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT KB	10.278	840.000	20.92
Flow (From)	SOUTHERNSIDE	1.585	735.000	15.03
Flow (In)	SOUTH LAKE	11.863	837.000	22.32

Subsection: Pond Inflow Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 15 yr

Return Event: 15 years  
 Storm Event: 15

**Summary for Hydrograph Addition at 'SOUTH LAKE'**

Upstream Link	Upstream Node
OUT KB	KB-LAKE
<Catchment to Outflow Node>	SOUTHERNSIDE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT KB	22.725	816.000	52.48
Flow (From)	SOUTHERNSIDE	2.949	732.000	28.12
Flow (In)	SOUTH LAKE	25.674	810.000	55.58



Subsection: Pond Inflow Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 25 yr

Return Event: 25 years  
 Storm Event: 25

**Summary for Hydrograph Addition at 'SOUTH LAKE'**

Upstream Link	Upstream Node
OUT KB	KB-LAKE
<Catchment to Outflow Node>	SOUTHERNSIDE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT KB	26.674	813.000	62.22
Flow (From)	SOUTHERNSIDE	3.371	732.000	32.13
	E			
Flow (In)	SOUTH LAKE	30.046	807.000	65.86

Subsection: Pond Inflow Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'SOUTH LAKE'**

Upstream Link	Upstream Node
OUT KB	KB-LAKE
<Catchment to Outflow Node>	SOUTHERNSIDE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT KB	38.954	783.000	110.62
Flow (From)	SOUTHERNSIDE	4.670	732.000	44.31
Flow (In)	SOUTH LAKE	43.624	777.000	119.30

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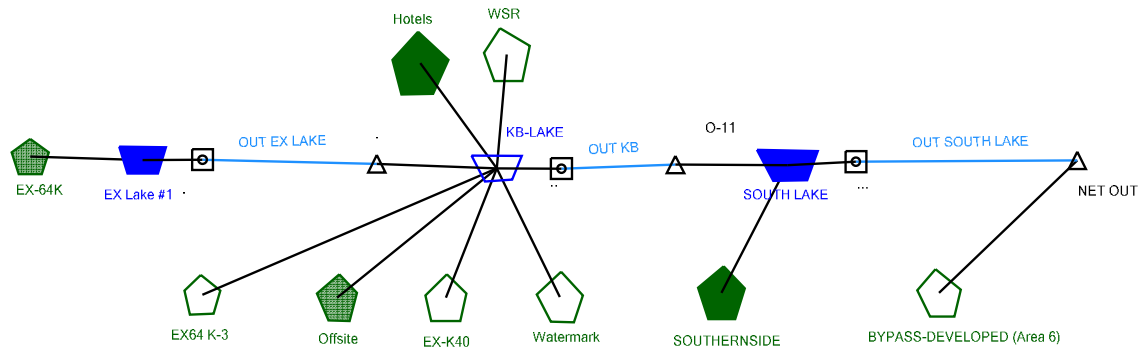
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# Scenario: 100 yr LFB



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Project Summary

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Title	WatermarkReside ntial O'Fallon
Engineer	J.M.B.
Company	
Date	2/10/2020

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Notes

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Subsection: Master Network Summary

**Catchments Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)
BYPASS-DEVELOPED (Area 6)	100 yr	100	0.842	726.000	9.90
EX-64K	100 yr	100	5.248	738.000	42.35
EX-K40	100 yr	100	3.063	735.000	27.37
EX64 K-3	100 yr	100	2.260	735.000	19.56
Hotels	100 yr	100	5.545	720.000	90.90
Offsite	100 yr	100	17.989	777.000	77.20
SOUTHERNSIDE	100 yr	100	4.670	732.000	44.31
WSR	100 yr	100	0.264	717.000	4.01
Watermark	100 yr	100	9.435	720.000	134.48

**Node Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)
NET OUT	100 yr	100	45.697	735.000	201.38

**Pond Summary**

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (min)	Peak Flow (ft <sup>3</sup> /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
EX Lake #1 (IN)	100 yr	100	5.248	738.000	42.35	(N/A)	(N/A)
EX Lake #1 (OUT)	100 yr	100	5.077	810.000	7.38	552.60	2.389
KB-LAKE (IN)	100 yr	100	43.633	720.000	275.25	(N/A)	(N/A)
KB-LAKE (OUT)	100 yr	100	41.269	735.000	150.69	533.41	14.242
SOUTH LAKE (IN)	100 yr	100	45.938	735.000	194.70	(N/A)	(N/A)
SOUTH LAKE (OUT)	100 yr	100	44.855	735.000	193.50	524.76	2.741

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Time-Depth Curve: 100	
Label	100
Start Time	0.000 min
Increment	6.000 min
End Time	1,440.000 min
Return Event	100 years

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.1	0.1	0.1
60.000	0.1	0.1	0.1	0.1	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.2	0.2	0.2	0.2	0.2
150.000	0.2	0.2	0.2	0.2	0.2
180.000	0.2	0.3	0.3	0.3	0.3
210.000	0.3	0.3	0.3	0.3	0.3
240.000	0.3	0.4	0.4	0.4	0.4
270.000	0.4	0.4	0.4	0.4	0.4
300.000	0.5	0.5	0.5	0.5	0.5
330.000	0.5	0.5	0.5	0.6	0.6
360.000	0.6	0.6	0.6	0.6	0.6
390.000	0.6	0.7	0.7	0.7	0.7
420.000	0.7	0.7	0.7	0.8	0.8
450.000	0.8	0.8	0.8	0.8	0.8
480.000	0.9	0.9	0.9	0.9	0.9
510.000	1.0	1.0	1.0	1.0	1.0
540.000	1.1	1.1	1.1	1.1	1.2
570.000	1.2	1.2	1.2	1.2	1.3
600.000	1.3	1.3	1.4	1.4	1.4
630.000	1.5	1.5	1.5	1.6	1.6
660.000	1.7	1.7	1.8	1.9	2.0
690.000	2.0	2.2	2.6	3.1	4.1
720.000	4.8	4.9	5.0	5.1	5.2
750.000	5.3	5.4	5.4	5.5	5.5
780.000	5.6	5.6	5.6	5.7	5.7
810.000	5.8	5.8	5.8	5.8	5.9
840.000	5.9	5.9	6.0	6.0	6.0
870.000	6.0	6.1	6.1	6.1	6.1
900.000	6.1	6.2	6.2	6.2	6.2
930.000	6.2	6.3	6.3	6.3	6.3
960.000	6.3	6.4	6.4	6.4	6.4
990.000	6.4	6.4	6.4	6.5	6.5
1,020.000	6.5	6.5	6.5	6.5	6.6

Subsection: Time-Depth Curve  
 Label: O'Fallon  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**CUMULATIVE RAINFALL (in)**  
**Output Time Increment = 6.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	6.6	6.6	6.6	6.6	6.6
1,080.000	6.6	6.6	6.7	6.7	6.7
1,110.000	6.7	6.7	6.7	6.7	6.7
1,140.000	6.8	6.8	6.8	6.8	6.8
1,170.000	6.8	6.8	6.8	6.8	6.8
1,200.000	6.9	6.9	6.9	6.9	6.9
1,230.000	6.9	6.9	6.9	6.9	6.9
1,260.000	6.9	7.0	7.0	7.0	7.0
1,290.000	7.0	7.0	7.0	7.0	7.0
1,320.000	7.0	7.0	7.1	7.1	7.1
1,350.000	7.1	7.1	7.1	7.1	7.1
1,380.000	7.1	7.1	7.1	7.1	7.2
1,410.000	7.2	7.2	7.2	7.2	7.2
1,440.000	7.2	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Runoff CN-Area  
 Label: EX-64K  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Runoff Curve Number Data**

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Pasture, grassland, or range - good - Soil C	74.000	8.25	0.0	0.0	74.000
Pasture, grassland, or range - good - Soil B	61.000	10.11	0.0	0.0	61.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	18.36	(N/A)	(N/A)	66.842

## Subsection: Unit Hydrograph Equations

### Unit Hydrograph Method (Computational Notes)

#### Definition of Terms

At	Total area (acres): $At = Ai + Ap$
Ai	Impervious area (acres)
Ap	Pervious area (acres)
CNi	Runoff curve number for impervious area
CNp	Runoff curve number for pervious area
fLoss	f loss constant infiltration (depth/time)
gKs	Saturated Hydraulic Conductivity (depth/time)
Md	Volumetric Moisture Deficit
Psi	Capillary Suction (length)
hK	Horton Infiltration Decay Rate ( $\text{time}^{-1}$ )
fo	Initial Infiltration Rate (depth/time)
fc	Ultimate(capacity)Infiltration Rate (depth/time)
Ia	Initial Abstraction (length)
dt	Computational increment (duration of unit excess rainfall) Default dt is smallest value of $0.1333Tc$ , $r_{tm}$ , and $t_h$ (Smallest dt is then adjusted to match up with $T_p$ )
UDdt	User specified override computational main time increment (only used if UDdt is $\Rightarrow .1333Tc$ )
D(t)	Point on distribution curve (fraction of P) for time step t
K	$2 / (1 + (T_r/T_p))$ : default $K = 0.75$ : (for $T_r/T_p = 1.67$ )
Ks	Hydrograph shape factor = Unit Conversions * $K = ((1\text{hr}/3600\text{sec}) * (1\text{ft}/12\text{in}) * ((5280\text{ft})^2/\text{sq.mi})) * K$ Default $K_s = 645.333 * 0.75 = 484$
Lag	Lag time from center of excess runoff (dt) to $T_p$ : $Lag = 0.6T_c$
P	Total precipitation depth, inches
Pa(t)	Accumulated rainfall at time step t
Pi(t)	Incremental rainfall at time step t
qp	Peak discharge (cfs) for 1in. runoff, for 1hr, for 1 sq.mi. = $(K_s * A * Q) / T_p$ (where $Q = 1\text{in. runoff}$ , $A = \text{sq.mi.}$ )
Qu(t)	Unit hydrograph ordinate (cfs) at time step t
Q(t)	Final hydrograph ordinate (cfs) at time step t
Rai(t)	Accumulated runoff (inches) at time step t for impervious area
Rap(t)	Accumulated runoff (inches) at time step t for pervious area
Rii(t)	Incremental runoff (inches) at time step t for impervious area
Rip(t)	Incremental runoff (inches) at time step t for pervious area
R(t)	Incremental weighted total runoff (inches)
Rtm	Time increment for rainfall table
Si	S for impervious area: $S_i = (1000/CN_i) - 10$
Sp	S for pervious area: $S_p = (1000/CN_p) - 10$
t	Time step (row) number
Tc	Time of concentration
Tb	Time (hrs) of entire unit hydrograph: $T_b = T_p + T_r$
Tp	Time (hrs) to peak of a unit hydrograph: $T_p = (dt/2) + Lag$
Tr	Time (hrs) of receding limb of unit hydrograph: $T_r = \text{ratio of } T_p$

Subsection: Unit Hydrograph Equations

## Unit Hydrograph Method

### Computational Notes

#### Precipitation

Column (1) Time for time step t  
Column (2)  $D(t)$  = Point on distribution curve for time step t  
Column (3)  $P_i(t) = P_a(t) - P_a(t-1)$ : Col.(4) - Preceding Col.(4)  
Column (4)  $P_a(t) = D(t) \times P$ : Col.(2)  $\times$  P

#### Pervious Area Runoff (using SCS Runoff CN Method)

Column (5)  $R_{ap}(t)$  = Accumulated pervious runoff for time step t  
If  $(P_a(t))$  is  $\leq 0.2Sp$  then use:  $R_{ap}(t) = 0.0$   
If  $(P_a(t))$  is  $> 0.2Sp$  then use:  
 $R_{ap}(t) = (Col.(4) - 0.2Sp)^2 / (Col.(4) + 0.8Sp)$   
Column (6)  $R_{ip}(t)$  = Incremental pervious runoff for time step t  
 $R_{ip}(t) = R_{ap}(t) - R_{ap}(t-1)$   
 $R_{ip}(t) = Col.(5)$  for current row -  $Col.(5)$  for preceding row.

#### Impervious Area Runoff

Column (7 & 8)... Did not specify to use impervious areas.

#### Incremental Weighted Runoff

Column (9)  $R(t) = (A_p/A_t) \times R_{ip}(t) + (A_i/A_t) \times R_{ii}(t)$   
 $R(t) = (A_p/A_t) \times Col.(6) + (A_i/A_t) \times Col.(8)$

#### SCS Unit Hydrograph Method

Column (10)  $Q(t)$  is computed with the SCS unit hydrograph method using  $R(t)$  and  $Q_u(t)$ .

Subsection: Unit Hydrograph Summary  
 Label: BYPASS-DEVELOPED (Area 6)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	23.472 min
Area (User Defined)	2.77 acres
Computational Time Increment	3.130 min
Time to Peak (Computed)	726.067 min
Flow (Peak, Computed)	9.92 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	726.000 min
Flow (Peak Interpolated Output)	9.90 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	68.884
Area (User Defined)	2.77 acres
Maximum Retention (Pervious)	4.5 in
Maximum Retention (Pervious, 20 percent)	0.9 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.7 in
Runoff Volume (Pervious)	0.846 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	0.842 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	23.472 min
Computational Time Increment	3.130 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	8.02 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: BYPASS-DEVELOPED (Area 6)  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	15.648 min
Unit receding limb, $T_r$	62.592 min
Total unit time, $T_b$	78.240 min

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Subsection: Unit Hydrograph Summary  
 Label: EX64 K-3  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	38.022 min
Area (User Defined)	8.80 acres
Computational Time Increment	5.070 min
Time to Peak (Computed)	735.092 min
Flow (Peak, Computed)	19.59 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	19.56 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	63.600
Area (User Defined)	8.80 acres
Maximum Retention (Pervious)	5.7 in
Maximum Retention (Pervious, 20 percent)	1.1 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.1 in
Runoff Volume (Pervious)	2.283 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	2.260 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	38.022 min
Computational Time Increment	5.070 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	15.73 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX64 K-3  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	25.348 min
Unit receding limb, $T_r$	101.392 min
Total unit time, $T_b$	126.740 min

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Subsection: Unit Hydrograph Summary  
 Label: EX-64K  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	42.864 min
Area (User Defined)	18.36 acres
Computational Time Increment	5.715 min
Time to Peak (Computed)	737.261 min
Flow (Peak, Computed)	42.46 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	738.000 min
Flow (Peak Interpolated Output)	42.35 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	67.000
Area (User Defined)	18.36 acres
Maximum Retention (Pervious)	4.9 in
Maximum Retention (Pervious, 20 percent)	1.0 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.5 in
Runoff Volume (Pervious)	5.305 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	5.248 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	42.864 min
Computational Time Increment	5.715 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	29.12 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: EX-64K  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	28.576 min
Unit receding limb, $T_r$	114.304 min
Total unit time, $T_b$	142.880 min

---

Subsection: Unit Hydrograph Summary  
 Label: EX-K40  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	36.810 min
Area (User Defined)	9.59 acres
Computational Time Increment	4.908 min
Time to Peak (Computed)	736.200 min
Flow (Peak, Computed)	27.59 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	735.000 min
Flow (Peak Interpolated Output)	27.37 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	70.747
Area (User Defined)	9.59 acres
Maximum Retention (Pervious)	4.1 in
Maximum Retention (Pervious, 20 percent)	0.8 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	3.9 in
Runoff Volume (Pervious)	3.089 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	3.063 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	36.810 min
Computational Time Increment	4.908 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	17.71 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: EX-K40  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	24.540 min
Unit receding limb, $T_r$	98.160 min
Total unit time, $T_b$	122.700 min

---

Subsection: Unit Hydrograph Summary  
 Label: Hotels  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	9.600 min
Area (User Defined)	15.81 acres
<hr/>	
Computational Time Increment	1.280 min
Time to Peak (Computed)	719.360 min
Flow (Peak, Computed)	91.70 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	90.90 ft <sup>3</sup> /s
<hr/>	
Drainage Area	
SCS CN (Composite)	74.000
Area (User Defined)	15.81 acres
Maximum Retention (Pervious)	3.5 in
Maximum Retention (Pervious, 20 percent)	0.7 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.2 in
Runoff Volume (Pervious)	5.556 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	5.545 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	9.600 min
Computational Time Increment	1.280 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	111.96 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Hotels  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	6.400 min
Unit receding limb, $T_r$	25.600 min
Total unit time, $T_b$	32.000 min

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Subsection: Unit Hydrograph Summary  
 Label: Offsite  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	105.954 min
Area (User Defined)	48.60 acres
<hr/>	
Computational Time Increment	14.127 min
Time to Peak (Computed)	776.996 min
Flow (Peak, Computed)	77.20 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	777.000 min
Flow (Peak Interpolated Output)	77.20 ft <sup>3</sup> /s
<hr/>	
Drainage Area	
SCS CN (Composite)	77.000
Area (User Defined)	48.60 acres
Maximum Retention (Pervious)	3.0 in
Maximum Retention (Pervious, 20 percent)	0.6 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	4.5 in
Runoff Volume (Pervious)	18.412 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	17.989 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	105.954 min
Computational Time Increment	14.127 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	31.18 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Offsite  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	70.636 min
Unit receding limb, $T_r$	282.544 min
Total unit time, $T_b$	353.180 min

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Subsection: Unit Hydrograph Summary  
 Label: SOUTHERNSIDE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	33.210 min
Area (User Defined)	11.39 acres
Computational Time Increment	4.428 min
Time to Peak (Computed)	730.620 min
Flow (Peak, Computed)	44.45 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	732.000 min
Flow (Peak Interpolated Output)	44.31 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	80.651
Area (User Defined)	11.39 acres
Maximum Retention (Pervious)	2.4 in
Maximum Retention (Pervious, 20 percent)	0.5 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	5.0 in
Runoff Volume (Pervious)	4.701 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	4.670 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	33.210 min
Computational Time Increment	4.428 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	23.32 ft <sup>3</sup> /s



Subsection: Unit Hydrograph Summary  
Label: SOUTHERNSIDE  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	22.140 min
Unit receding limb, $T_r$	88.560 min
Total unit time, $T_b$	110.700 min

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Subsection: Unit Hydrograph Summary  
 Label: Watermark  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	13.200 min
Area (User Defined)	19.00 acres
Computational Time Increment	1.760 min
Time to Peak (Computed)	721.600 min
Flow (Peak, Computed)	134.80 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	720.000 min
Flow (Peak Interpolated Output)	134.48 ft <sup>3</sup> /s
<b>Drainage Area</b>	
SCS CN (Composite)	89.600
Area (User Defined)	19.00 acres
Maximum Retention (Pervious)	1.2 in
Maximum Retention (Pervious, 20 percent)	0.2 in
<b>Cumulative Runoff</b>	
Cumulative Runoff Depth (Pervious)	6.0 in
Runoff Volume (Pervious)	9.457 ac-ft
<b>Hydrograph Volume (Area under Hydrograph curve)</b>	
Volume	9.435 ac-ft
<b>SCS Unit Hydrograph Parameters</b>	
Time of Concentration (Composite)	13.200 min
Computational Time Increment	1.760 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	97.85 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: Watermark  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	8.800 min
Unit receding limb, $T_r$	35.200 min
Total unit time, $T_b$	44.000 min

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Subsection: Unit Hydrograph Summary  
 Label: WSR  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Storm Event	100
Return Event	100 years
Duration	1,440.000 min
Depth	7.2 in
Time of Concentration (Composite)	6.000 min
Area (User Defined)	0.46 acres
<hr/>	
Computational Time Increment	0.800 min
Time to Peak (Computed)	715.200 min
Flow (Peak, Computed)	4.16 ft <sup>3</sup> /s
Output Increment	3.000 min
Time to Flow (Peak Interpolated Output)	717.000 min
Flow (Peak Interpolated Output)	4.01 ft <sup>3</sup> /s
<hr/>	
Drainage Area	
SCS CN (Composite)	98.000
Area (User Defined)	0.46 acres
Maximum Retention (Pervious)	0.2 in
Maximum Retention (Pervious, 20 percent)	0.0 in
<hr/>	
Cumulative Runoff	
Cumulative Runoff Depth (Pervious)	7.0 in
Runoff Volume (Pervious)	0.265 ac-ft
<hr/>	
Hydrograph Volume (Area under Hydrograph curve)	
Volume	0.264 ac-ft
<hr/>	
SCS Unit Hydrograph Parameters	
Time of Concentration (Composite)	6.000 min
Computational Time Increment	0.800 min
Unit Hydrograph Shape Factor	483.432
K Factor	0.749
Receding/Rising, Tr/Tp	1.670
Unit peak, qp	5.17 ft <sup>3</sup> /s

Subsection: Unit Hydrograph Summary  
Label: WSR  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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SCS Unit Hydrograph Parameters	
Unit peak time, $T_p$	4.000 min
Unit receding limb, $T_r$	16.000 min
Total unit time, $T_b$	20.000 min

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Subsection: Addition Summary  
 Label: NET OUT  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'NET OUT'**

Upstream Link	Upstream Node
<Catchment to Outflow Node> OUT SOUTH LAKE	BYPASS-DEVELOPED (Area 6) SOUTH LAKE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	BYPASS-DEVELOPED (Area 6)	0.842	726.000	9.90
Flow (From)	OUT SOUTH LAKE	44.855	735.000	193.50
Flow (In)	NET OUT	45.697	735.000	201.38

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	550.40	550.40	550.40	550.40	550.40
15.000	550.40	550.40	550.40	550.40	550.40
30.000	550.40	550.40	550.40	550.40	550.40
45.000	550.40	550.40	550.40	550.40	550.40
60.000	550.40	550.40	550.40	550.40	550.40
75.000	550.40	550.40	550.40	550.40	550.40
90.000	550.40	550.40	550.40	550.40	550.40
105.000	550.40	550.40	550.40	550.40	550.40
120.000	550.40	550.40	550.40	550.40	550.40
135.000	550.40	550.40	550.40	550.40	550.40
150.000	550.40	550.40	550.40	550.40	550.40
165.000	550.40	550.40	550.40	550.40	550.40
180.000	550.40	550.40	550.40	550.40	550.40
195.000	550.40	550.40	550.40	550.40	550.40
210.000	550.40	550.40	550.40	550.40	550.40
225.000	550.40	550.40	550.40	550.40	550.40
240.000	550.40	550.40	550.40	550.40	550.40
255.000	550.40	550.40	550.40	550.40	550.40
270.000	550.40	550.40	550.40	550.40	550.40
285.000	550.40	550.40	550.40	550.40	550.40
300.000	550.40	550.40	550.40	550.40	550.40
315.000	550.40	550.40	550.40	550.40	550.40
330.000	550.40	550.40	550.40	550.40	550.40
345.000	550.40	550.40	550.40	550.40	550.40
360.000	550.40	550.40	550.40	550.40	550.40
375.000	550.40	550.40	550.40	550.40	550.40
390.000	550.40	550.40	550.40	550.40	550.40
405.000	550.40	550.40	550.40	550.40	550.40
420.000	550.40	550.40	550.40	550.40	550.40
435.000	550.40	550.40	550.40	550.40	550.40
450.000	550.40	550.40	550.40	550.40	550.40
465.000	550.40	550.40	550.40	550.40	550.40
480.000	550.40	550.40	550.40	550.40	550.40
495.000	550.40	550.40	550.40	550.40	550.40
510.000	550.40	550.40	550.40	550.40	550.40
525.000	550.40	550.40	550.40	550.40	550.40
540.000	550.40	550.41	550.41	550.42	550.43
555.000	550.44	550.45	550.47	550.49	550.51
570.000	550.53	550.55	550.58	550.60	550.61
585.000	550.61	550.62	550.62	550.63	550.64
600.000	550.64	550.65	550.66	550.67	550.68
615.000	550.69	550.70	550.71	550.73	550.74

Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	550.75	550.77	550.79	550.80	550.81
645.000	550.82	550.82	550.83	550.84	550.85
660.000	550.87	550.88	550.89	550.91	550.92
675.000	550.94	550.96	550.98	551.00	551.02
690.000	551.03	551.05	551.06	551.08	551.11
705.000	551.14	551.18	551.23	551.27	551.34
720.000	551.43	551.51	551.61	551.69	551.79
735.000	551.87	551.96	552.03	552.10	552.17
750.000	552.23	552.29	552.34	552.38	552.41
765.000	552.44	552.47	552.49	552.51	552.53
780.000	552.54	552.56	552.57	552.57	552.58
795.000	552.59	552.59	552.59	552.59	552.60
810.000	552.60	552.60	552.60	552.59	552.59
825.000	552.59	552.59	552.58	552.58	552.58
840.000	552.57	552.57	552.56	552.56	552.55
855.000	552.55	552.54	552.54	552.53	552.53
870.000	552.52	552.51	552.51	552.50	552.50
885.000	552.49	552.48	552.48	552.47	552.46
900.000	552.46	552.45	552.44	552.44	552.43
915.000	552.42	552.42	552.41	552.40	552.39
930.000	552.39	552.38	552.37	552.37	552.36
945.000	552.35	552.34	552.34	552.33	552.32
960.000	552.32	552.31	552.30	552.29	552.29
975.000	552.28	552.27	552.26	552.26	552.25
990.000	552.24	552.23	552.23	552.22	552.21
1,005.000	552.20	552.20	552.19	552.18	552.18
1,020.000	552.17	552.16	552.15	552.15	552.14
1,035.000	552.13	552.12	552.12	552.11	552.10
1,050.000	552.10	552.09	552.08	552.08	552.07
1,065.000	552.06	552.06	552.05	552.04	552.04
1,080.000	552.03	552.02	552.02	552.01	552.00
1,095.000	551.99	551.99	551.98	551.97	551.97
1,110.000	551.96	551.95	551.94	551.94	551.93
1,125.000	551.92	551.92	551.91	551.90	551.90
1,140.000	551.89	551.88	551.88	551.87	551.86
1,155.000	551.86	551.85	551.84	551.84	551.83
1,170.000	551.82	551.82	551.81	551.81	551.80
1,185.000	551.79	551.78	551.78	551.77	551.76
1,200.000	551.75	551.74	551.74	551.73	551.72
1,215.000	551.71	551.71	551.70	551.69	551.69
1,230.000	551.68	551.67	551.67	551.66	551.65
1,245.000	551.65	551.64	551.63	551.63	551.62



Subsection: Time vs. Elevation  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	551.61	551.61	551.60	551.59	551.59
1,275.000	551.58	551.57	551.56	551.56	551.55
1,290.000	551.54	551.53	551.53	551.52	551.51
1,305.000	551.51	551.50	551.49	551.49	551.48
1,320.000	551.47	551.47	551.46	551.46	551.45
1,335.000	551.44	551.44	551.43	551.43	551.42
1,350.000	551.42	551.41	551.41	551.40	551.39
1,365.000	551.39	551.38	551.37	551.37	551.36
1,380.000	551.35	551.35	551.34	551.33	551.33
1,395.000	551.32	551.32	551.31	551.31	551.30
1,410.000	551.30	551.29	551.29	551.28	551.28
1,425.000	551.27	551.27	551.26	551.26	551.25
1,440.000	551.25	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	529.25	529.25	529.25	529.25	529.25
15.000	529.25	529.25	529.25	529.25	529.25
30.000	529.25	529.25	529.25	529.25	529.25
45.000	529.25	529.25	529.25	529.25	529.25
60.000	529.25	529.25	529.25	529.25	529.25
75.000	529.25	529.25	529.25	529.25	529.25
90.000	529.25	529.25	529.25	529.25	529.25
105.000	529.25	529.25	529.25	529.25	529.25
120.000	529.25	529.25	529.25	529.25	529.25
135.000	529.25	529.25	529.25	529.25	529.25
150.000	529.25	529.25	529.25	529.25	529.25
165.000	529.25	529.25	529.25	529.25	529.25
180.000	529.25	529.25	529.25	529.25	529.25
195.000	529.25	529.25	529.25	529.25	529.25
210.000	529.25	529.25	529.26	529.26	529.26
225.000	529.26	529.26	529.26	529.26	529.26
240.000	529.26	529.26	529.26	529.26	529.26
255.000	529.26	529.26	529.27	529.27	529.27
270.000	529.27	529.27	529.27	529.27	529.27
285.000	529.27	529.27	529.28	529.28	529.28
300.000	529.28	529.28	529.28	529.28	529.29
315.000	529.29	529.29	529.29	529.29	529.29
330.000	529.29	529.30	529.30	529.30	529.30
345.000	529.30	529.31	529.31	529.31	529.31
360.000	529.31	529.31	529.32	529.32	529.32
375.000	529.32	529.32	529.33	529.33	529.33
390.000	529.33	529.34	529.34	529.34	529.34
405.000	529.35	529.35	529.35	529.35	529.35
420.000	529.36	529.36	529.36	529.37	529.37
435.000	529.37	529.37	529.38	529.38	529.38
450.000	529.39	529.39	529.39	529.40	529.40
465.000	529.40	529.41	529.41	529.42	529.42
480.000	529.42	529.43	529.43	529.44	529.44
495.000	529.45	529.45	529.46	529.46	529.47
510.000	529.47	529.48	529.48	529.49	529.50
525.000	529.50	529.51	529.52	529.52	529.53
540.000	529.54	529.55	529.55	529.56	529.57
555.000	529.58	529.59	529.60	529.61	529.62
570.000	529.63	529.64	529.64	529.65	529.66
585.000	529.67	529.68	529.70	529.71	529.72
600.000	529.73	529.74	529.75	529.77	529.78
615.000	529.79	529.81	529.82	529.84	529.85

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	529.87	529.89	529.91	529.92	529.94
645.000	529.96	529.98	530.01	530.03	530.05
660.000	530.07	530.10	530.13	530.15	530.18
675.000	530.21	530.25	530.28	530.32	530.36
690.000	530.40	530.45	530.50	530.57	530.67
705.000	530.81	531.00	531.25	531.58	532.00
720.000	532.46	532.87	533.16	533.33	533.40
735.000	533.41	533.41	533.39	533.37	533.35
750.000	533.32	533.30	533.28	533.26	533.24
765.000	533.22	533.21	533.19	533.18	533.17
780.000	533.15	533.14	533.13	533.11	533.10
795.000	533.08	533.06	533.04	533.02	533.00
810.000	532.98	532.96	532.93	532.91	532.88
825.000	532.86	532.83	532.81	532.78	532.75
840.000	532.73	532.70	532.68	532.66	532.64
855.000	532.61	532.59	532.57	532.55	532.54
870.000	532.52	532.50	532.48	532.47	532.45
885.000	532.43	532.42	532.41	532.39	532.38
900.000	532.36	532.35	532.34	532.32	532.31
915.000	532.30	532.29	532.27	532.26	532.25
930.000	532.24	532.23	532.22	532.21	532.20
945.000	532.19	532.18	532.17	532.16	532.14
960.000	532.13	532.12	532.11	532.10	532.09
975.000	532.08	532.07	532.06	532.04	532.03
990.000	532.02	532.01	532.00	531.98	531.97
1,005.000	531.96	531.94	531.93	531.92	531.90
1,020.000	531.89	531.88	531.86	531.85	531.84
1,035.000	531.82	531.81	531.80	531.78	531.77
1,050.000	531.76	531.74	531.73	531.72	531.70
1,065.000	531.69	531.68	531.66	531.65	531.64
1,080.000	531.63	531.61	531.60	531.59	531.58
1,095.000	531.56	531.55	531.54	531.53	531.51
1,110.000	531.50	531.49	531.48	531.47	531.46
1,125.000	531.44	531.43	531.42	531.41	531.40
1,140.000	531.39	531.38	531.36	531.35	531.34
1,155.000	531.33	531.32	531.31	531.30	531.29
1,170.000	531.28	531.27	531.26	531.24	531.23
1,185.000	531.22	531.21	531.20	531.19	531.18
1,200.000	531.17	531.16	531.15	531.14	531.13
1,215.000	531.12	531.11	531.10	531.09	531.08
1,230.000	531.07	531.06	531.05	531.04	531.03
1,245.000	531.02	531.01	531.00	530.99	530.98

Subsection: Time vs. Elevation  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	530.98	530.97	530.96	530.95	530.94
1,275.000	530.93	530.92	530.92	530.91	530.90
1,290.000	530.89	530.88	530.88	530.87	530.86
1,305.000	530.85	530.85	530.84	530.83	530.82
1,320.000	530.82	530.81	530.80	530.80	530.79
1,335.000	530.78	530.78	530.77	530.76	530.76
1,350.000	530.75	530.74	530.74	530.73	530.73
1,365.000	530.72	530.71	530.71	530.70	530.70
1,380.000	530.69	530.69	530.68	530.67	530.67
1,395.000	530.66	530.66	530.65	530.65	530.64
1,410.000	530.64	530.63	530.63	530.62	530.62
1,425.000	530.61	530.61	530.60	530.60	530.59
1,440.000	530.59	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
0.000	521.00	521.00	521.00	521.00	521.00
15.000	521.00	521.00	521.00	521.00	521.00
30.000	521.00	521.00	521.00	521.00	521.00
45.000	521.00	521.00	521.00	521.00	521.00
60.000	521.00	521.00	521.00	521.00	521.00
75.000	521.00	521.00	521.00	521.00	521.00
90.000	521.00	521.00	521.00	521.00	521.00
105.000	521.00	521.00	521.00	521.00	521.00
120.000	521.00	521.00	521.00	521.00	521.00
135.000	521.00	521.00	521.00	521.00	521.00
150.000	521.00	521.00	521.00	521.00	521.00
165.000	521.00	521.00	521.00	521.00	521.00
180.000	521.00	521.00	521.00	521.00	521.00
195.000	521.00	521.00	521.00	521.00	521.00
210.000	521.00	521.00	521.00	521.00	521.00
225.000	521.00	521.00	521.00	521.00	521.00
240.000	521.00	521.00	521.00	521.00	521.00
255.000	521.00	521.00	521.00	521.00	521.01
270.000	521.01	521.01	521.01	521.01	521.01
285.000	521.01	521.01	521.01	521.01	521.01
300.000	521.01	521.01	521.01	521.01	521.01
315.000	521.01	521.01	521.02	521.02	521.02
330.000	521.02	521.02	521.02	521.02	521.02
345.000	521.02	521.03	521.03	521.03	521.03
360.000	521.03	521.03	521.03	521.04	521.04
375.000	521.04	521.04	521.04	521.05	521.05
390.000	521.05	521.05	521.06	521.06	521.06
405.000	521.07	521.07	521.07	521.08	521.08
420.000	521.08	521.09	521.09	521.09	521.10
435.000	521.10	521.11	521.11	521.11	521.12
450.000	521.12	521.13	521.13	521.14	521.14
465.000	521.15	521.15	521.16	521.17	521.17
480.000	521.18	521.19	521.19	521.20	521.21
495.000	521.21	521.22	521.23	521.24	521.25
510.000	521.26	521.27	521.28	521.29	521.30
525.000	521.31	521.32	521.33	521.34	521.35
540.000	521.37	521.38	521.39	521.41	521.42
555.000	521.44	521.45	521.47	521.49	521.50
570.000	521.52	521.54	521.56	521.58	521.59
585.000	521.61	521.64	521.66	521.68	521.70
600.000	521.72	521.75	521.77	521.80	521.83
615.000	521.85	521.88	521.91	521.94	521.98

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
630.000	522.01	522.04	522.07	522.10	522.12
645.000	522.15	522.17	522.20	522.22	522.24
660.000	522.26	522.28	522.31	522.33	522.35
675.000	522.37	522.39	522.42	522.44	522.47
690.000	522.49	522.52	522.55	522.58	522.61
705.000	522.66	522.71	522.79	522.89	523.03
720.000	523.23	523.56	524.00	524.47	524.72
735.000	524.76	524.75	524.74	524.73	524.71
750.000	524.69	524.68	524.66	524.65	524.64
765.000	524.63	524.62	524.61	524.60	524.60
780.000	524.59	524.59	524.58	524.57	524.57
795.000	524.56	524.56	524.55	524.55	524.54
810.000	524.53	524.53	524.52	524.51	524.51
825.000	524.50	524.48	524.46	524.43	524.39
840.000	524.35	524.31	524.27	524.23	524.19
855.000	524.15	524.11	524.07	524.03	523.99
870.000	523.96	523.92	523.89	523.85	523.82
885.000	523.79	523.76	523.73	523.70	523.67
900.000	523.65	523.63	523.60	523.58	523.56
915.000	523.54	523.52	523.51	523.49	523.47
930.000	523.45	523.43	523.41	523.40	523.38
945.000	523.36	523.35	523.34	523.32	523.31
960.000	523.30	523.29	523.28	523.27	523.26
975.000	523.25	523.24	523.23	523.23	523.22
990.000	523.21	523.21	523.20	523.20	523.19
1,005.000	523.19	523.18	523.18	523.17	523.17
1,020.000	523.16	523.16	523.15	523.15	523.14
1,035.000	523.14	523.13	523.13	523.12	523.12
1,050.000	523.11	523.11	523.11	523.10	523.10
1,065.000	523.09	523.09	523.08	523.08	523.07
1,080.000	523.07	523.06	523.06	523.05	523.05
1,095.000	523.05	523.04	523.04	523.03	523.03
1,110.000	523.02	523.02	523.01	523.01	523.01
1,125.000	523.00	523.00	522.99	522.99	522.98
1,140.000	522.98	522.97	522.97	522.96	522.96
1,155.000	522.95	522.95	522.94	522.94	522.93
1,170.000	522.93	522.92	522.92	522.92	522.91
1,185.000	522.91	522.90	522.90	522.89	522.89
1,200.000	522.88	522.88	522.87	522.87	522.86
1,215.000	522.86	522.86	522.85	522.85	522.84
1,230.000	522.84	522.83	522.83	522.82	522.82
1,245.000	522.82	522.81	522.81	522.80	522.80

Subsection: Time vs. Elevation  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Elevation (ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)
1,260.000	522.80	522.79	522.79	522.78	522.78
1,275.000	522.78	522.77	522.77	522.77	522.76
1,290.000	522.76	522.75	522.75	522.75	522.74
1,305.000	522.74	522.74	522.73	522.73	522.73
1,320.000	522.72	522.72	522.72	522.72	522.71
1,335.000	522.71	522.71	522.70	522.70	522.70
1,350.000	522.70	522.69	522.69	522.69	522.69
1,365.000	522.68	522.68	522.68	522.68	522.67
1,380.000	522.67	522.67	522.67	522.66	522.66
1,395.000	522.66	522.66	522.65	522.65	522.65
1,410.000	522.65	522.65	522.64	522.64	522.64
1,425.000	522.64	522.64	522.63	522.63	522.63
1,440.000	522.63	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.000	0.000	0.000
195.000	0.000	0.000	0.000	0.000	0.000
210.000	0.000	0.000	0.000	0.000	0.000
225.000	0.000	0.000	0.000	0.000	0.000
240.000	0.000	0.000	0.000	0.000	0.000
255.000	0.000	0.000	0.000	0.000	0.000
270.000	0.000	0.000	0.000	0.000	0.000
285.000	0.000	0.000	0.000	0.000	0.000
300.000	0.000	0.000	0.000	0.000	0.000
315.000	0.000	0.000	0.000	0.000	0.000
330.000	0.000	0.000	0.000	0.000	0.000
345.000	0.000	0.000	0.000	0.000	0.000
360.000	0.000	0.000	0.000	0.000	0.000
375.000	0.000	0.000	0.000	0.000	0.000
390.000	0.000	0.000	0.000	0.000	0.000
405.000	0.000	0.000	0.000	0.000	0.000
420.000	0.000	0.000	0.000	0.000	0.000
435.000	0.000	0.000	0.000	0.000	0.000
450.000	0.000	0.000	0.000	0.000	0.000
465.000	0.000	0.000	0.000	0.000	0.000
480.000	0.000	0.000	0.000	0.000	0.000
495.000	0.000	0.000	0.000	0.000	0.000
510.000	0.000	0.000	0.000	0.000	0.000
525.000	0.000	0.000	0.000	0.000	0.000
540.000	0.000	0.000	0.000	0.000	0.000
555.000	0.000	0.000	0.000	0.000	0.000
570.000	0.001	0.001	0.002	0.002	0.002
585.000	0.003	0.003	0.003	0.003	0.004
600.000	0.004	0.004	0.005	0.005	0.006
615.000	0.007	0.007	0.008	0.009	0.011



Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.012	0.014	0.015	0.017	0.018
645.000	0.019	0.021	0.022	0.024	0.025
660.000	0.027	0.030	0.032	0.035	0.039
675.000	0.043	0.048	0.054	0.059	0.063
690.000	0.068	0.073	0.079	0.086	0.096
705.000	0.110	0.130	0.152	0.181	0.227
720.000	0.291	0.366	0.474	0.583	0.727
735.000	0.864	1.018	1.179	1.326	1.467
750.000	1.597	1.713	1.817	1.908	1.987
765.000	2.054	2.111	2.161	2.204	2.241
780.000	2.272	2.298	2.320	2.338	2.353
795.000	2.364	2.373	2.380	2.385	2.387
810.000	2.389	2.388	2.386	2.384	2.380
825.000	2.375	2.369	2.362	2.354	2.346
840.000	2.337	2.328	2.318	2.307	2.296
855.000	2.284	2.272	2.260	2.247	2.234
870.000	2.221	2.208	2.194	2.180	2.166
885.000	2.152	2.138	2.124	2.109	2.095
900.000	2.080	2.066	2.051	2.036	2.021
915.000	2.006	1.991	1.976	1.961	1.946
930.000	1.930	1.915	1.899	1.884	1.868
945.000	1.852	1.837	1.821	1.805	1.790
960.000	1.774	1.758	1.742	1.727	1.711
975.000	1.695	1.679	1.663	1.648	1.632
990.000	1.616	1.600	1.585	1.569	1.553
1,005.000	1.538	1.522	1.506	1.490	1.475
1,020.000	1.459	1.444	1.428	1.413	1.398
1,035.000	1.383	1.368	1.353	1.338	1.323
1,050.000	1.309	1.294	1.279	1.265	1.251
1,065.000	1.236	1.222	1.208	1.194	1.180
1,080.000	1.166	1.153	1.139	1.125	1.112
1,095.000	1.097	1.082	1.067	1.052	1.038
1,110.000	1.023	1.009	0.996	0.982	0.969
1,125.000	0.956	0.943	0.930	0.917	0.905
1,140.000	0.893	0.881	0.869	0.858	0.846
1,155.000	0.835	0.824	0.813	0.802	0.792
1,170.000	0.781	0.771	0.761	0.751	0.741
1,185.000	0.728	0.716	0.704	0.692	0.680
1,200.000	0.668	0.657	0.646	0.635	0.625
1,215.000	0.614	0.604	0.594	0.585	0.575
1,230.000	0.566	0.557	0.548	0.539	0.531
1,245.000	0.522	0.514	0.506	0.499	0.491

Subsection: Time vs. Volume  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	0.484	0.477	0.470	0.461	0.452
1,275.000	0.443	0.434	0.425	0.417	0.409
1,290.000	0.401	0.394	0.386	0.379	0.372
1,305.000	0.366	0.359	0.353	0.346	0.340
1,320.000	0.335	0.329	0.323	0.318	0.313
1,335.000	0.308	0.303	0.298	0.293	0.288
1,350.000	0.284	0.280	0.275	0.271	0.266
1,365.000	0.260	0.254	0.249	0.244	0.239
1,380.000	0.234	0.230	0.225	0.221	0.217
1,395.000	0.213	0.209	0.205	0.201	0.198
1,410.000	0.194	0.191	0.188	0.185	0.182
1,425.000	0.179	0.176	0.173	0.171	0.168
1,440.000	0.166	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	6.223	6.223	6.223	6.223	6.223
15.000	6.223	6.223	6.223	6.223	6.223
30.000	6.223	6.223	6.223	6.223	6.223
45.000	6.223	6.223	6.223	6.223	6.223
60.000	6.223	6.223	6.224	6.224	6.224
75.000	6.224	6.224	6.224	6.224	6.224
90.000	6.224	6.224	6.224	6.224	6.224
105.000	6.224	6.224	6.224	6.225	6.225
120.000	6.225	6.225	6.225	6.225	6.225
135.000	6.225	6.225	6.225	6.225	6.226
150.000	6.226	6.226	6.226	6.226	6.226
165.000	6.226	6.226	6.226	6.226	6.227
180.000	6.227	6.227	6.227	6.227	6.228
195.000	6.228	6.228	6.229	6.229	6.230
210.000	6.231	6.231	6.232	6.233	6.234
225.000	6.235	6.236	6.237	6.238	6.239
240.000	6.240	6.241	6.242	6.244	6.245
255.000	6.246	6.248	6.249	6.251	6.253
270.000	6.254	6.256	6.258	6.260	6.262
285.000	6.263	6.265	6.268	6.270	6.272
300.000	6.274	6.276	6.279	6.281	6.283
315.000	6.286	6.288	6.291	6.294	6.296
330.000	6.299	6.302	6.305	6.308	6.311
345.000	6.314	6.317	6.320	6.323	6.326
360.000	6.329	6.333	6.336	6.339	6.343
375.000	6.346	6.350	6.354	6.357	6.361
390.000	6.365	6.369	6.373	6.376	6.380
405.000	6.385	6.389	6.393	6.397	6.401
420.000	6.406	6.410	6.415	6.420	6.424
435.000	6.429	6.434	6.440	6.445	6.450
450.000	6.456	6.462	6.468	6.474	6.480
465.000	6.486	6.493	6.499	6.506	6.513
480.000	6.520	6.527	6.534	6.542	6.549
495.000	6.557	6.565	6.574	6.583	6.592
510.000	6.601	6.611	6.621	6.632	6.643
525.000	6.654	6.666	6.678	6.690	6.703
540.000	6.716	6.730	6.744	6.758	6.773
555.000	6.788	6.804	6.819	6.835	6.851
570.000	6.867	6.883	6.899	6.916	6.933
585.000	6.950	6.968	6.987	7.006	7.026
600.000	7.047	7.068	7.090	7.112	7.136
615.000	7.160	7.186	7.211	7.238	7.266

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	7.295	7.325	7.356	7.388	7.422
645.000	7.457	7.494	7.532	7.571	7.613
660.000	7.656	7.700	7.747	7.797	7.850
675.000	7.906	7.965	8.027	8.095	8.166
690.000	8.242	8.325	8.425	8.560	8.745
705.000	9.002	9.353	9.826	10.471	11.304
720.000	12.227	13.070	13.691	14.049	14.203
735.000	14.242	14.227	14.191	14.145	14.096
750.000	14.046	13.995	13.945	13.899	13.859
765.000	13.825	13.793	13.762	13.734	13.708
780.000	13.682	13.653	13.622	13.591	13.558
795.000	13.524	13.486	13.446	13.405	13.362
810.000	13.315	13.266	13.214	13.160	13.105
825.000	13.051	12.997	12.943	12.889	12.836
840.000	12.784	12.734	12.684	12.636	12.590
855.000	12.547	12.505	12.463	12.423	12.384
870.000	12.346	12.310	12.274	12.239	12.207
885.000	12.175	12.145	12.115	12.087	12.059
900.000	12.031	12.003	11.975	11.948	11.922
915.000	11.896	11.871	11.846	11.822	11.799
930.000	11.776	11.754	11.732	11.711	11.691
945.000	11.670	11.649	11.628	11.607	11.585
960.000	11.564	11.542	11.520	11.499	11.477
975.000	11.455	11.432	11.408	11.384	11.360
990.000	11.335	11.311	11.285	11.260	11.234
1,005.000	11.208	11.182	11.156	11.129	11.103
1,020.000	11.077	11.050	11.024	10.997	10.971
1,035.000	10.944	10.918	10.892	10.865	10.838
1,050.000	10.812	10.785	10.759	10.733	10.707
1,065.000	10.681	10.655	10.629	10.604	10.579
1,080.000	10.554	10.529	10.505	10.480	10.456
1,095.000	10.431	10.407	10.384	10.360	10.337
1,110.000	10.313	10.290	10.267	10.245	10.222
1,125.000	10.200	10.177	10.155	10.133	10.112
1,140.000	10.090	10.068	10.046	10.025	10.004
1,155.000	9.982	9.961	9.940	9.919	9.899
1,170.000	9.878	9.858	9.837	9.817	9.797
1,185.000	9.777	9.756	9.736	9.716	9.696
1,200.000	9.676	9.656	9.636	9.617	9.597
1,215.000	9.578	9.558	9.539	9.520	9.501
1,230.000	9.483	9.464	9.446	9.428	9.410
1,245.000	9.393	9.375	9.358	9.341	9.324

Subsection: Time vs. Volume  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	9.307	9.290	9.274	9.257	9.241
1,275.000	9.225	9.210	9.194	9.179	9.163
1,290.000	9.148	9.134	9.119	9.105	9.090
1,305.000	9.076	9.062	9.049	9.035	9.022
1,320.000	9.009	8.996	8.983	8.970	8.958
1,335.000	8.945	8.933	8.921	8.909	8.897
1,350.000	8.885	8.874	8.862	8.851	8.840
1,365.000	8.829	8.818	8.807	8.796	8.786
1,380.000	8.775	8.765	8.755	8.745	8.735
1,395.000	8.725	8.715	8.705	8.695	8.686
1,410.000	8.677	8.667	8.658	8.649	8.640
1,425.000	8.631	8.622	8.614	8.605	8.596
1,440.000	8.588	(N/A)	(N/A)	(N/A)	(N/A)

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
0.000	0.000	0.000	0.000	0.000	0.000
15.000	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
45.000	0.000	0.000	0.000	0.000	0.000
60.000	0.000	0.000	0.000	0.000	0.000
75.000	0.000	0.000	0.000	0.000	0.000
90.000	0.000	0.000	0.000	0.000	0.000
105.000	0.000	0.000	0.000	0.000	0.000
120.000	0.000	0.000	0.000	0.000	0.000
135.000	0.000	0.000	0.000	0.000	0.000
150.000	0.000	0.000	0.000	0.000	0.000
165.000	0.000	0.000	0.000	0.000	0.000
180.000	0.000	0.000	0.001	0.001	0.001
195.000	0.001	0.001	0.001	0.001	0.001
210.000	0.001	0.001	0.001	0.001	0.001
225.000	0.001	0.001	0.001	0.001	0.002
240.000	0.002	0.002	0.002	0.002	0.002
255.000	0.002	0.003	0.003	0.003	0.003
270.000	0.003	0.004	0.004	0.004	0.005
285.000	0.005	0.005	0.005	0.006	0.006
300.000	0.007	0.007	0.007	0.008	0.008
315.000	0.009	0.009	0.010	0.010	0.011
330.000	0.011	0.012	0.013	0.013	0.014
345.000	0.015	0.016	0.016	0.017	0.018
360.000	0.019	0.020	0.021	0.022	0.024
375.000	0.025	0.026	0.028	0.029	0.030
390.000	0.032	0.034	0.035	0.037	0.039
405.000	0.041	0.043	0.045	0.047	0.049
420.000	0.051	0.053	0.056	0.058	0.060
435.000	0.063	0.066	0.068	0.071	0.074
450.000	0.077	0.080	0.083	0.086	0.089
465.000	0.093	0.096	0.100	0.104	0.108
480.000	0.112	0.116	0.120	0.125	0.129
495.000	0.134	0.139	0.144	0.150	0.155
510.000	0.161	0.167	0.173	0.179	0.186
525.000	0.192	0.200	0.207	0.215	0.222
540.000	0.231	0.239	0.248	0.257	0.266
555.000	0.276	0.286	0.297	0.307	0.318
570.000	0.329	0.341	0.353	0.365	0.377
585.000	0.390	0.404	0.418	0.432	0.447
600.000	0.463	0.479	0.495	0.513	0.531
615.000	0.549	0.568	0.588	0.609	0.631

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
630.000	0.653	0.674	0.694	0.713	0.731
645.000	0.748	0.764	0.780	0.795	0.811
660.000	0.826	0.841	0.856	0.871	0.886
675.000	0.901	0.917	0.933	0.951	0.969
690.000	0.988	1.007	1.027	1.048	1.072
705.000	1.103	1.143	1.197	1.272	1.372
720.000	1.521	1.772	2.118	2.498	2.713
735.000	2.741	2.740	2.731	2.718	2.703
750.000	2.689	2.675	2.662	2.651	2.641
765.000	2.632	2.625	2.618	2.613	2.607
780.000	2.603	2.598	2.594	2.589	2.584
795.000	2.580	2.575	2.570	2.565	2.560
810.000	2.554	2.549	2.543	2.537	2.531
825.000	2.524	2.512	2.491	2.466	2.437
840.000	2.406	2.374	2.340	2.306	2.272
855.000	2.238	2.205	2.173	2.143	2.114
870.000	2.085	2.056	2.029	2.002	1.976
885.000	1.951	1.927	1.904	1.882	1.862
900.000	1.842	1.825	1.807	1.791	1.776
915.000	1.761	1.746	1.732	1.718	1.704
930.000	1.690	1.676	1.663	1.650	1.637
945.000	1.625	1.614	1.604	1.594	1.585
960.000	1.576	1.568	1.559	1.551	1.544
975.000	1.537	1.531	1.525	1.520	1.515
990.000	1.511	1.507	1.503	1.499	1.495
1,005.000	1.491	1.487	1.484	1.480	1.476
1,020.000	1.473	1.469	1.466	1.462	1.459
1,035.000	1.455	1.451	1.448	1.444	1.441
1,050.000	1.437	1.434	1.430	1.427	1.423
1,065.000	1.420	1.416	1.413	1.409	1.406
1,080.000	1.403	1.399	1.396	1.392	1.389
1,095.000	1.386	1.382	1.379	1.376	1.372
1,110.000	1.369	1.366	1.363	1.359	1.356
1,125.000	1.353	1.350	1.346	1.343	1.339
1,140.000	1.336	1.332	1.329	1.325	1.322
1,155.000	1.318	1.315	1.311	1.308	1.304
1,170.000	1.301	1.297	1.294	1.290	1.287
1,185.000	1.283	1.280	1.277	1.273	1.270
1,200.000	1.266	1.263	1.260	1.256	1.253
1,215.000	1.250	1.246	1.243	1.240	1.237
1,230.000	1.233	1.230	1.227	1.224	1.221
1,245.000	1.218	1.215	1.212	1.209	1.206

Subsection: Time vs. Volume  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Time vs. Volume (ac-ft)**

**Output Time increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)	Volume (ac-ft)
1,260.000	1.203	1.200	1.197	1.195	1.192
1,275.000	1.189	1.186	1.184	1.181	1.179
1,290.000	1.176	1.173	1.171	1.169	1.166
1,305.000	1.164	1.161	1.159	1.157	1.154
1,320.000	1.152	1.150	1.147	1.145	1.143
1,335.000	1.141	1.139	1.137	1.135	1.133
1,350.000	1.131	1.129	1.127	1.125	1.124
1,365.000	1.122	1.120	1.118	1.116	1.115
1,380.000	1.113	1.111	1.110	1.108	1.106
1,395.000	1.105	1.103	1.101	1.100	1.098
1,410.000	1.097	1.095	1.094	1.092	1.091
1,425.000	1.089	1.088	1.086	1.085	1.084
1,440.000	1.082	(N/A)	(N/A)	(N/A)	(N/A)



Subsection: Elevation-Area Volume Curve  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (acres)	A1+A2+sq (A1*A2) (acres)	Volume (ac-ft)	Volume (Total) (ac-ft)
550.40	0.0	0.00	0.00	0.000	0.000
552.00	0.0	2.08	2.08	1.107	1.107
554.00	0.0	2.57	6.96	4.641	5.749
555.00	0.0	2.68	7.88	2.628	8.377

Subsection: Volume Equations  
Label: EX Lake #1  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2            Lower and upper elevations of the increment  
              Area1, Area2       Areas computed for EL1, EL2, respectively  
              Volume            Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ac-ft)	Volume (Total) (ac-ft)
525.00	0.0	1.25	0.00	0.000	0.000
526.00	0.0	1.34	3.89	1.296	1.296
528.00	0.0	1.56	4.35	2.898	4.195
530.00	0.0	1.77	4.99	3.328	7.522
532.00	0.0	2.00	5.66	3.772	11.295
534.00	0.0	2.24	6.35	4.236	15.530

Subsection: Volume Equations  
Label: KB-LAKE  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:      EL1, EL2              Lower and upper elevations of the increment  
              Area1, Area2        Areas computed for EL1, EL2, respectively  
              Volume             Incremental volume between EL1 and EL2

Subsection: Elevation-Area Volume Curve  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Planimeter (ft <sup>2</sup> )	Area (acres)	A1+A2+sqr (A1*A2) (acres)	Volume (ac-ft)	Volume (Total) (ac-ft)
521.00	0.0	0.62	0.00	0.000	0.000
525.00	0.0	0.86	2.21	2.951	2.951
526.00	0.0	0.93	2.69	0.896	3.846

Subsection: Volume Equations  
Label: SOUTH LAKE  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

### **Pond Volume Equations**

**\* Incremental volume computed by the Conic Method for Reservoir Volumes.**

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * (\text{Area1} + \text{Area2} + \text{sqr}(\text{Area1} * \text{Area2}))$$

where:    EL1, EL2            Lower and upper elevations of the increment  
          Area1, Area2       Areas computed for EL1, EL2, respectively  
          Volume            Incremental volume between EL1 and EL2

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	525.00 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	534.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	R0	Forward	C1	532.10	534.00
Rectangular Weir	Weir - high	Forward	C1	529.25	534.00
Culvert-Circular	C1	Forward	TW	522.20	534.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
Label: Outlet KB  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

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Structure ID: R0	
Structure Type: Inlet Box	
<hr/>	
Number of Openings	1
Elevation	532.10 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	20.63 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Key, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	False

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Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	54.0 in
Length	47.00 ft
Length (Computed Barrel)	47.00 ft
Slope (Computed)	0.014 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.004
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.154
T2 ratio (HW/D)	1.300
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	527.39 ft	T1 Flow	118.08 ft <sup>3</sup> /s
T2 Elevation	528.05 ft	T2 Flow	134.95 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet KB  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Structure ID: Weir - high	
Structure Type: Rectangular Weir	
Number of Openings	1
Elevation	529.25 ft
Weir Length	2.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	550.40 ft
Increment (Headwater)	0.20 ft
Maximum (Headwater)	555.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Culvert-Circular Tailwater Settings	C1 Tailwater	Forward	TW	550.40 (N/A)	555.00 (N/A)

Subsection: Outlet Input Data  
 Label: Outlet Ex Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Structure ID: C1	
Structure Type: Culvert-Circular	
Number of Barrels	1
Diameter	15.0 in
Length	127.00 ft
Length (Computed Barrel)	128.05 ft
Slope (Computed)	0.129 ft/ft
Outlet Control Data	
Manning's n	0.013
Ke	0.500
Kb	0.023
Kr	0.000
Convergence Tolerance	0.00 ft
Inlet Control Data	
Equation Form	Form 1
K	0.0098
M	2.0000
C	0.0398
Y	0.6700
T1 ratio (HW/D)	1.096
T2 ratio (HW/D)	1.242
Slope Correction Factor	-0.500

Use unsubmerged inlet control 0 equation below T1 elevation.  
 Use submerged inlet control 0 equation above T2 elevation

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...

T1 Elevation	551.77 ft	T1 Flow	4.80 ft <sup>3</sup> /s
T2 Elevation	551.95 ft	T2 Flow	5.49 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
Label: Outlet Ex Lake #1  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

Structure ID: TW	
Structure Type: TW Setup, DS Channel	
Tailwater Type	Free Outfall
Convergence Tolerances	
Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.100 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Requested Pond Water Surface Elevations	
Minimum (Headwater)	521.00 ft
Increment (Headwater)	0.50 ft
Maximum (Headwater)	526.00 ft

**Outlet Connectivity**

Structure Type	Outlet ID	Direction	Outfall	E1 (ft)	E2 (ft)
Inlet Box	Riser - 1	Forward	TW	524.50	526.00
Rectangular Weir	Weir - 1	Forward	TW	522.00	526.00
Tailwater Settings	Tailwater			(N/A)	(N/A)

Subsection: Outlet Input Data  
 Label: Outlet Southlake  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

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Structure ID: Riser - 1	
Structure Type: Inlet Box	

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Number of Openings	1
Elevation	524.50 ft
Orifice Area	50.3 ft <sup>2</sup>
Orifice Coefficient	0.600
Weir Length	524.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s
K Reverse	1.000
Manning's n	0.000
Kev, Charged Riser	0.000
Weir Submergence	False
Orifice H to crest	True

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Structure ID: Weir - 1	
Structure Type: Rectangular Weir	

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Number of Openings	1
Elevation	522.00 ft
Weir Length	7.50 ft
Weir Coefficient	3.33 (ft <sup>0.5</sup> )/s

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Structure ID: TW	
Structure Type: TW Setup, DS Channel	

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Tailwater Type	Free Outfall
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Convergence Tolerances	
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Maximum Iterations	30
Tailwater Tolerance (Minimum)	0.01 ft
Tailwater Tolerance (Maximum)	0.50 ft
Headwater Tolerance (Minimum)	0.01 ft
Headwater Tolerance (Maximum)	0.50 ft
Flow Tolerance (Minimum)	0.001 ft <sup>3</sup> /s
Flow Tolerance (Maximum)	10.000 ft <sup>3</sup> /s

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Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: EX Lake #1  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Infiltration	
Infiltration Method (Computed)	No Infiltration
Initial Conditions	
Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (acres)	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
550.40	0.00	0.000	0.00	0.00	0.00	0.00
550.60	0.08	0.002	0.03	0.00	0.08	1.13
550.80	0.43	0.017	0.13	0.00	0.43	8.80
551.00	0.85	0.058	0.29	0.00	0.85	29.11
551.20	1.68	0.138	0.52	0.00	1.68	68.67
551.40	2.46	0.270	0.81	0.00	2.46	133.31
551.60	3.31	0.467	1.17	0.00	3.31	229.41
551.80	4.30	0.742	1.59	0.00	4.30	363.34
552.00	5.26	1.107	2.08	0.00	5.26	541.20
552.20	6.14	1.527	2.12	0.00	6.14	745.34
552.40	6.86	1.957	2.17	0.00	6.86	953.94
552.60	7.39	2.396	2.22	0.00	7.39	1,167.00
552.80	7.89	2.845	2.27	0.00	7.89	1,384.75
553.00	8.35	3.303	2.32	0.00	8.35	1,607.23
553.20	8.79	3.772	2.37	0.00	8.79	1,834.51
553.40	9.21	4.251	2.42	0.00	9.21	2,066.64
553.60	9.61	4.740	2.47	0.00	9.61	2,303.67
553.80	10.00	5.239	2.52	0.00	10.00	2,545.65
554.00	10.37	5.749	2.57	0.00	10.37	2,792.65
554.20	10.73	6.265	2.60	0.00	10.73	3,043.21
554.40	11.08	6.787	2.62	0.00	11.08	3,295.85
554.60	11.41	7.312	2.64	0.00	11.41	3,550.60
554.80	11.74	7.842	2.66	0.00	11.74	3,807.45
555.00	12.06	8.377	2.68	0.00	12.06	4,066.41



Subsection: Level Pool Pond Routing Summary  
 Label: EX Lake #1 (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	550.40 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	42.35 ft <sup>3</sup> /s	Time to Peak (Flow, In)	738.000 min
Flow (Peak Outlet)	7.38 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	810.000 min

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Elevation (Water Surface, Peak)	552.60 ft
Volume (Peak)	2.389 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	5.248 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	5.077 ac-ft
Volume (Retained)	0.159 ac-ft
Volume (Unrouted)	-0.012 ac-ft
Error (Mass Balance)	0.2 %

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Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	7.38 ft <sup>3</sup> /s
Time to Peak	810.000 min
Hydrograph Volume	5.077 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
534.000	0.00	0.00	0.00	0.00	0.01
549.000	0.01	0.01	0.02	0.02	0.03
564.000	0.04	0.04	0.05	0.06	0.07
579.000	0.09	0.09	0.10	0.11	0.12
594.000	0.13	0.15	0.16	0.17	0.19
609.000	0.21	0.22	0.24	0.26	0.28
624.000	0.30	0.33	0.35	0.38	0.40
639.000	0.43	0.45	0.46	0.48	0.50
654.000	0.52	0.54	0.57	0.59	0.62
669.000	0.65	0.69	0.73	0.77	0.81
684.000	0.86	0.91	0.97	1.03	1.11
699.000	1.19	1.30	1.43	1.61	1.78
714.000	1.97	2.24	2.57	2.91	3.34
729.000	3.77	4.25	4.65	5.05	5.41
744.000	5.72	6.01	6.25	6.45	6.63
759.000	6.78	6.90	6.98	7.05	7.11
774.000	7.16	7.21	7.24	7.27	7.30
789.000	7.32	7.34	7.35	7.36	7.37
804.000	7.38	7.38	7.38	7.38	7.38
819.000	7.38	7.37	7.37	7.36	7.35
834.000	7.34	7.33	7.32	7.31	7.30
849.000	7.28	7.27	7.26	7.24	7.23
864.000	7.21	7.20	7.18	7.17	7.15
879.000	7.13	7.12	7.10	7.08	7.06
894.000	7.05	7.03	7.01	6.99	6.98
909.000	6.96	6.94	6.92	6.90	6.88
924.000	6.87	6.84	6.82	6.79	6.76
939.000	6.74	6.71	6.69	6.66	6.63
954.000	6.61	6.58	6.55	6.53	6.50
969.000	6.47	6.45	6.42	6.39	6.37
984.000	6.34	6.31	6.29	6.26	6.23
999.000	6.21	6.18	6.15	6.12	6.09
1,014.000	6.06	6.03	6.00	5.96	5.93
1,029.000	5.90	5.87	5.84	5.81	5.78
1,044.000	5.75	5.71	5.68	5.65	5.62
1,059.000	5.59	5.56	5.53	5.50	5.48
1,074.000	5.45	5.42	5.39	5.36	5.33
1,089.000	5.30	5.27	5.24	5.20	5.17
1,104.000	5.13	5.10	5.06	5.03	5.00

Subsection: Pond Routed Hydrograph (total out)  
 Label: EX Lake #1 (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,119.000	4.96	4.93	4.90	4.86	4.83
1,134.000	4.80	4.76	4.73	4.70	4.67
1,149.000	4.64	4.60	4.57	4.54	4.51
1,164.000	4.48	4.45	4.42	4.39	4.36
1,179.000	4.33	4.30	4.26	4.22	4.18
1,194.000	4.14	4.10	4.07	4.03	3.99
1,209.000	3.95	3.92	3.88	3.84	3.81
1,224.000	3.77	3.74	3.71	3.67	3.64
1,239.000	3.60	3.57	3.54	3.51	3.48
1,254.000	3.44	3.41	3.38	3.35	3.32
1,269.000	3.29	3.26	3.22	3.19	3.16
1,284.000	3.12	3.09	3.06	3.03	3.00
1,299.000	2.97	2.94	2.91	2.88	2.86
1,314.000	2.83	2.80	2.78	2.75	2.72
1,329.000	2.70	2.67	2.65	2.62	2.60
1,344.000	2.58	2.55	2.53	2.51	2.49
1,359.000	2.47	2.44	2.41	2.38	2.36
1,374.000	2.33	2.30	2.28	2.25	2.23
1,389.000	2.21	2.18	2.16	2.14	2.12
1,404.000	2.09	2.07	2.05	2.03	2.01
1,419.000	2.00	1.98	1.96	1.94	1.92
1,434.000	1.91	1.89	1.87	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
Label: EX Lake #1 (IN)  
Scenario: 100 yr

Return Event: 100 years  
Storm Event: 100

**Summary for Hydrograph Addition at 'EX Lake #1'**

Upstream Link	Upstream Node
<Catchment to Outflow Node>	EX-64K

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	EX-64K	5.248	738.000	42.35
Flow (In)	EX Lake #1	5.248	738.000	42.35

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Infiltration	
Infiltration Method (Computed)	No Infiltration

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Initial Conditions	
Elevation (Water Surface, Initial)	529.25 ft
Volume (Initial)	6.223 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (acres)	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
525.00	0.00	0.000	1.25	0.00	0.00	0.00
525.20	0.00	0.252	1.27	0.00	0.00	121.78
525.40	0.00	0.507	1.29	0.00	0.00	245.41
525.60	0.00	0.766	1.31	0.00	0.00	370.88
525.80	0.00	1.029	1.33	0.00	0.00	498.22
526.00	0.00	1.296	1.34	0.00	0.00	627.45
526.20	0.00	1.567	1.37	0.00	0.00	758.60
526.40	0.00	1.842	1.39	0.00	0.00	891.75
526.60	0.00	2.122	1.41	0.00	0.00	1,026.89
526.80	0.00	2.405	1.43	0.00	0.00	1,164.05
527.00	0.00	2.693	1.45	0.00	0.00	1,303.25
527.20	0.00	2.984	1.47	0.00	0.00	1,444.49
527.40	0.00	3.281	1.49	0.00	0.00	1,587.79
527.60	0.00	3.581	1.51	0.00	0.00	1,733.18
527.80	0.00	3.886	1.53	0.00	0.00	1,880.65
528.00	0.00	4.195	1.56	0.00	0.00	2,030.23
528.20	0.00	4.508	1.58	0.00	0.00	2,181.89
528.40	0.00	4.826	1.60	0.00	0.00	2,335.60
528.60	0.00	5.147	1.62	0.00	0.00	2,491.38
528.80	0.00	5.474	1.64	0.00	0.00	2,649.23
529.00	0.00	5.804	1.66	0.00	0.00	2,809.19
529.20	0.00	6.139	1.69	0.00	0.00	2,971.24
529.25	0.00	6.223	1.69	0.00	0.00	3,012.09
529.40	0.48	6.478	1.71	0.00	0.48	3,135.90
529.60	1.64	6.822	1.73	0.00	1.64	3,303.38
529.80	3.25	7.170	1.75	0.00	3.25	3,473.45
530.00	5.10	7.522	1.77	0.00	5.10	3,645.93
530.20	7.08	7.879	1.80	0.00	7.08	3,820.69
530.40	9.37	8.241	1.82	0.00	9.37	3,997.90
530.60	11.61	8.607	1.84	0.00	11.61	4,177.22

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: KB-LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (acres)	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
530.80	14.02	8.977	1.86	0.00	14.02	4,358.88
531.00	16.57	9.352	1.89	0.00	16.57	4,542.87
531.20	19.14	9.731	1.91	0.00	19.14	4,729.07
531.40	21.67	10.115	1.93	0.00	21.67	4,917.44
531.60	24.37	10.504	1.95	0.00	24.37	5,108.20
531.80	27.01	10.897	1.98	0.00	27.01	5,301.14
532.00	29.68	11.295	2.00	0.00	29.68	5,496.36
532.10	30.99	11.495	2.01	0.00	30.99	5,594.79
532.20	34.32	11.697	2.02	0.00	34.32	5,695.79
532.40	45.91	12.104	2.05	0.00	45.91	5,904.42
532.60	61.73	12.516	2.07	0.00	61.73	6,119.51
532.80	80.14	12.932	2.09	0.00	80.14	6,339.45
533.00	100.98	13.354	2.12	0.00	100.98	6,564.09
533.20	123.88	13.779	2.14	0.00	123.88	6,793.09
533.40	148.82	14.210	2.16	0.00	148.82	7,026.42
533.60	174.14	14.645	2.19	0.00	174.14	7,262.44
533.80	197.01	15.085	2.21	0.00	197.01	7,498.34
534.00	217.53	15.530	2.24	0.00	217.53	7,734.22

Subsection: Level Pool Pond Routing Summary  
 Label: KB-LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

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Infiltration

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Infiltration Method (Computed)	No Infiltration
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Initial Conditions

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Elevation (Water Surface, Initial)	529.25 ft
Volume (Initial)	6.223 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

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Inflow/Outflow Hydrograph Summary

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Flow (Peak In)	275.25 ft <sup>3</sup> /s	Time to Peak (Flow, In)	720.000 min
Flow (Peak Outlet)	150.69 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	735.000 min

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Elevation (Water Surface, Peak)	533.41 ft
Volume (Peak)	14.242 ac-ft

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Mass Balance (ac-ft)

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Volume (Initial)	6.223 ac-ft
Volume (Total Inflow)	43.633 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	41.269 ac-ft
Volume (Retained)	8.541 ac-ft
Volume (Unrouted)	-0.047 ac-ft
Error (Mass Balance)	0.1 %

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Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	150.69 ft <sup>3</sup> /s
Time to Peak	735.000 min
Hydrograph Volume	41.268 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

Time on left represents time for first value in each row.

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
84.000	0.00	0.00	0.00	0.00	0.00
99.000	0.00	0.00	0.00	0.00	0.00
114.000	0.00	0.00	0.00	0.00	0.00
129.000	0.00	0.00	0.00	0.00	0.00
144.000	0.00	0.00	0.00	0.00	0.00
159.000	0.00	0.01	0.01	0.01	0.01
174.000	0.01	0.01	0.01	0.01	0.01
189.000	0.01	0.01	0.01	0.01	0.01
204.000	0.01	0.01	0.01	0.02	0.02
219.000	0.02	0.02	0.02	0.02	0.02
234.000	0.03	0.03	0.03	0.03	0.04
249.000	0.04	0.04	0.04	0.05	0.05
264.000	0.05	0.06	0.06	0.06	0.06
279.000	0.07	0.07	0.08	0.08	0.08
294.000	0.09	0.09	0.10	0.10	0.10
309.000	0.11	0.11	0.12	0.12	0.13
324.000	0.13	0.14	0.14	0.15	0.15
339.000	0.16	0.16	0.17	0.18	0.18
354.000	0.19	0.19	0.20	0.21	0.21
369.000	0.22	0.22	0.23	0.24	0.24
384.000	0.25	0.26	0.27	0.27	0.28
399.000	0.29	0.30	0.30	0.31	0.32
414.000	0.33	0.33	0.34	0.35	0.36
429.000	0.37	0.38	0.39	0.40	0.41
444.000	0.42	0.43	0.44	0.45	0.46
459.000	0.47	0.48	0.51	0.53	0.55
474.000	0.57	0.60	0.62	0.64	0.67
489.000	0.69	0.72	0.75	0.77	0.80
504.000	0.83	0.86	0.90	0.93	0.96
519.000	1.00	1.04	1.07	1.11	1.15
534.000	1.20	1.24	1.28	1.33	1.38
549.000	1.43	1.48	1.53	1.58	1.63
564.000	1.70	1.77	1.85	1.92	2.00
579.000	2.08	2.15	2.24	2.32	2.41
594.000	2.49	2.59	2.68	2.78	2.88
609.000	2.98	3.09	3.20	3.33	3.47
624.000	3.61	3.76	3.91	4.06	4.23
639.000	4.40	4.57	4.76	4.95	5.15
654.000	5.37	5.60	5.84	6.09	6.35



Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
669.000	6.62	6.92	7.25	7.62	8.02
684.000	8.45	8.90	9.38	9.89	10.50
699.000	11.32	12.51	14.19	16.58	19.77
714.000	24.14	29.73	50.66	86.99	119.17
729.000	139.53	148.45	150.69	149.84	147.71
744.000	145.07	142.25	139.37	136.43	133.52
759.000	130.83	128.53	126.53	124.66	122.97
774.000	121.45	120.08	118.68	117.12	115.46
789.000	113.76	112.03	110.16	108.13	105.98
804.000	103.75	101.42	99.10	96.65	94.08
819.000	91.41	88.70	86.01	83.33	80.67
834.000	78.24	75.89	73.61	71.37	69.19
849.000	67.07	65.03	63.09	61.29	59.71
864.000	58.17	56.68	55.23	53.82	52.45
879.000	51.12	49.86	48.64	47.47	46.34
894.000	45.42	44.62	43.82	43.03	42.25
909.000	41.48	40.73	39.99	39.27	38.56
924.000	37.88	37.21	36.56	35.93	35.32
939.000	34.72	34.21	33.87	33.53	33.18
954.000	32.82	32.47	32.11	31.76	31.40
969.000	31.04	30.87	30.72	30.57	30.42
984.000	30.26	30.10	29.94	29.78	29.61
999.000	29.44	29.27	29.10	28.92	28.75
1,014.000	28.57	28.40	28.22	28.04	27.86
1,029.000	27.69	27.51	27.33	27.15	26.97
1,044.000	26.79	26.62	26.44	26.26	26.09
1,059.000	25.91	25.73	25.56	25.39	25.22
1,074.000	25.05	24.88	24.71	24.54	24.38
1,089.000	24.21	24.04	23.87	23.70	23.54
1,104.000	23.38	23.21	23.05	22.89	22.73
1,119.000	22.57	22.42	22.26	22.11	21.95
1,134.000	21.80	21.65	21.51	21.36	21.22
1,149.000	21.08	20.94	20.80	20.66	20.52
1,164.000	20.38	20.25	20.11	19.98	19.84
1,179.000	19.71	19.57	19.44	19.31	19.17
1,194.000	19.04	18.90	18.77	18.63	18.50
1,209.000	18.37	18.24	18.10	17.97	17.84
1,224.000	17.72	17.59	17.46	17.34	17.21
1,239.000	17.09	16.97	16.85	16.73	16.61
1,254.000	16.50	16.38	16.27	16.15	16.04
1,269.000	15.93	15.82	15.71	15.61	15.50
1,284.000	15.40	15.29	15.19	15.09	14.99
1,299.000	14.89	14.79	14.70	14.60	14.51

Subsection: Pond Routed Hydrograph (total out)  
 Label: KB-LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,314.000	14.42	14.33	14.24	14.15	14.06
1,329.000	13.98	13.89	13.81	13.73	13.65
1,344.000	13.58	13.50	13.42	13.35	13.28
1,359.000	13.20	13.13	13.06	12.99	12.92
1,374.000	12.85	12.78	12.71	12.64	12.58
1,389.000	12.51	12.44	12.38	12.32	12.25
1,404.000	12.19	12.13	12.07	12.00	11.94
1,419.000	11.89	11.83	11.77	11.71	11.65
1,434.000	11.60	11.55	11.49	(N/A)	(N/A)

Subsection: Pond Inflow Summary  
 Label: KB-LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'KB-LAKE'**

Upstream Link	Upstream Node
OUT EX LAKE	EX Lake #1
<Catchment to Outflow Node>	EX64 K-3
<Catchment to Outflow Node>	EX-K40
<Catchment to Outflow Node>	Hotels
<Catchment to Outflow Node>	Offsite
<Catchment to Outflow Node>	WSR
<Catchment to Outflow Node>	Watermark

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT EX LAKE	5.077	810.000	7.38
Flow (From)	EX64 K-3	2.260	735.000	19.56
Flow (From)	EX-K40	3.063	735.000	27.37
Flow (From)	Hotels	5.545	720.000	90.90
Flow (From)	Offsite	17.989	777.000	77.20
Flow (From)	WSR	0.264	717.000	4.01
Flow (From)	Watermark	9.435	720.000	134.48
Flow (In)	KB-LAKE	43.633	720.000	275.25

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Peak Discharge	193.50 ft <sup>3</sup> /s
Time to Peak	735.000 min
Hydrograph Volume	44.855 ac-ft

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**

**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
627.000	0.00	0.17	0.71	1.22	1.70
642.000	2.15	2.59	3.00	3.41	3.80
657.000	4.19	4.57	4.94	5.32	5.69
672.000	6.07	6.46	6.85	7.26	7.69
687.000	8.15	8.62	9.39	10.25	11.17
702.000	12.23	13.57	15.32	17.69	20.90
717.000	25.34	33.26	46.64	66.78	90.39
732.000	180.13	193.50	192.94	188.50	182.45
747.000	175.67	168.85	162.31	156.30	150.98
762.000	146.29	142.28	138.78	135.64	132.87
777.000	130.46	128.25	126.07	123.88	121.69
792.000	119.53	117.35	115.06	112.68	110.23
807.000	107.71	105.17	102.59	99.90	97.11
822.000	94.28	91.98	91.21	89.98	88.43
837.000	86.67	84.76	82.75	80.68	78.57
852.000	76.45	74.35	72.28	70.28	68.37
867.000	66.56	64.89	63.26	61.68	60.13
882.000	58.64	57.19	55.79	54.44	53.15
897.000	51.94	50.82	49.76	48.76	47.80
912.000	46.88	45.99	45.12	44.29	43.53
927.000	42.80	42.08	41.37	40.68	39.99
942.000	39.33	38.71	38.14	37.60	37.10
957.000	36.62	36.16	35.72	35.29	34.86
972.000	34.47	34.11	33.79	33.50	33.23
987.000	32.98	32.75	32.53	32.31	32.10
1,002.000	31.90	31.70	31.50	31.31	31.12
1,017.000	30.92	30.73	30.54	30.36	30.17
1,032.000	29.98	29.79	29.60	29.41	29.22
1,047.000	29.04	28.85	28.66	28.47	28.29
1,062.000	28.10	27.92	27.73	27.55	27.36
1,077.000	27.18	27.00	26.82	26.64	26.46
1,092.000	26.28	26.10	25.92	25.74	25.57
1,107.000	25.39	25.22	25.04	24.87	24.70
1,122.000	24.52	24.35	24.21	24.06	23.91
1,137.000	23.77	23.61	23.46	23.31	23.16
1,152.000	23.01	22.86	22.71	22.56	22.41
1,167.000	22.26	22.11	21.96	21.82	21.67
1,182.000	21.52	21.38	21.23	21.09	20.94
1,197.000	20.80	20.65	20.51	20.37	20.22

Subsection: Pond Routed Hydrograph (total out)  
 Label: SOUTH LAKE (OUT)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**HYDROGRAPH ORDINATES (ft<sup>3</sup>/s)**  
**Output Time Increment = 3.000 min**  
**Time on left represents time for first value in each row.**

Time (min)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)
1,212.000	20.08	19.94	19.79	19.65	19.51
1,227.000	19.37	19.23	19.10	18.96	18.83
1,242.000	18.70	18.56	18.44	18.31	18.18
1,257.000	18.06	17.93	17.81	17.69	17.57
1,272.000	17.45	17.33	17.22	17.10	16.99
1,287.000	16.88	16.76	16.65	16.55	16.44
1,302.000	16.33	16.23	16.12	16.02	15.92
1,317.000	15.82	15.72	15.62	15.53	15.43
1,332.000	15.34	15.25	15.16	15.07	14.98
1,347.000	14.90	14.81	14.73	14.65	14.57
1,362.000	14.49	14.41	14.33	14.25	14.18
1,377.000	14.10	14.03	13.95	13.88	13.81
1,392.000	13.73	13.66	13.59	13.52	13.46
1,407.000	13.39	13.32	13.25	13.19	13.12
1,422.000	13.06	13.00	12.93	12.87	12.81
1,437.000	12.75	12.69	(N/A)	(N/A)	(N/A)

Subsection: Elevation-Volume-Flow Table (Pond)  
 Label: SOUTH LAKE  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

Infiltration	
Infiltration Method (Computed)	No Infiltration

Initial Conditions	
Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

Elevation (ft)	Outflow (ft <sup>3</sup> /s)	Storage (ac-ft)	Area (acres)	Infiltration (ft <sup>3</sup> /s)	Flow (Total) (ft <sup>3</sup> /s)	2S/t + O (ft <sup>3</sup> /s)
521.00	0.00	0.000	0.62	0.00	0.00	0.00
521.50	0.00	0.316	0.65	0.00	0.00	152.99
522.00	0.00	0.647	0.68	0.00	0.00	312.97
522.50	8.71	0.992	0.71	0.00	8.71	488.79
523.00	24.31	1.352	0.74	0.00	24.31	678.79
523.50	44.05	1.728	0.77	0.00	44.05	880.38
524.00	66.87	2.119	0.80	0.00	66.87	1,092.66
524.50	92.14	2.527	0.83	0.00	92.14	1,315.14
525.00	290.44	2.951	0.86	0.00	290.44	1,718.57
525.50	390.17	3.391	0.90	0.00	390.17	2,031.23
526.00	474.76	3.846	0.93	0.00	474.76	2,336.43

Subsection: Level Pool Pond Routing Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

---

Infiltration

---

Infiltration Method (Computed)	No Infiltration
-----------------------------------	-----------------

---

Initial Conditions

---

Elevation (Water Surface, Initial)	521.00 ft
Volume (Initial)	0.000 ac-ft
Flow (Initial Outlet)	0.00 ft <sup>3</sup> /s
Flow (Initial Infiltration)	0.00 ft <sup>3</sup> /s
Flow (Initial, Total)	0.00 ft <sup>3</sup> /s
Time Increment	3.000 min

---

Inflow/Outflow Hydrograph Summary

---

Flow (Peak In)	194.70 ft <sup>3</sup> /s	Time to Peak (Flow, In)	735.000 min
Flow (Peak Outlet)	193.50 ft <sup>3</sup> /s	Time to Peak (Flow, Outlet)	735.000 min

---

Elevation (Water Surface, Peak)	524.76 ft
Volume (Peak)	2.741 ac-ft

---

Mass Balance (ac-ft)

---

Volume (Initial)	0.000 ac-ft
Volume (Total Inflow)	45.938 ac-ft
Volume (Total Infiltration)	0.000 ac-ft
Volume (Total Outlet Outflow)	44.855 ac-ft
Volume (Retained)	1.035 ac-ft
Volume (Unrouted)	-0.049 ac-ft
Error (Mass Balance)	0.1 %

---

Subsection: Pond Inflow Summary  
 Label: SOUTH LAKE (IN)  
 Scenario: 100 yr

Return Event: 100 years  
 Storm Event: 100

**Summary for Hydrograph Addition at 'SOUTH LAKE'**

Upstream Link	Upstream Node
OUT KB	KB-LAKE
<Catchment to Outflow Node>	SOUTHERNSIDE

**Node Inflows**

Inflow Type	Element	Volume (ac-ft)	Time to Peak (min)	Flow (Peak) (ft <sup>3</sup> /s)
Flow (From)	OUT KB	41.269	735.000	150.69
Flow (From)	SOUTHERNSIDE	4.670	732.000	44.31
Flow (In)	SOUTH LAKE	45.938	735.000	194.70



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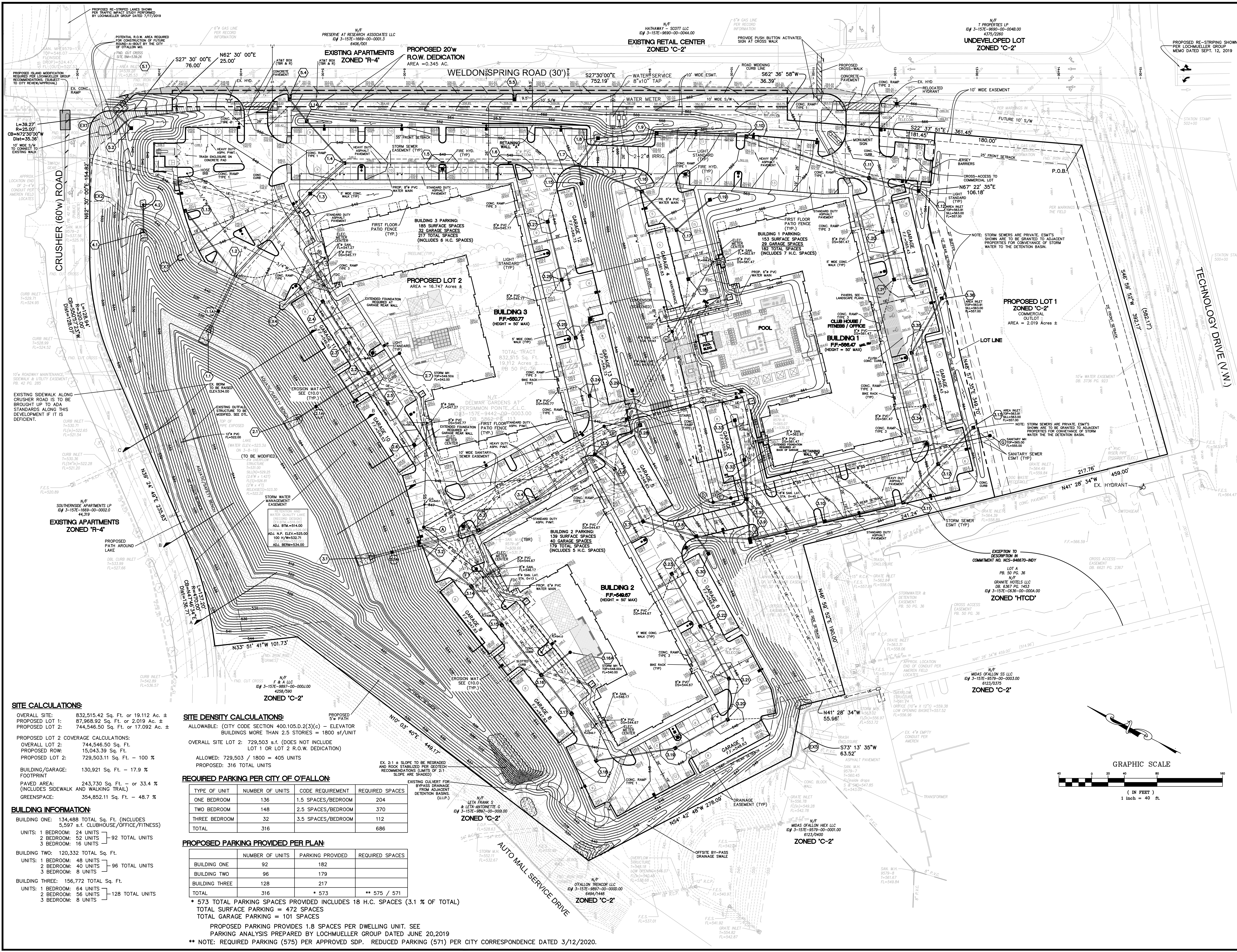
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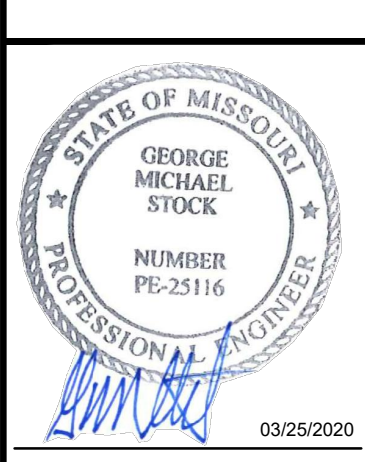
Appendix A – SITE AND GRADING PLAN (C5.0)





PREPARED BY:  
**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.  
 757 Chesterfield Business Parkway  
 St. Louis, MO 63005 PH: (636) 590-9000  
 5901-9000 FAX: (636) 590-9000  
 e-mail: general@stockass.com  
 Web: www.stockass.com

SITE IMPROVEMENT PLANS FOR:  
**WATERMARK APARTMENTS AT O'FALLON**  
 CRUSHER ROAD AND WELDON SPRING ROAD  
 CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366



REVISIONS:  
 1 01/16/2020 - 60% PRINTING  
 2 02/14/2020 - PERMIT SET  
 3 02/25/2020 - REVISED PER OWNER / CITY / UTILITY COMMENTS

DRAWN BY: T.S.M.B. CHECKED BY: G.M.S.  
 DATE: 01/16/2019 JOB NO: 219-6484

SHEET TITLE:  
**OVERALL SITE AND GRADING PLAN**

SHEET NO.:  
**C5.0**

**SITE CALCULATIONS:**  
 OVERALL SITE: 832,515.42 Sq. Ft. or 19,112 Ac. ±  
 PROPOSED LOT 1: 87,968.92 Sq. Ft. or 2,019 Ac. ±  
 PROPOSED LOT 2: 744,546.50 Sq. Ft. or 17,092 Ac. ±

**PROPOSED LOT 2 COVERAGE CALCULATIONS:**  
 OVERALL LOT 2: 744,546.50 Sq. Ft.  
 PROPOSED ROW: 15,043.39 Sq. Ft.  
 PROPOSED LOT 2: 729,503.11 Sq. Ft. - 100 %  
 BUILDING/GARAGE: 130,921 Sq. Ft. - 17.9 %  
 FOOTPRINT  
 PAVED AREA: 243,730 Sq. Ft. - or 33.4 %  
 (INCLUDES SIDEWALK AND WALKING TRAIL)  
 GREENSPACE: 354,852.11 Sq. Ft. - 48.7 %

**BUILDING INFORMATION:**  
 BUILDING ONE: 134,488 TOTAL Sq. Ft. (INCLUDES 5,597 s.f. CLUBHOUSE/OFFICE/FITNESS)  
 UNITS: 1 BEDROOM: 24 UNITS  
 2 BEDROOM: 52 UNITS } 92 TOTAL UNITS  
 3 BEDROOM: 16 UNITS

BUILDING TWO: 120,332 TOTAL Sq. Ft.  
 UNITS: 1 BEDROOM: 48 UNITS  
 2 BEDROOM: 40 UNITS } 96 TOTAL UNITS  
 3 BEDROOM: 8 UNITS

BUILDING THREE: 156,772 TOTAL Sq. Ft.  
 UNITS: 1 BEDROOM: 64 UNITS  
 2 BEDROOM: 56 UNITS } 128 TOTAL UNITS  
 3 BEDROOM: 8 UNITS

**SITE DENSITY CALCULATIONS:**  
 ALLOWABLE: (CITY CODE SECTION 400.105.D.2(3)(c) - ELEVATOR BUILDINGS MORE THAN 2.5 STORIES = 1800 sf/UNIT  
 OVERALL SITE LOT 2: 729,503 s.f. (DOES NOT INCLUDE LOT 1 OR LOT 2 R.O.W. DEDICATION)  
 ALLOWED: 729,503 / 1800 = 405 UNITS  
 PROPOSED: 316 TOTAL UNITS

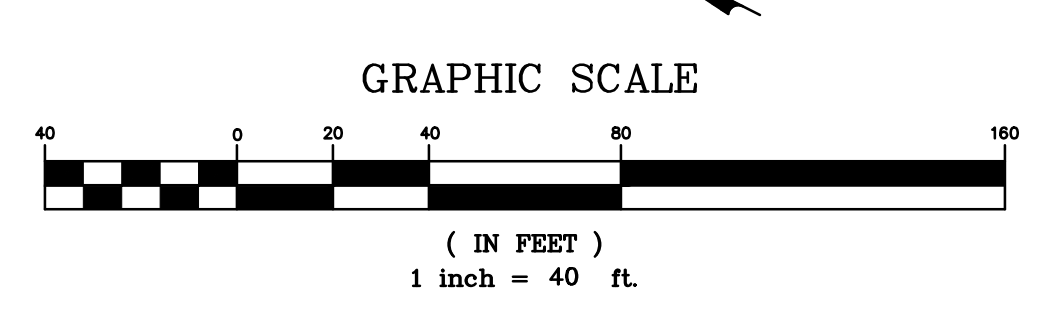
**REQUIRED PARKING PER CITY OF O'FALLON:**

TYPE OF UNIT	NUMBER OF UNITS	CODE REQUIREMENT	REQUIRED SPACES
ONE BEDROOM	136	1.5 SPACES/BEDROOM	204
TWO BEDROOM	148	2.5 SPACES/BEDROOM	370
THREE BEDROOM	32	3.5 SPACES/BEDROOM	112
<b>TOTAL</b>	<b>316</b>		<b>686</b>

**PROPOSED PARKING PROVIDED PER PLAN:**

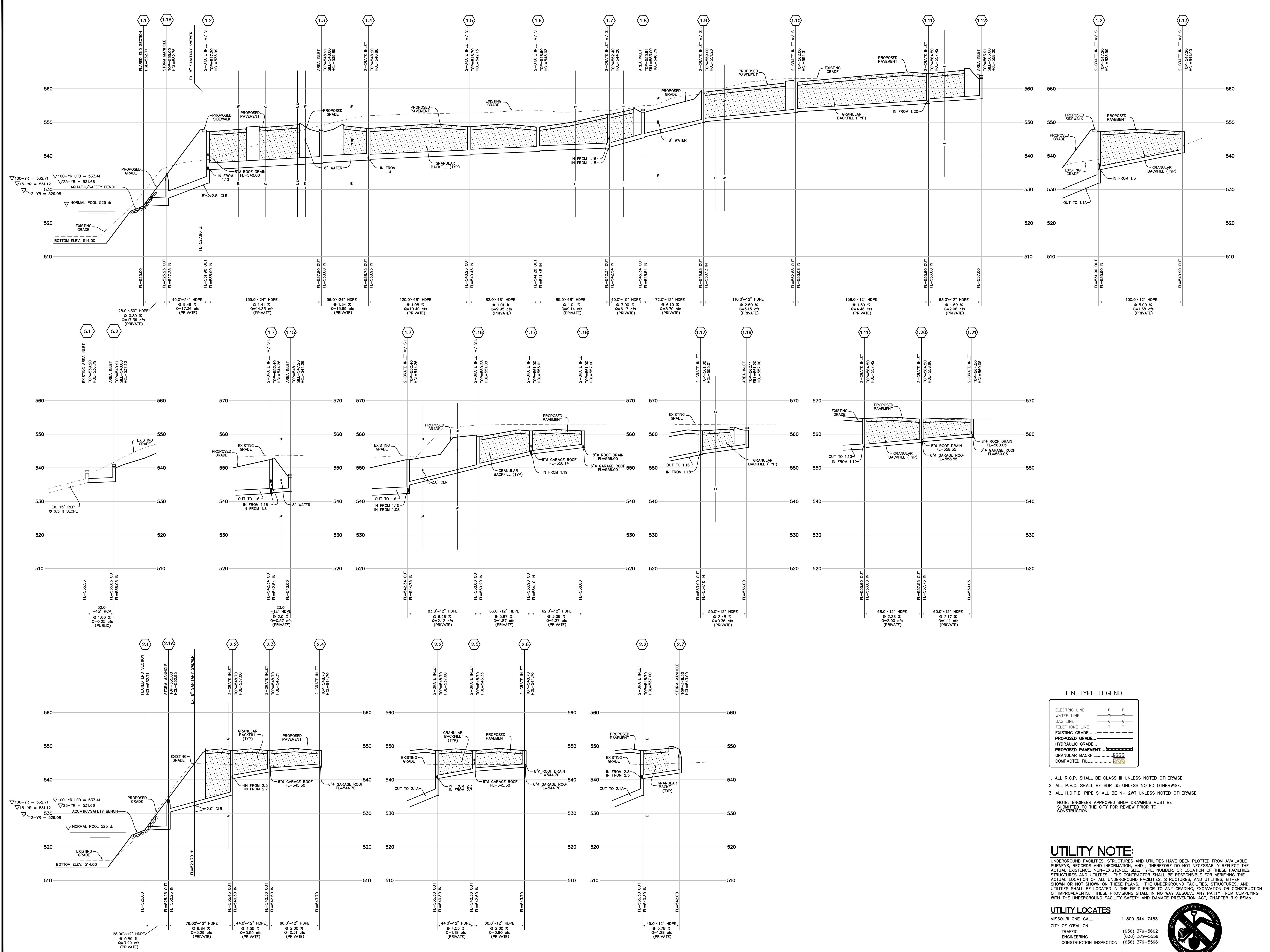
BUILDING	NUMBER OF UNITS	PARKING PROVIDED	REQUIRED SPACES
BUILDING ONE	92	182	
BUILDING TWO	96	179	
BUILDING THREE	128	217	
<b>TOTAL</b>	<b>316</b>	<b>* 573</b>	<b>** 575 / 571</b>

\* 573 TOTAL PARKING SPACES PROVIDED INCLUDES 18 H.C. SPACES (3.1 % OF TOTAL)  
 TOTAL SURFACE PARKING = 472 SPACES  
 TOTAL GARAGE PARKING = 101 SPACES  
 PROPOSED PARKING PROVIDES 1.8 SPACES PER DWELLING UNIT. SEE PARKING ANALYSIS PREPARED BY LOCHMUELLER GROUP DATED JUNE 20, 2019  
 \*\* NOTE: REQUIRED PARKING (575) PER APPROVED SDP. REDUCED PARKING (571) PER CITY CORRESPONDENCE DATED 3/12/2020.





Appendix B – SEWER PROFILES (C8.0, C8.1)



**LINETYPE LEGEND**

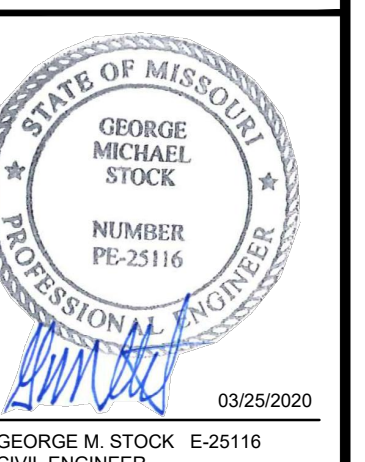
ELECTRIC LINE	---
WATER LINE	---
GAS LINE	---
TELEPHONE LINE	---
EXISTING GRADE	---
PROPOSED GRADE	---
HYDRAULIC GRADE	---
PROPOSED PAVEMENT	---
GRANULAR BACKFILL	---
COMPACTED FILL	---

- REVISIONS:**
1. ALL R.C.P. SHALL BE CLASS III UNLESS NOTED OTHERWISE.
  2. ALL P.V.C. SHALL BE SDR 35 UNLESS NOTED OTHERWISE.
  3. ALL H.D.P.E. PIPE SHALL BE N-12WT UNLESS NOTED OTHERWISE.
- NOTE: ENGINEER APPROVED SHOP DRAWINGS MUST BE SUBMITTED TO THE CITY FOR REVIEW PRIOR TO CONSTRUCTION.

**UTILITY NOTE:**  
 UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

**UTILITY LOCATES**  
 MISSOURI ONE-CALL 1 800 344-7483  
 CITY OF O'FALLON  
 TRAFFIC (636) 379-5602  
 ENGINEERING (636) 379-5556  
 CONSTRUCTION INSPECTION (636) 379-5596

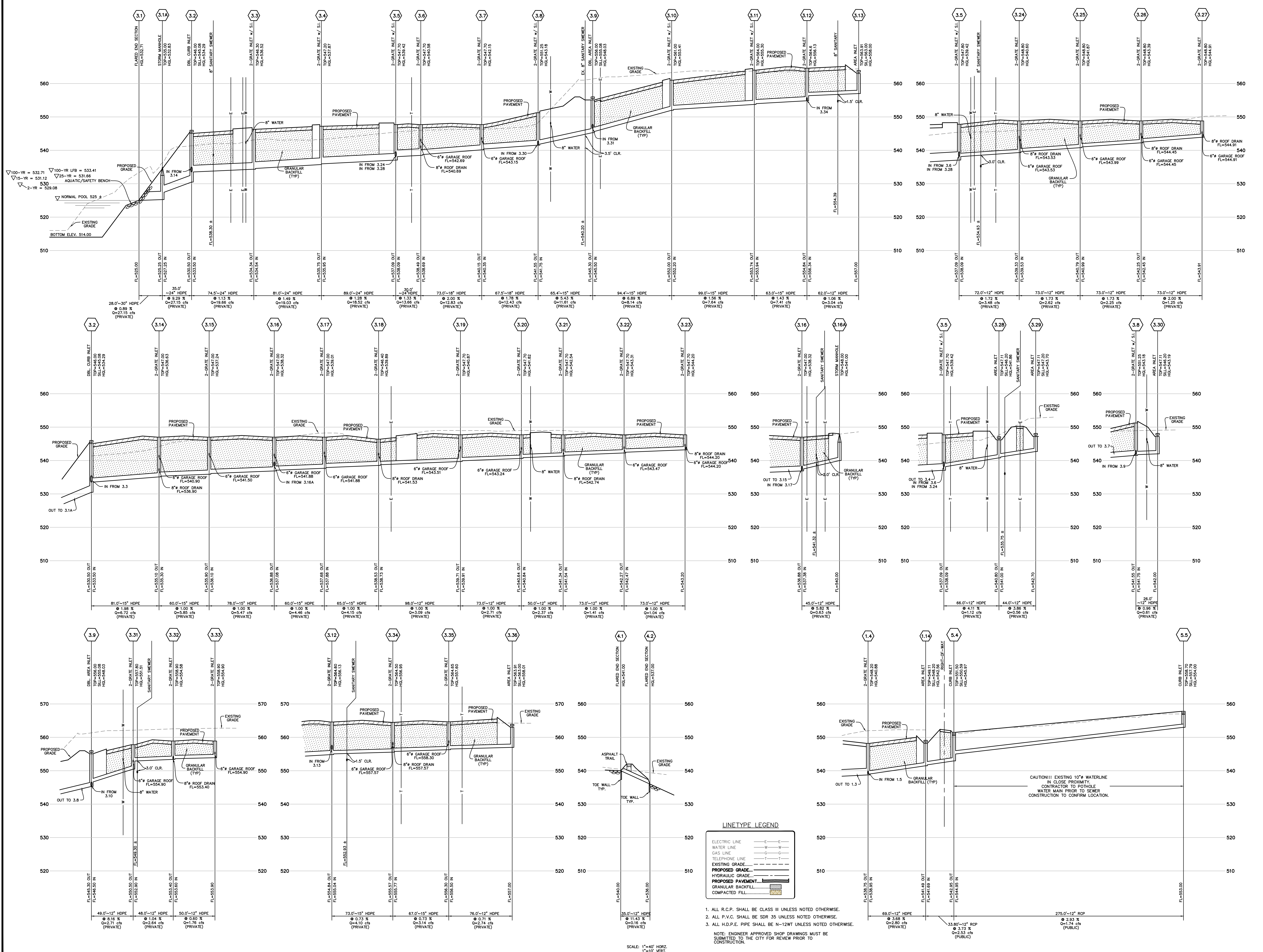
**WATERMARK APARTMENTS AT O'FALLON**  
 CRUSHER ROAD & WELDON SPRING ROAD  
 CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366



DATE: 01/16/2019  
 JOB NO: 219-6494

SCALE: 1"=40' HORIZ.  
 1"=10' VERT.





**LINETYPE LEGEND**

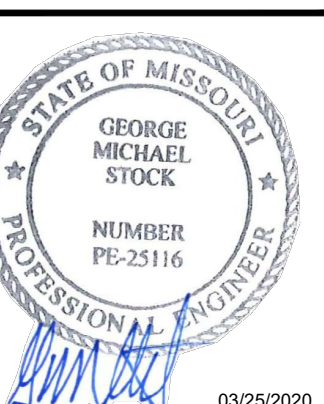
ELECTRIC LINE	---
WATER LINE	---
GAS LINE	---
TELEPHONE LINE	---
EXISTING GRADE	---
PROPOSED GRADE	---
HYDRAULIC GRADE	---
PROPOSED PAVEMENT	---
GRANULAR BACKFILL	---
COMPACTED FILL	---

1. ALL R.C.P. SHALL BE CLASS III UNLESS NOTED OTHERWISE.
  2. ALL P.V.C. SHALL BE SDR 35 UNLESS NOTED OTHERWISE.
  3. ALL H.D.P.E. PIPE SHALL BE N-12WT UNLESS NOTED OTHERWISE.
- NOTE: ENGINEER APPROVED SHOP DRAWINGS MUST BE SUBMITTED TO THE CITY FOR REVIEW PRIOR TO CONSTRUCTION.

SCALE: 1"=40' HORIZ.  
1"=10' VERT.

**WATERMARK APARTMENTS AT O'FALLON**  
CRUSHER ROAD & WELDON SPRING ROAD  
CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366

SITE IMPROVEMENT PLANS FOR:



03/25/2020  
GEORGE M. STOCK E-23116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 050990

- REVISIONS:**
- 1 01/16/2020 - 60% PRINTING
  - 2 01/16/2020 - PERMIT SET
  - 3 03/25/2020 - REVISED PER OWNER / CITY / UTILITY COMMENTS

DRAWN BY: T.S.J.M.B. CHECKED BY: G.M.S.  
DATE: 01/16/2019 JOB NO: 219-6494

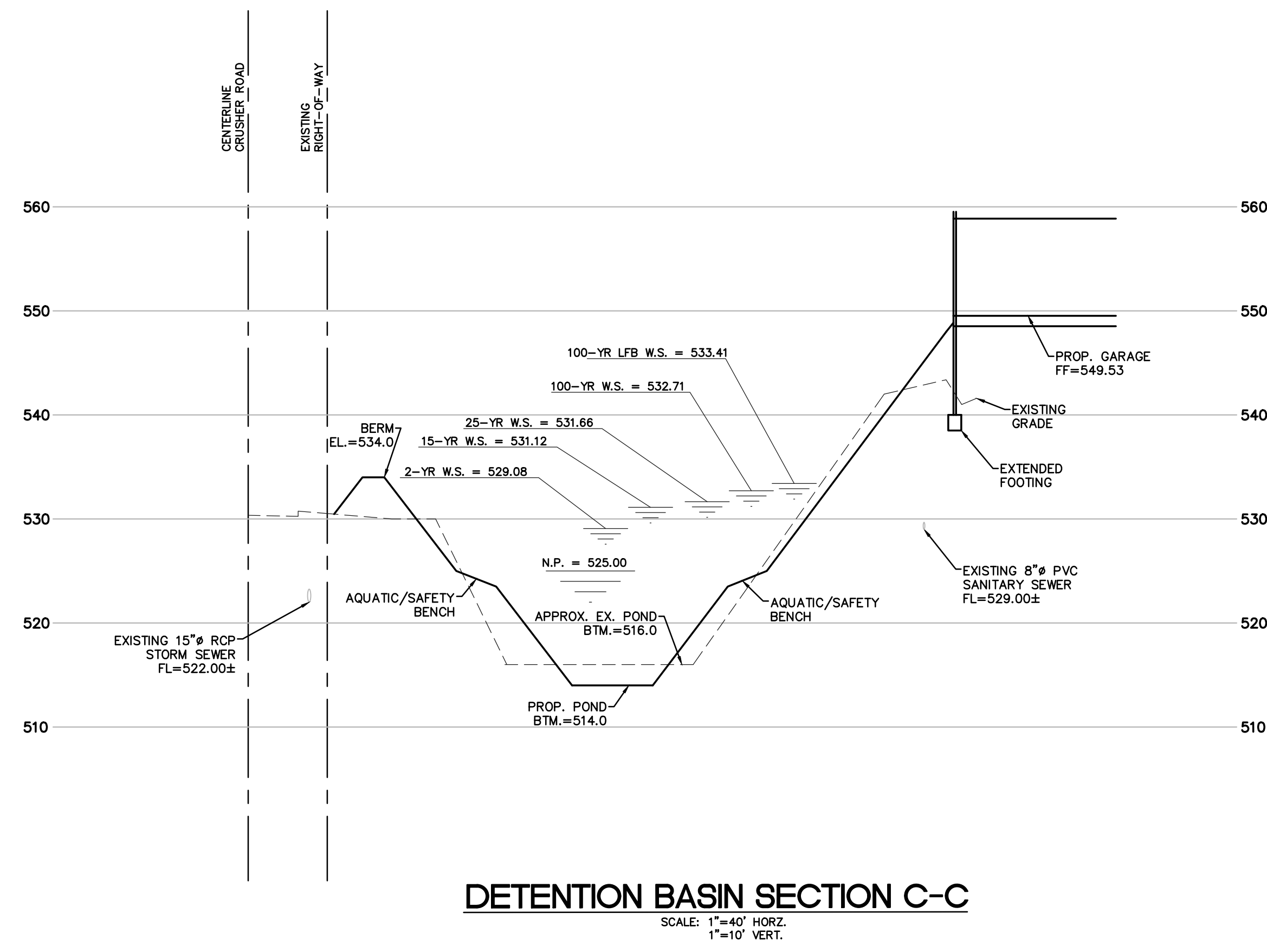
SHEET TITLE:  
**STORM SEWER PROFILES**

SHEET NO.:  
**C81**

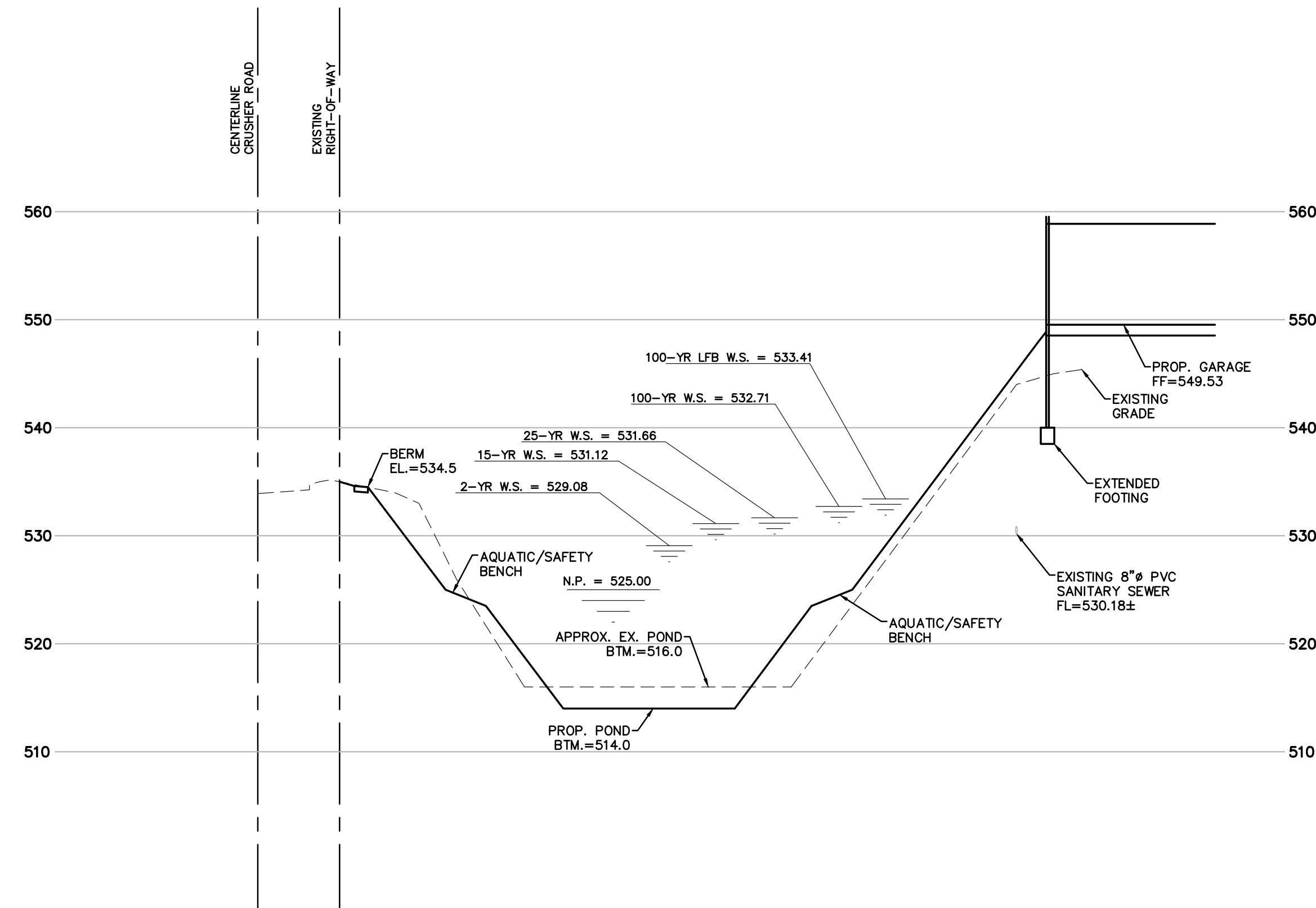
CAUTION!! EXISTING 10" WATERLINE IN CLOSE PROXIMITY. CONTRACTOR TO POT-HOLE WATER MAIN PRIOR TO SEWER CONSTRUCTION TO CONFIRM LOCATION.



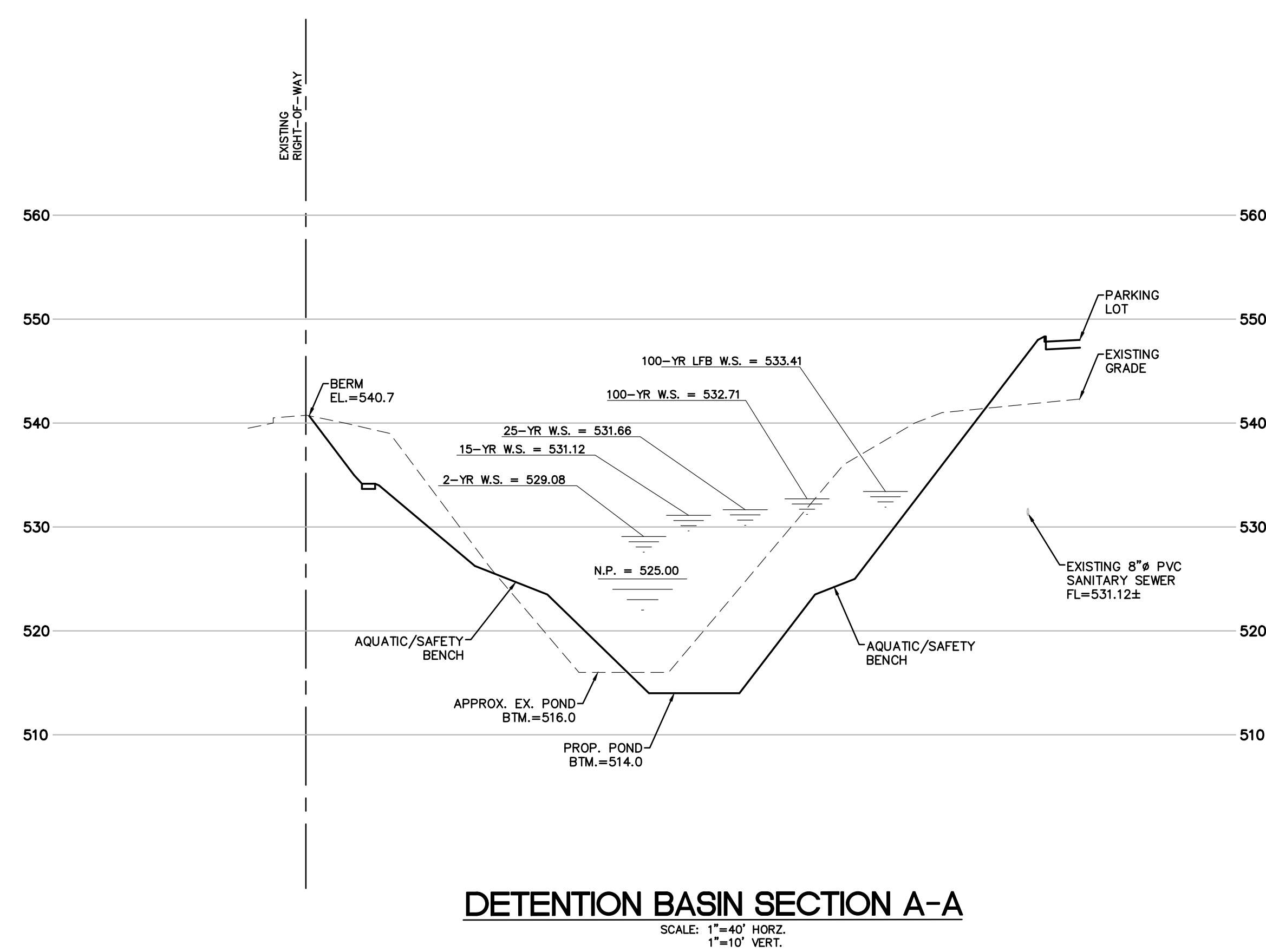
Appendix C – STORM SEWER HYDRAULICS AND DETENTION OUTFALL DETAILS  
(C8.2)



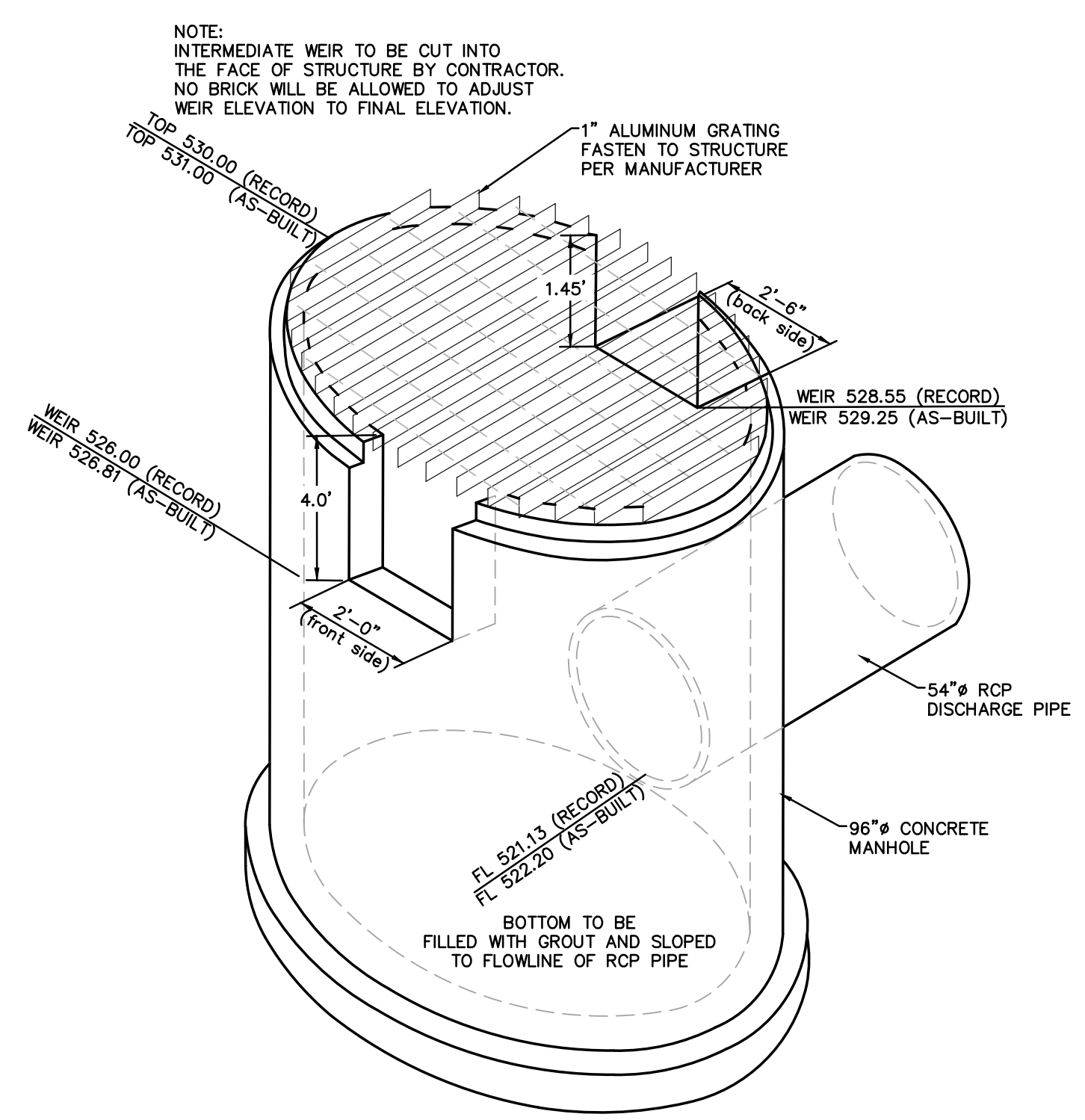
**DETENTION BASIN SECTION C-C**  
SCALE: 1"=40' HORIZ.  
1"=10' VERT.



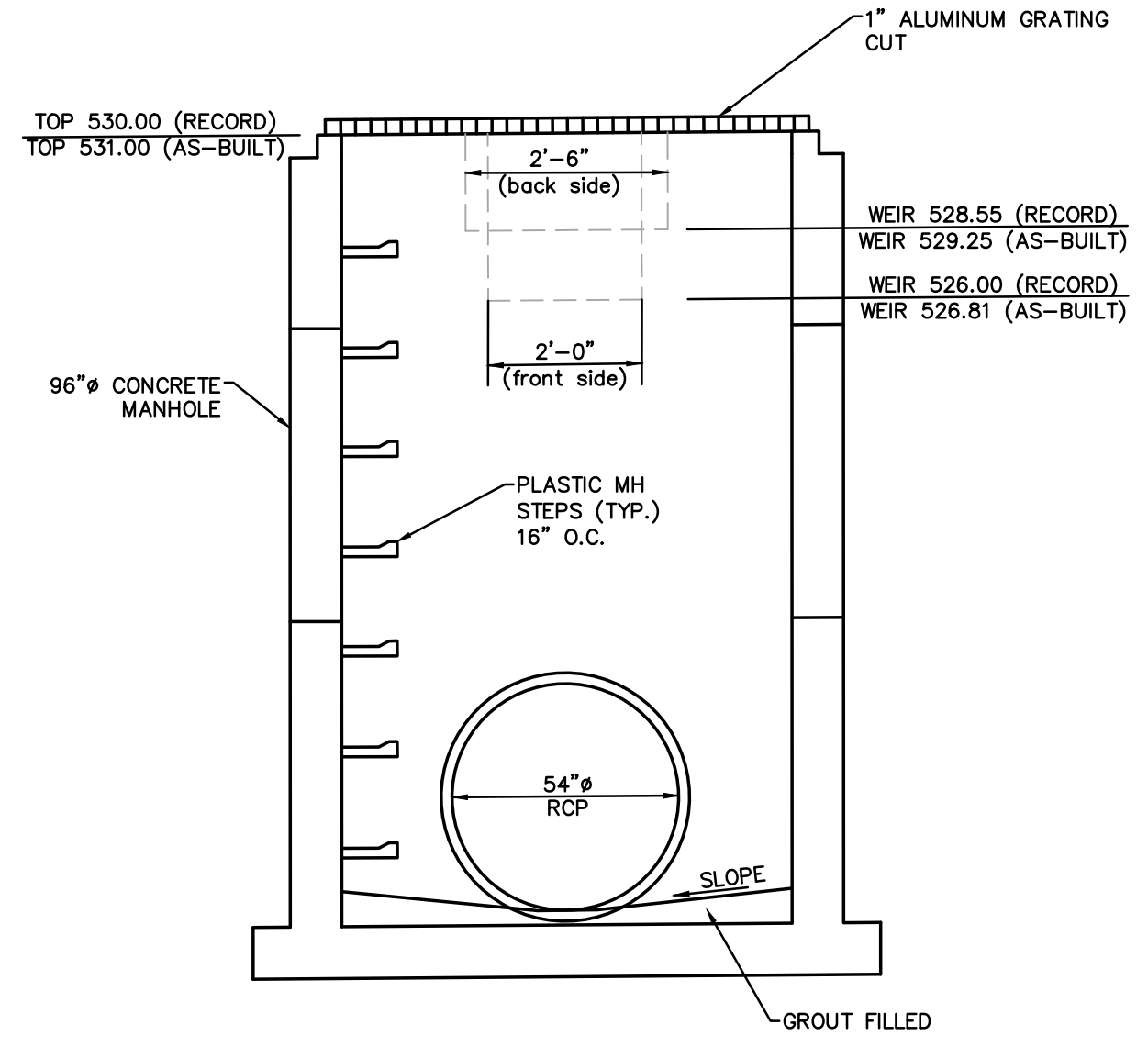
**DETENTION BASIN SECTION B-B**  
SCALE: 1"=40' HORIZ.  
1"=10' VERT.



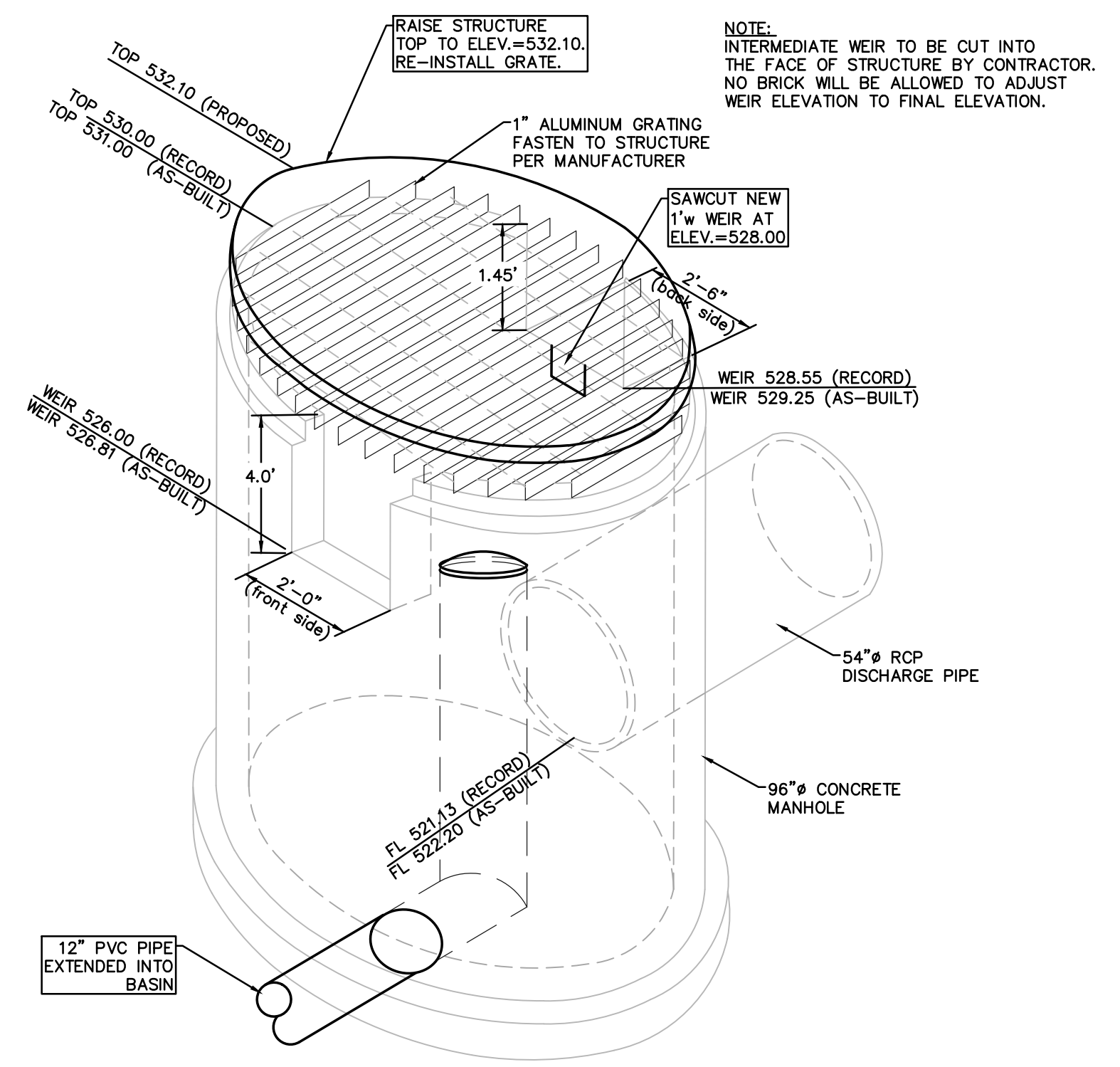
**DETENTION BASIN SECTION A-A**  
SCALE: 1"=40' HORIZ.  
1"=10' VERT.



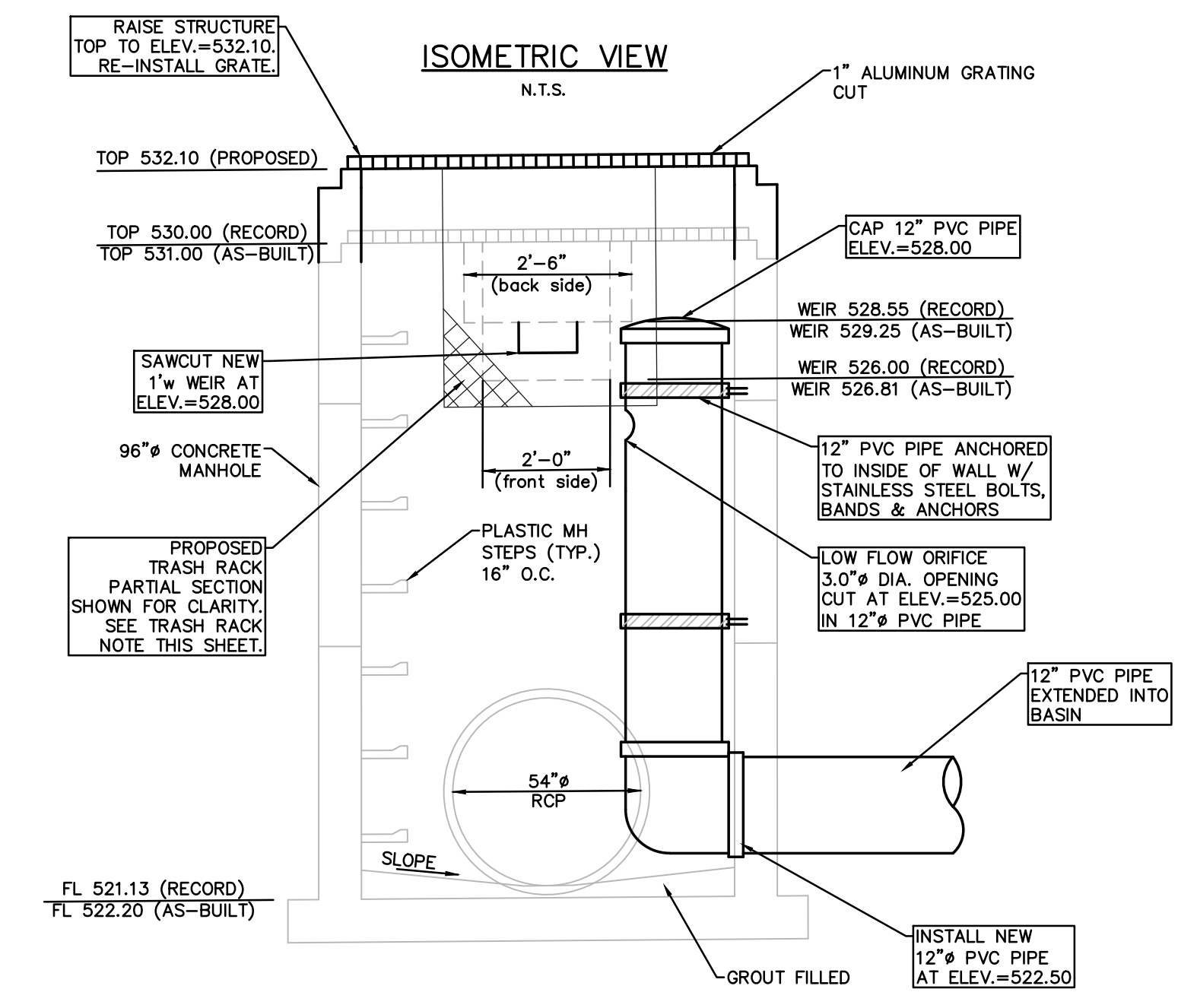
**ISOMETRIC VIEW**  
N.T.S.



**SECTION VIEW**  
N.T.S.  
**EXISTING DETENTION OUTFALL STRUCTURE (RECORD + AS-BUILT)**  
SCALE: 1"=40' HORIZ.  
1"=10' VERT.



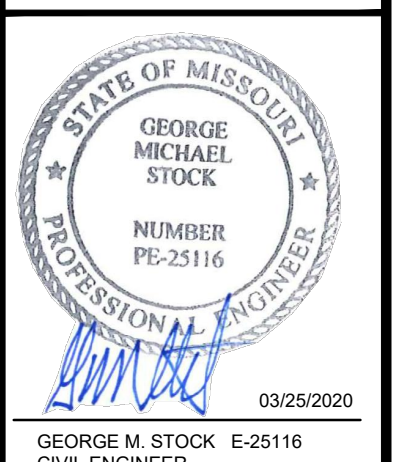
**ISOMETRIC VIEW**  
N.T.S.



**SECTION VIEW**  
N.T.S.  
**EXISTING DETENTION OUTFALL STRUCTURE - MODIFICATIONS**  
SCALE: 1"=40' HORIZ.  
1"=10' VERT.

**STRUCTURE MODIFICATION NOTE**  
OUTFALL STRUCTURE MODIFICATIONS SUBJECT TO CONTRACTOR AND STRUCTURAL ENGINEER ASSESSMENT. COMPLETE REMOVAL AND REPLACEMENT OF STRUCTURE MAY BE REQUIRED.

**TRASH RACK NOTE**  
ALL WEIR OPENINGS TO BE PROTECTED WITH A TRASH RACK. CONTRACTOR TO INSTALL CUSTOM TRASH RACK BY PLASTIC-SOLUTIONS, INC. OR APPROVED EQUAL. [www.plastic-solution.com](http://www.plastic-solution.com).

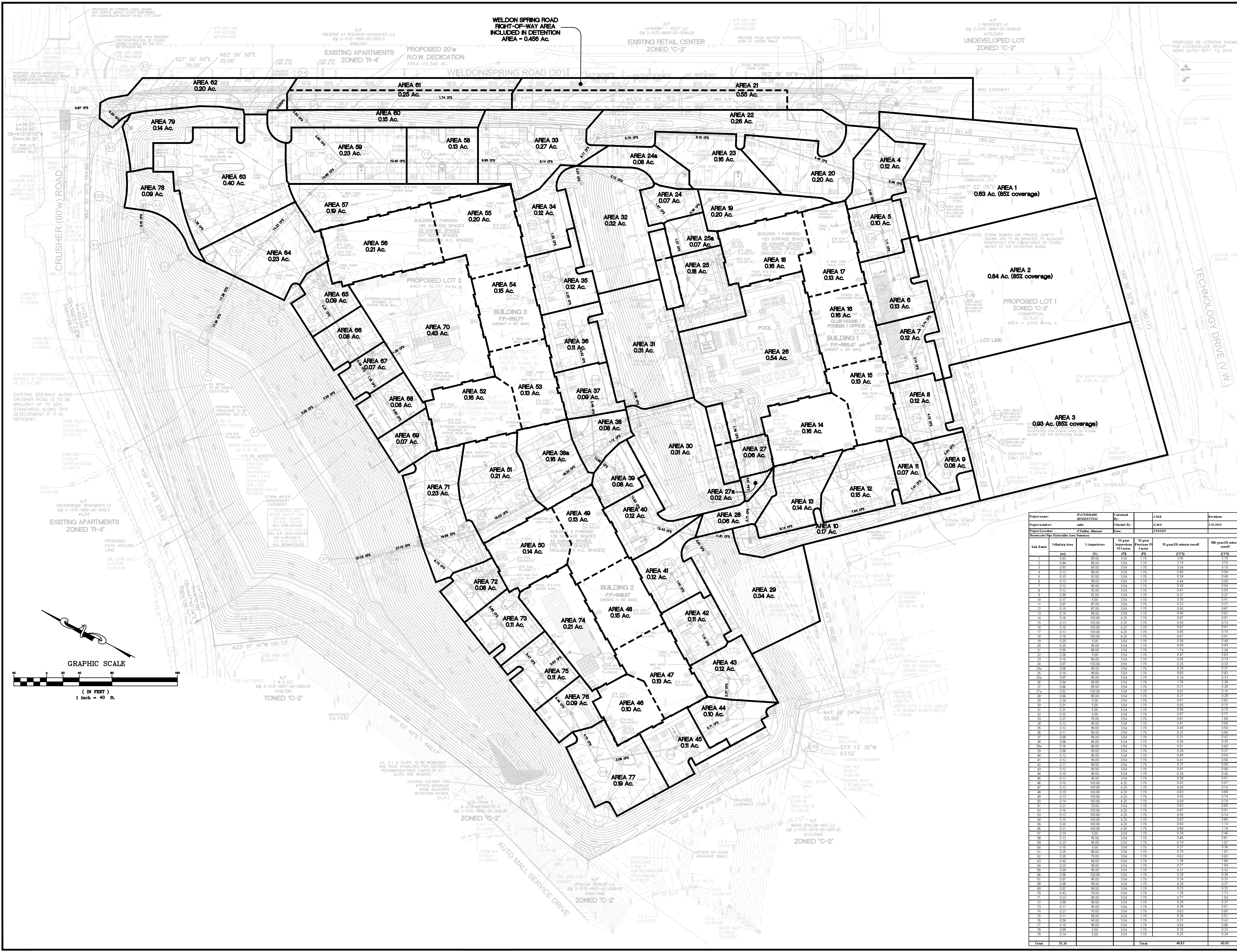


REVISIONS:  
1 01/16/2020 - 60% PRINTING  
2 01/16/2020 - PERMIT SET  
3 03/25/2020 - REVISED PER OWNER / CITY / UTILITY COMMENTS

DRAWN BY: T.S.J.M.B. CHECKED BY: G.M.S.  
DATE: 01/16/2019 JOB NO: 219-6494  
SHEET TITLE: **DETENTION OUTFALL DETAILS AND BASIN SECTIONS**  
SHEET NO.: **C8.2**

Appendix D – DRAINAGE AREA MAP – HYDRAULICS (C11.0)

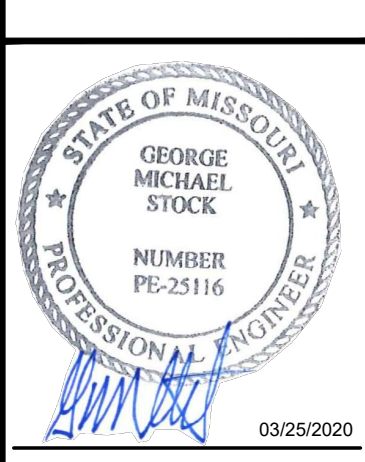




Project Name:		WATERMARK APARTMENTS AT O'FALLON		Checked By:	J.M.B.	Rev. No.:
Project Number:		604		Checked By:	G.M.E.	1/25/2019
Project Location:		O'Fallon, Missouri		Date:	2/24/2020	
Drainage Area Hydrology Summary						
Sub Basin	Drainage Area (Ac)	% Impervious (%)	15 Year Intensity (IP)		15 Year 20 Minute Runoff (CFS)	
			IP (in/hr)	IP (in/hr)	15 Year 20 Minute Runoff (CFS)	100 Year 20 Minute Runoff (CFS)
1	0.03	85.00	3.54	1.70	2.08	2.78
2	0.04	85.00	3.54	1.70	2.74	3.61
3	0.03	85.00	3.54	1.70	3.04	4.10
4	0.12	85.00	3.54	1.70	0.40	0.54
5	0.10	82.00	3.54	1.70	0.34	0.46
6	0.13	80.00	3.54	1.70	0.44	0.59
7	0.12	80.00	3.54	1.70	0.40	0.54
8	0.12	82.00	3.54	1.70	0.41	0.55
9	0.08	82.00	3.54	1.70	0.37	0.50
10	0.17	5.00	3.54	1.70	0.30	0.41
11	0.07	87.00	3.54	1.70	0.23	0.31
12	0.15	87.00	3.54	1.70	0.50	0.67
13	0.14	85.00	3.54	1.70	0.46	0.62
14	0.13	100.00	4.20	1.70	0.67	0.91
15	0.13	100.00	4.20	1.70	0.55	0.74
16	0.16	100.00	4.20	1.70	0.67	0.91
17	0.13	100.00	4.20	1.70	0.55	0.74
18	0.16	100.00	4.20	1.70	0.67	0.91
19	0.20	5.00	3.54	1.70	0.36	0.48
20	0.20	85.00	3.54	1.70	0.69	0.93
21	0.06	85.00	3.54	1.70	0.17	0.23
22	0.06	85.00	3.54	1.70	0.17	0.23
23	0.16	95.00	3.54	1.70	0.55	0.74
24	0.07	100.00	4.20	1.70	0.25	0.33
25	0.18	85.00	3.54	1.70	0.60	0.82
26	0.18	85.00	3.54	1.70	0.60	0.82
27a	0.07	85.00	3.54	1.70	0.24	0.33
27b	0.04	85.00	3.54	1.70	0.16	0.21
27c	0.06	85.00	3.54	1.70	0.21	0.28
27d	0.03	85.00	3.54	1.70	0.07	0.10
28	0.06	85.00	3.54	1.70	0.21	0.28
29	0.34	5.00	3.54	1.70	0.61	0.82
30	0.31	5.00	3.54	1.70	0.56	0.75
31	0.31	5.00	3.54	1.70	0.56	0.75
32	0.06	85.00	3.54	1.70	0.21	0.28
33	0.07	70.00	3.54	1.70	0.21	0.28
34	0.12	85.00	3.54	1.70	0.41	0.55
35	0.12	80.00	3.54	1.70	0.40	0.54
36	0.11	80.00	3.54	1.70	0.37	0.50
37	0.09	85.00	3.54	1.70	0.31	0.42
38	0.08	85.00	3.54	1.70	0.28	0.38
38a	0.16	80.00	3.54	1.70	0.51	0.69
38b	0.06	85.00	3.54	1.70	0.23	0.31
40	0.12	80.00	3.54	1.70	0.40	0.54
41	0.12	85.00	3.54	1.70	0.41	0.56
42	0.11	85.00	3.54	1.70	0.37	0.50
43	0.12	85.00	3.54	1.70	0.41	0.56
44	0.09	80.00	3.54	1.70	0.34	0.46
45	0.11	85.00	3.54	1.70	0.38	0.51
46	0.10	100.00	4.20	1.70	0.42	0.57
47	0.13	100.00	4.20	1.70	0.56	0.74
48	0.15	100.00	4.20	1.70	0.63	0.85
49	0.13	100.00	4.20	1.70	0.55	0.74
50	0.14	100.00	4.20	1.70	0.59	0.81
51	0.21	70.00	3.54	1.70	0.63	0.85
52	0.16	100.00	4.20	1.70	0.63	0.85
53	0.16	100.00	4.20	1.70	0.63	0.85
54	0.15	100.00	4.20	1.70	0.63	0.85
55	0.20	4.20	3.54	1.70	0.34	0.46
56	0.21	100.00	4.20	1.70	0.68	0.93
57	0.19	5.00	3.54	1.70	0.48	0.65
58	0.13	85.00	3.54	1.70	0.45	0.61
59	0.23	85.00	3.54	1.70	0.79	1.07
60	0.16	5.00	3.54	1.70	0.27	0.36
61	0.25	80.00	3.54	1.70	0.79	1.07
62	0.20	75.00	3.54	1.70	0.62	0.83
63	0.40	85.00	3.54	1.70	1.38	1.86
64	0.23	80.00	3.54	1.70	0.77	1.04
65	0.09	85.00	3.54	1.70	0.31	0.42
66	0.08	100.00	4.20	1.70	0.28	0.38
67	0.07	85.00	3.54	1.70	0.23	0.32
68	0.07	85.00	3.54	1.70	0.24	0.33
69	0.08	85.00	3.54	1.70	0.28	0.37
70	0.43	70.00	3.54	1.70	1.27	1.74
71	0.23	85.00	3.54	1.70	0.77	1.04
72	0.08	85.00	3.54	1.70	0.28	0.37
73	0.11	85.00	3.54	1.70	0.38	0.51
74	0.21	70.00	3.54	1.70	0.63	0.85
75	0.11	85.00	3.54	1.70	0.38	0.51
76	0.09	85.00	3.54	1.70	0.31	0.42
77	0.19	80.00	3.54	1.70	0.64	0.86
78	0.09	85.00	3.54	1.70	0.31	0.42
79	0.14	5.00	3.54	1.70	0.25	0.34
<b>Total</b>	<b>15.34</b>				<b>48.83</b>	<b>65.92</b>

PREPARED BY:  
**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.  
 257 Chesterfield Business Parkway  
 St. Louis, MO 63105 PH: (636) 520-5000 FAX: (636) 520-5000  
 e-mail: general@stockassoc.com  
 Web: www.stockassoc.com

SITE IMPROVEMENT PLANS FOR:  
**WATERMARK APARTMENTS AT O'FALLON**  
 CRUSHER ROAD & WELDON SPRING ROAD  
 CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366



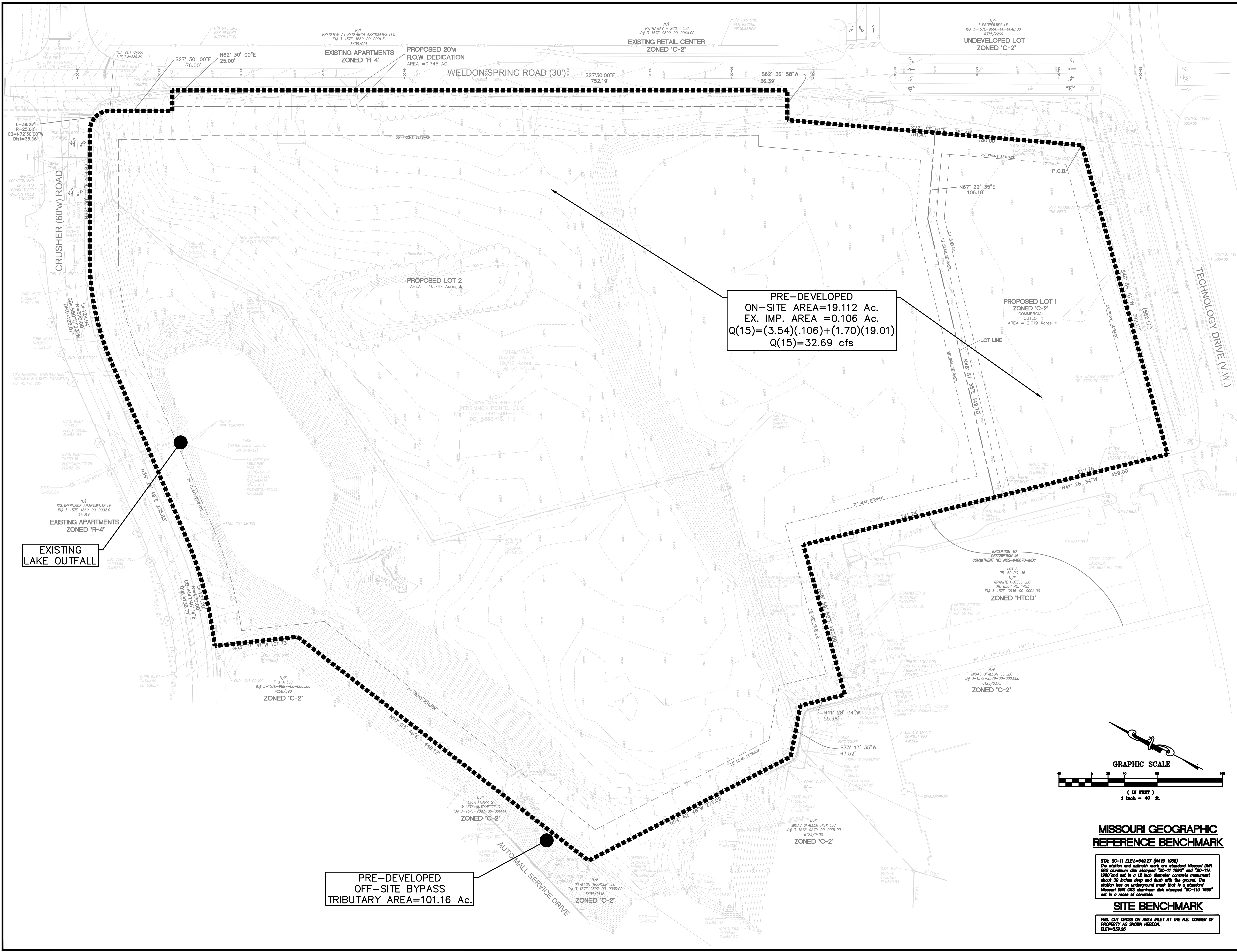
DATE: 01/16/2019  
 JOB NO: 219-6494  
 SHEET NO: C11.0

REVISIONS:  
 1 01/16/2020 - 60% PRINTING  
 2 01/16/2020 - PERMIT SET  
 3 03/25/2020 - REVISED PER OWNER / CITY / UTILITY COMMENTS



Appendix E – DRAINAGE AREA MAP – PRE-DEVELOPED (C11.1)

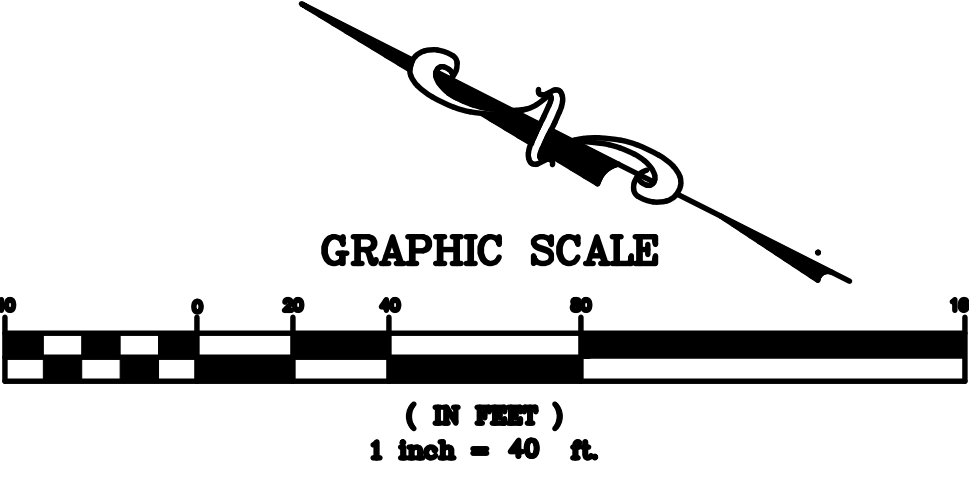




PRE-DEVELOPED  
ON-SITE AREA=19.112 Ac.  
EX. IMP. AREA =0.106 Ac.  
 $Q(15)=(3.54)(.106)+(1.70)(19.01)$   
 $Q(15)=32.69$  cfs

EXISTING  
LAKE OUTFALL

PRE-DEVELOPED  
OFF-SITE BYPASS  
TRIBUTARY AREA=101.16 Ac.

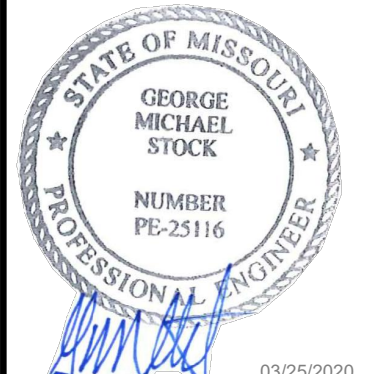


**MISSOURI GEOGRAPHIC  
REFERENCE BENCHMARK**

STA: SC-11 ELEV.=40.27 (NAVD 1988)  
The station and control mark are standard Missouri DMR  
GRS aluminum disk stamped "SC-11 1990" and "SC-11A  
1990" and set in a 12 inch diameter concrete monument  
about 30 inches deep and flush with the ground. The  
station has an underground mark that is a standard  
Missouri DMR GRS aluminum disk stamped "SC-11U 1990"  
set in a mass of concrete.

**SITE BENCHMARK**

FIND. CUT CROSS ON AREA INLET AT THE N.E. CORNER OF  
PROPERTY AS SHOWN HEREON.  
ELEV.=536.26



GEORGE M. STOCK E-20116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 00099

REVISIONS:	
1	01/16/2020 - 60% PRINTING
2	02/16/2020 - PERMIT SET
3	03/25/2020 - REVISED PER OWNER / CITY / UTILITY COMMENTS

DRAWN BY:	CHECKED BY:
T.S.L.M.B.	G.M.S.
DATE:	JOB NO.:
01/16/2019	210-6404

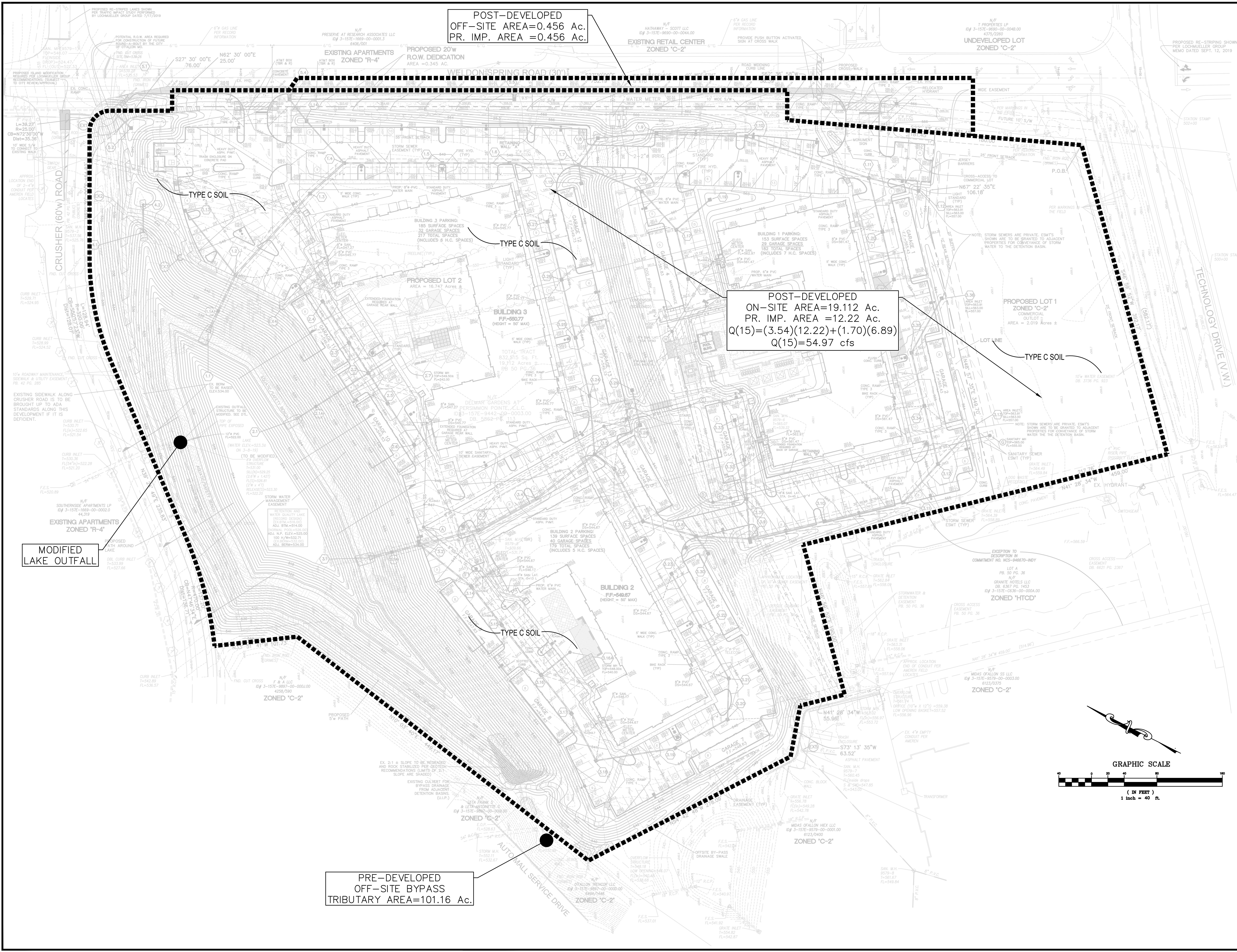
SHEET TITLE:  
**DRAINAGE AREA MAP  
PRE-DEVELOPED**

SHEET NO.:



Appendix F – DRAINAGE AREA MAP – POST-DEVELOPED (C11.2)





POST-DEVELOPED  
OFF-SITE AREA=0.456 Ac.  
PR. IMP. AREA =0.456 Ac.

POST-DEVELOPED  
ON-SITE AREA=19.112 Ac.  
PR. IMP. AREA =12.22 Ac.  
 $Q(15)=(3.54)(12.22)+(1.70)(6.89)$   
 $Q(15)=54.97$  cfs

PRE-DEVELOPED  
OFF-SITE BYPASS  
TRIBUTARY AREA=101.16 Ac.

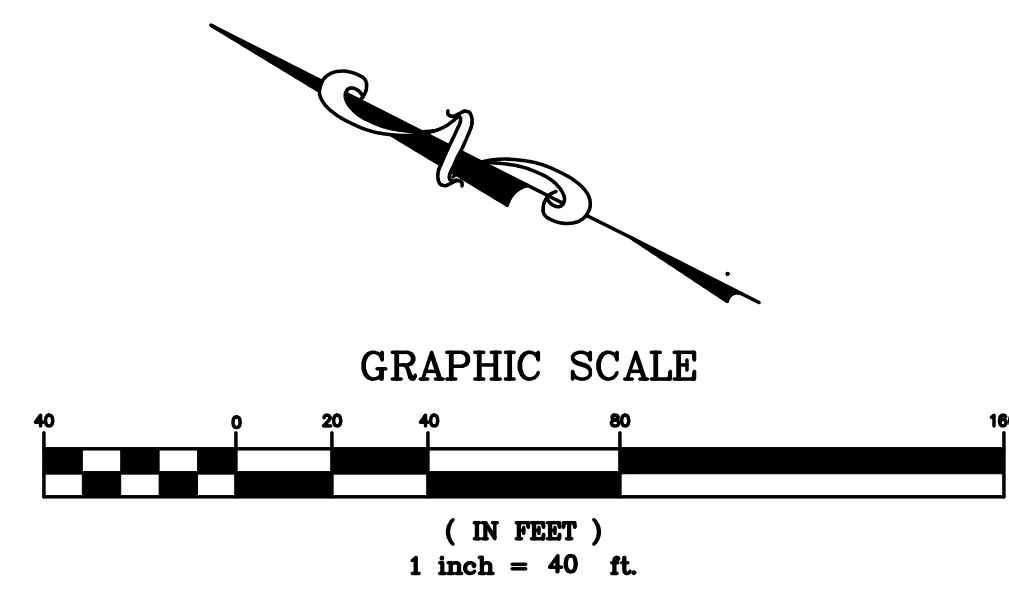
MODIFIED  
LAKE OUTFALL

TYPE C SOIL

TYPE C SOIL

TYPE C SOIL

TYPE C SOIL



PREPARED BY:  
**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.  
257 Chesterfield Business Parkway  
St. Louis, MO 63105 PH: (636) 520-9300  
5201-5000 FAX: (636) 520-9300  
e-mail: general@stockinc.com  
Web: www.stockinc.com

SITE IMPROVEMENT PLANS FOR:  
**WATERMARK APARTMENTS AT O'FALLON**  
CRUSHER ROAD & WELDON SPRING ROAD  
CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366



GEORGE M. STOCK E-2116  
CIVIL ENGINEER  
CERTIFICATE OF AUTHORITY  
NUMBER: 020991

REVISIONS:

1	11/16/2019	60% PRINTING
2	11/16/2019	100% PRINTING
3	11/16/2019	100% PRINTING

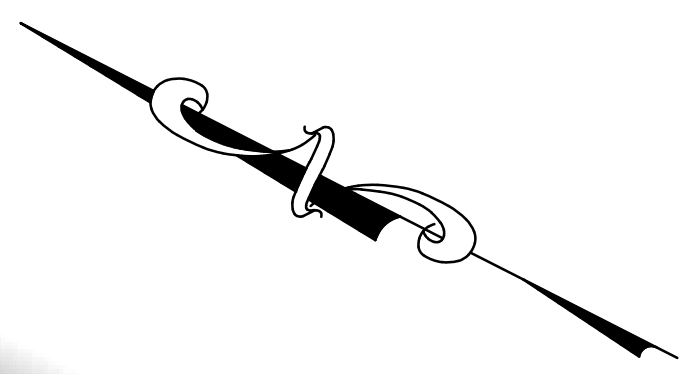
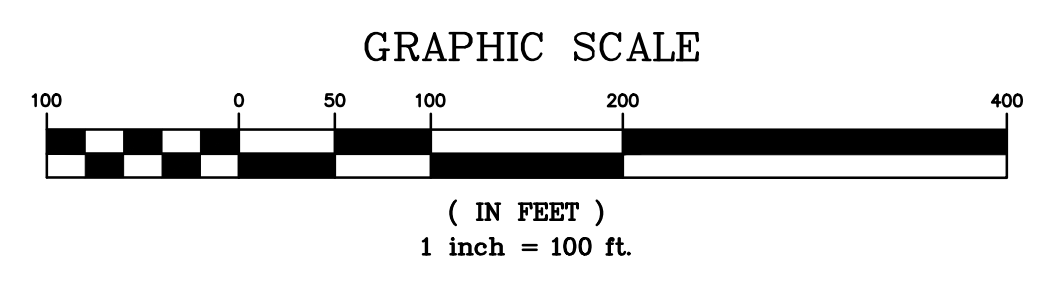
DRAWN BY:	CSM	CHECKED BY:	CSM
DATE:	01/16/2019	JOB NO.:	219-6494

SHEET TITLE:  
**DRAINAGE AREA MAP  
POST-DEVELOPED**  
SHEET NO.:  
**C11.2**



Appendix G – DRAINAGE AREA MAP –DETENTION (C11.3)



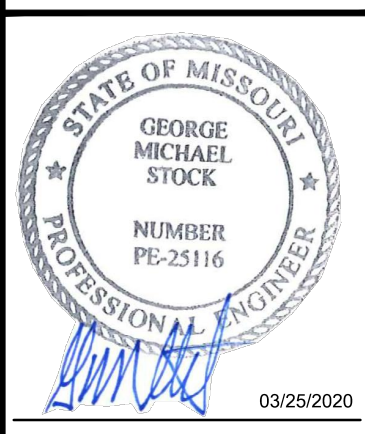


PREPARED BY:

**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.  
 257 Chesterfield Business Parkway  
 St. Louis, MO 63005 PH: (636) 530-9300  
 530-9300 FAX: (636) 530-9300  
 e-mail: general@stockassoc.com  
 Web: www.stockassoc.com

SITE IMPROVEMENT PLANS FOR:  
**WATERMARK APARTMENTS AT O'FALLON**

CRUSHER ROAD & WELDON SPRING ROAD  
 CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366



03/25/2020  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 050998

REVISIONS:

1	01/16/2020	- 60% PRINTING
2	02/14/2020	- PERMIT SET
3	03/25/2020	- REVISED PER OWNER / CITY / UTILITY COMMENTS

DRAWN BY:	CHECKED BY:
T.S.J.M.B.	G.M.S.
DATE:	JOB NO.:
01/16/2019	219-6494

SHEET TITLE:  
 DRAINAGE AREA  
 MAP - DETENTION  
 SHEET NO.: