

MIRAMAR HISTORIC DRAINAGE PHASE IV

SURFACE WATER CALCULATIONS

PREPARED FOR:

CITY OF MIRAMAR
&
BROWARD COUNTY ENVIRONMENTAL PROTECTION & GROWTH
MANAGEMENT DEPARTMENT ENVIRONMENTAL ENGINEERING AND
PERMITTING DIVISION

CTA PROJECT NO. 17-0015-001-02

MAY 2020

Prepared by:



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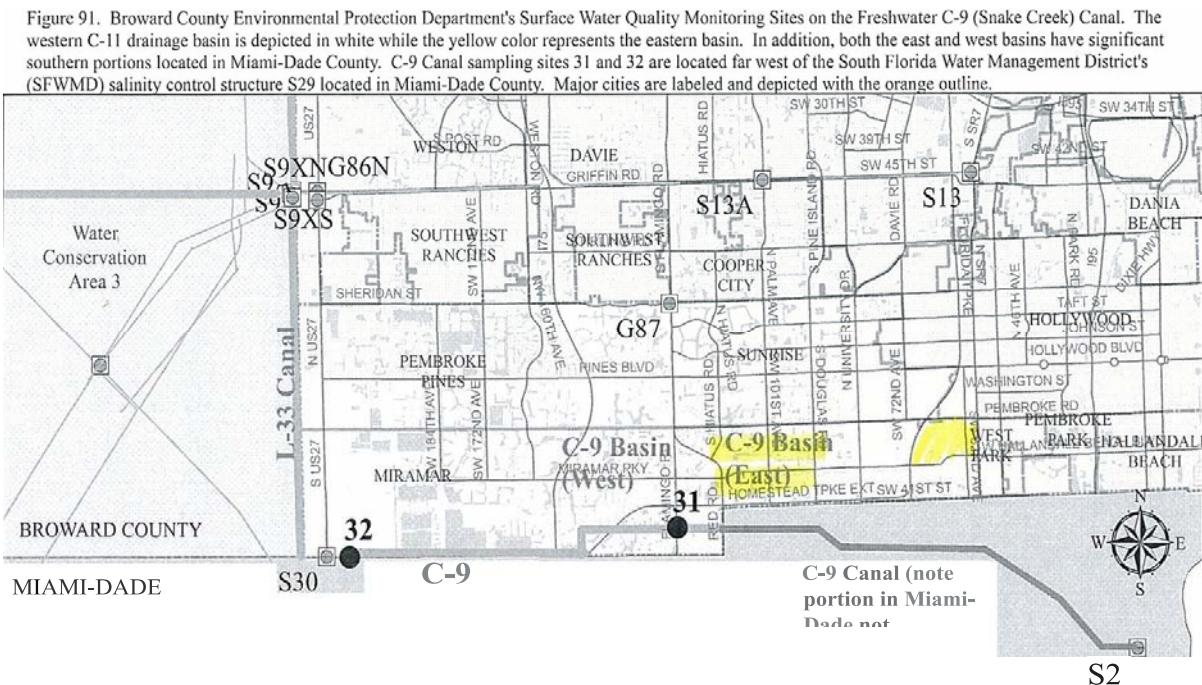
CALCULATIONS

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PROJECT NARRATIVE

INTRODUCTION

The C-9 Canal drains, a relatively large basin with an area of approximately 62,700 acres in Broward County and Miami-Dade County. The C-9 Basin is split into a West sub-basin and an East (Approximately 28,800-acre)' sub-basin which overlap the Broward County and Miami Dade County. Historic Miramar Drainage Infrastructure Improvements – Phase IV (301.79 acres) is located in the C-9 East Basin, The flow in the C-9 Canal is normally to the east with a final discharge in Miami-Dade County (through SFWMD control structure S29) into the estuarine Maule Lake and Intracoastal Waterway (ICW)/North Biscayne Bay system



Historic Miramar Drainage Infrastructure Improvements – Phase IV (301.79 acres), located in the C-9 East Basin, is within the Florida Department of Environmental Protection (FDEP) Water Body Identification number (WBID) 3283. WBID 3283 has “Dissolved Oxygen” listed as a parameter of concern. This basin is under Assessment Category 4d which indicates non-attainment of water standards, but the FDEP does not have enough information to determine a causative pollutant; or does current data show a potentially adverse trend in nutrients or nutrient response variables; or that there are exceedances of stream nutrient thresholds, but the FDEP does not have enough information to fully assess non-attainment of the stream nutrient standard.

Historic Miramar Drainage Infrastructure Improvements - Phase IV, approximately 301.79 acres in area, is located in the general area bounded by SW 64 Avenue to the east, County Line Road to the south, Florida Turnpike to the west and Miramar Parkway to the north. The project area was poorly-drained, had no water quality treatment, and experienced nuisance flooding due to inadequate stormwater management facilities. The drainage basin depended upon percolation and evaporation in the grass swales along the roadways to remove excess stormwater runoff. Many of these grass swales had been filled in by residents to create landscape areas thus reducing storage and the effectiveness of percolation. Inlets and outfalls were limited in this area of the project

The intent of the project is to convert some of the existing pavement to pervious pavement, re-introduce swales within the right of way for water quality improvement and groundwater recharge, install additional drainage piping for conveyance, and to add and installation of drainage piping with exfiltration trench to improve water quality and the overall function of the existing drainage system. More precisely, the project encompasses a total drainage area of 301.79 acres located, as shown, in the project aerial map on page 2 of this report.

EXISTING PRE-IMPROVEMENT CONDITIONS

The existing project area is made up of primarily single-family residences, a small commercial area, a small park area, a small municipal area, and a lake area. Most of the project area has little or no swales and no conveyance system and sheet flows to the nearest conveyance pipe system connected to the existing lake. The existing lake discharges via two (2) existing 54" diameter pipes under County Line Road to an existing neighborhood lake system south and adjacent to County Line Road and ultimately to the East Snake Creek Canal (C-9).

POST IMPROVEMENT CONDITIONS

The proposed improvements provide water quality volume in both grassed swales and exfiltration trench. Additionally, almost 0.6 acres of pavement area is converted into pervious pavement. The swales and proposed piping are interconnected as much as feasible to improve conveyance. These features also provide additional runoff storage volume. There is no proposed increase in impervious area in fact the impervious area will decrease due to the replacement of regular pavement with pervious pavement. Additionally, there is no proposed area where grades will be raised but rather additional runoff volume will be accommodated in proposed roadside sales. Weirs will be placed at the downstream ends of

proposed exfiltration trench at elevation 2.00 NAVD. The post improvement peak discharge rate and post improvement peak stage will ultimately be reduced from the pre-improvement peak discharge rate and pre-improvement peak stage while greatly enhancing water quality treatment within the area.

SUMMARY

The proposed project is intended to meet the requirements of the South Florida Water Management District, The Broward County Environmental Protection and Growth Management Department, the City of Miramar, and all governing agencies.

Pre Post Peak Stage and Discharge Summary

Basin Name	Pre Improvement Peak Stage 10 Year 1 day Storm Event (NAVD)	Post Improvement Peak Stage 10 Year 1 day Storm Event (NAVD)	Pre Improvement Peak Stage 25 Year 3 day Storm Event (NAVD)	Post Improvement Peak Stage 25 Year 3 day Storm Event (NAVD)	Pre Improvement Peak Stage 100 Year 3 day Zero Discharge Storm Event (NAVD)	Post Improvement Peak Stage 100 Year 3 day Zero Discharge Storm Event (NAVD)
1	4.79	4.67	5.20	5.08	6.07	5.48
2	4.75	4.61	5.19	5.05	6.07	5.47
3	4.68	4.55	5.17	5.03	6.07	5.47
4	4.68	4.56	5.17	5.02	6.07	5.46
5	4.68	4.56	5.17	5.02	6.07	5.46
6	4.65	4.57	5.14	5.01	6.07	5.47
7	4.67	4.58	5.17	5.02	6.07	5.47
8	4.80	4.69	5.20	5.08	6.07	5.49
9	4.80	4.71	5.20	5.08	6.07	5.49
10	4.66	4.57	5.15	5.00	6.07	5.47
11	4.80	4.72	5.20	5.08	6.08	5.49
12	4.81	4.73	5.20	5.08	6.07	5.49
13	4.82	4.74	5.20	5.08	6.07	5.49
14	4.84	4.76	5.20	5.07	6.07	5.49
15	4.84	4.76	5.20	5.07	6.07	5.49
16	4.66	4.58	5.14	4.99	6.07	5.47
17	4.65	4.56	5.14	4.99	6.07	5.47
18	4.68	4.59	5.13	4.98	6.07	5.47
19	4.67	4.58	5.13	4.98	6.07	5.47
20	4.68	4.59	5.13	4.98	6.07	5.47
Lake/Rear Yard	3.05	3.05	4.17	4.14	6.07	5.47

25 Year 3 Day Storm Event Pre Improvement Peak Discharge	152.74 cfs
25 Year 3 Day Storm Event Post Improvement Peak Discharge	150.68 cfs

Exhibit A
Aerial Location Map

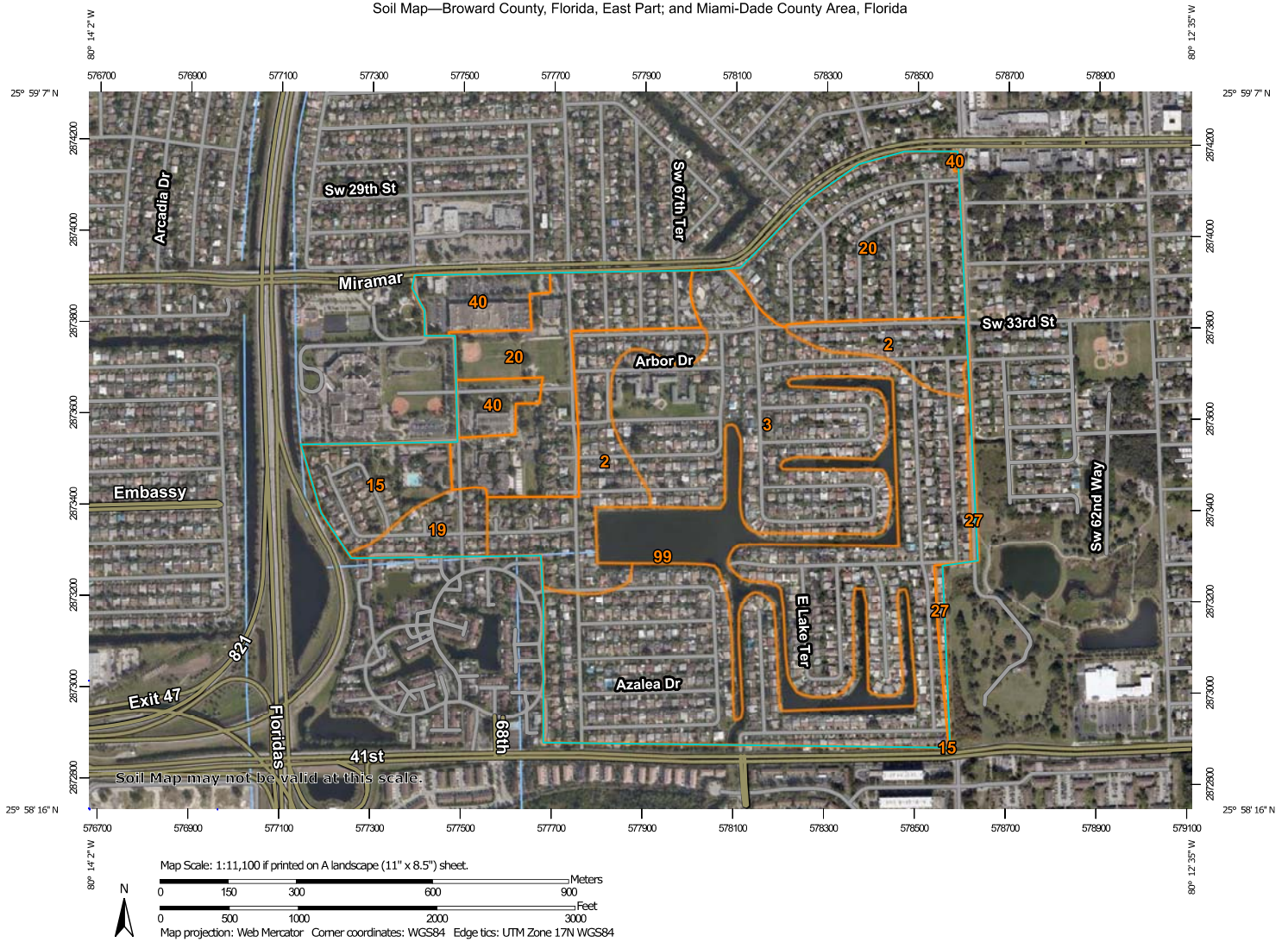


LOCATION MAP

SECTION 26, TOWNSHIP 51 SOUTH, RANGE 41 EAST

Exhibit B
SCS Soil Survey Map

Soil Map—Broward County, Florida, East Part; and Miami-Dade County Area, Florida



Soil Map—Broward County, Florida, East Part; and Miami-Dade County Area, Florida

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

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 scales ranging from 1:20,000 to 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: Broward County, Florida, East Part
Survey Area Data: Version 15, Sep 16, 2019

Soil Survey Area: Miami-Dade County Area, Florida
Survey Area Data: Version 11, Sep 16, 2019

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Jan 2, 2019—Mar 26, 2019

Soil Map—Broward County, Florida, East Part; and Miami-Dade County Area, Florida

MAP LEGEND

MAP INFORMATION

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.



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/23/2020
Page 3 of 4

Map Unit Legend

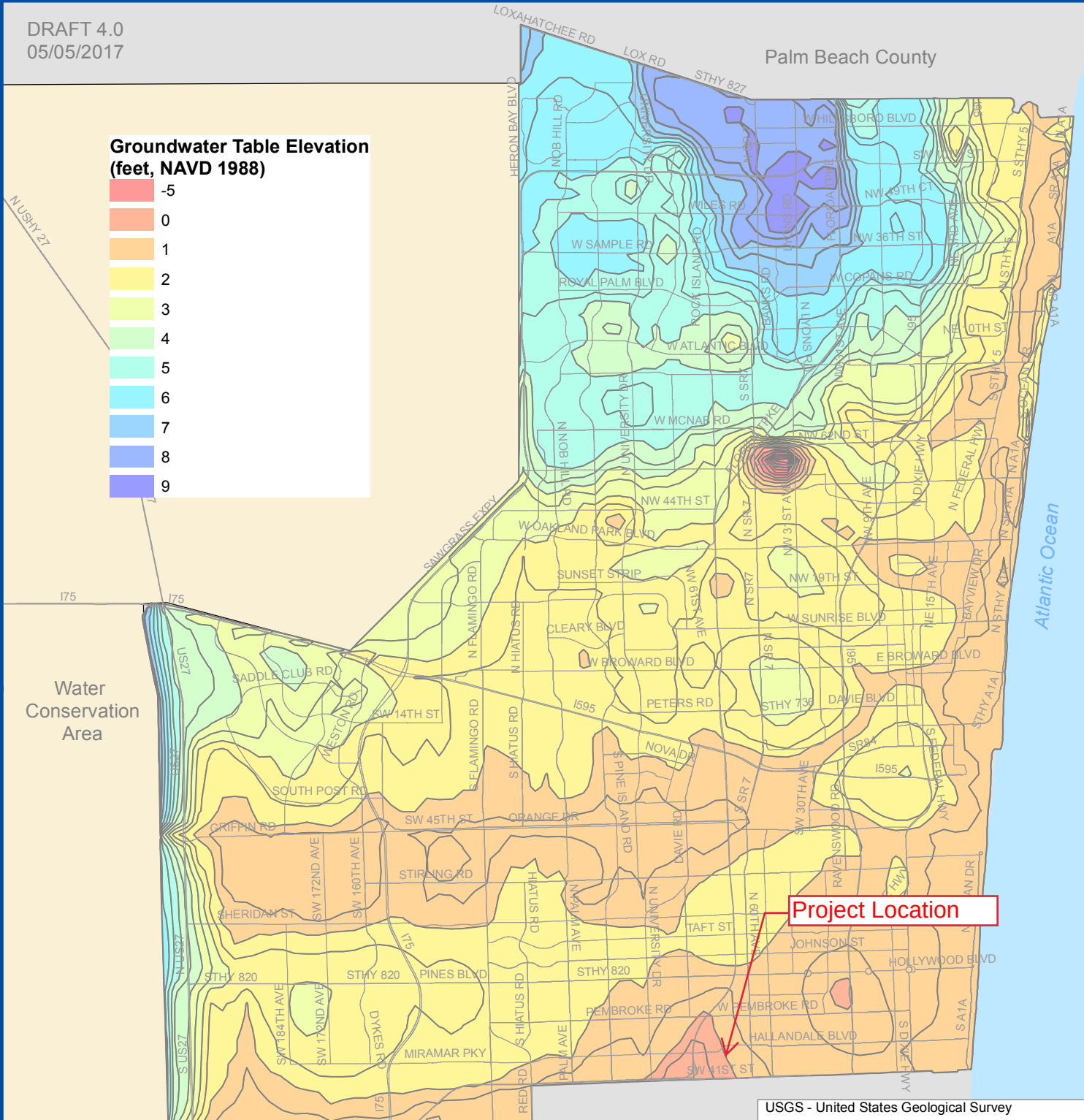
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Arents-Urban land complex	32.9	10.6%
3	Arents, organic substratum-Urban land complex	149.0	48.0%
15	Immokalee fine sand, 0 to 2 percent slopes	13.4	4.3%
19	Margate fine sand, occasionally ponded, 0 to 1 percent slopes	7.4	2.4%
20	Matlacha, limestone substratum-Urban land complex	65.1	21.0%
27	Plantation muck	2.8	0.9%
40	Urban land, 0 to 2 percent slopes	13.1	4.2%
99	Water	26.9	8.7%
Subtotals for Soil Survey Area		310.6	100.0%
Totals for Area of Interest		310.6	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
15	Urban land, 0 to 2 percent slopes	0.0	0.0%
Subtotals for Soil Survey Area		0.0	0.0%
Totals for Area of Interest		310.6	100.0%

Exhibit C
Wet Season Water Table Elevation Map

DRAFT 4.0
05/05/2017

Groundwater Table Elevation (feet, NAVD 1988)



0 1 2
Miles

Miami-Dade County

Division Name: Environmental Planning and Community Resilience
Department Name: Environmental Protection and Growth Management

USGS - United States Geological Survey
COAPS - Center for Ocean-Atmospheric Prediction Studies
CCSM - Community Climate System Model
USACE - United States Army Corps of Engineers
NRC3 - National Research Council Curve 3
NAVD 88 - 1988 North American Vertical Datum

The map represents the expected future average wet season groundwater elevations for Broward County. The average is based on model outputs for the months of May through October over the period of 2060-2069. The models used are The Broward County Inundation Model and the Broward County Northern Variable Density model, both developed by the USGS and MODFLOW based. The future conditions that are modified in the models are both precipitation and sea level rise. The future precipitation pattern is based on the COAPS downscaled CCSM global model and represents an increase of 9.1% rainfall from the base case of 1990-1999 (53.4 in/yr to 58.2 in/yr). Sea level rise was based on the USACE NRC3 curve which equates to an increase of 26.6 to 33.9 inches to the future period from 1992 levels. Final results are presented in NAVD 88.

Exhibit D
SFWMD 10, 25, & 100 Yr Rainfall Maps

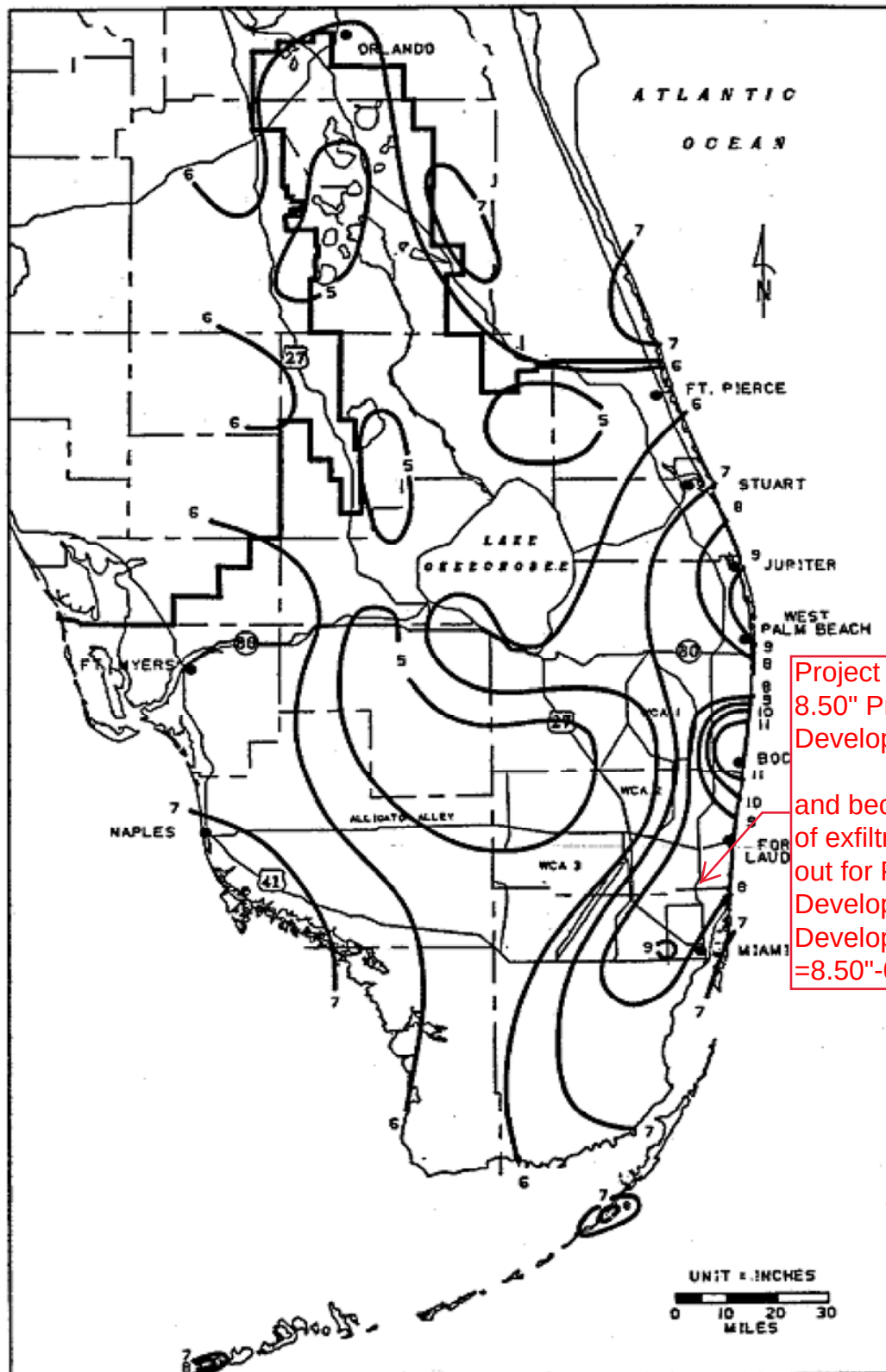


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

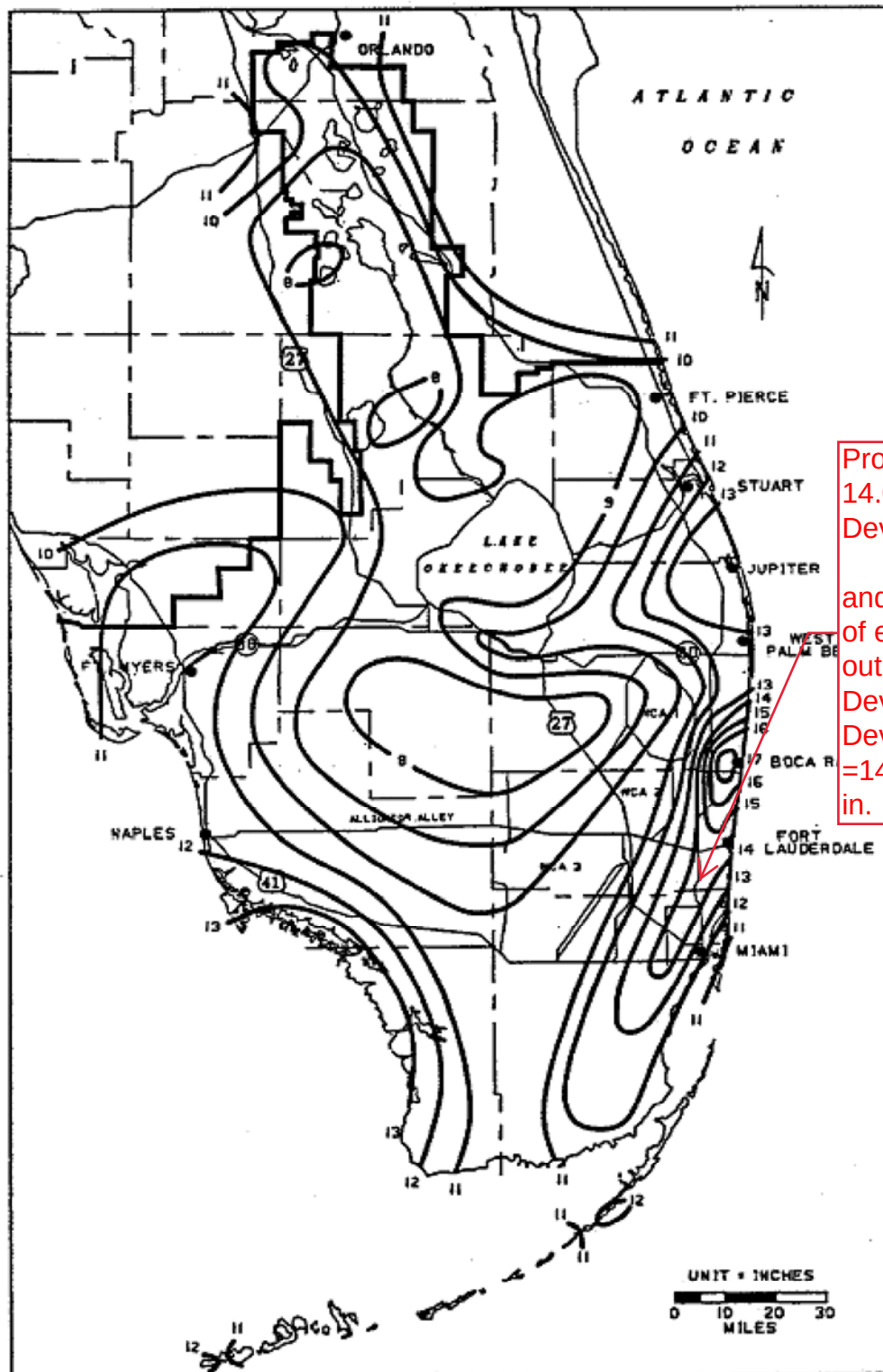


FIGURE C-8. 3-DAY RAINFALL: 25-YEAR RETURN PERIOD

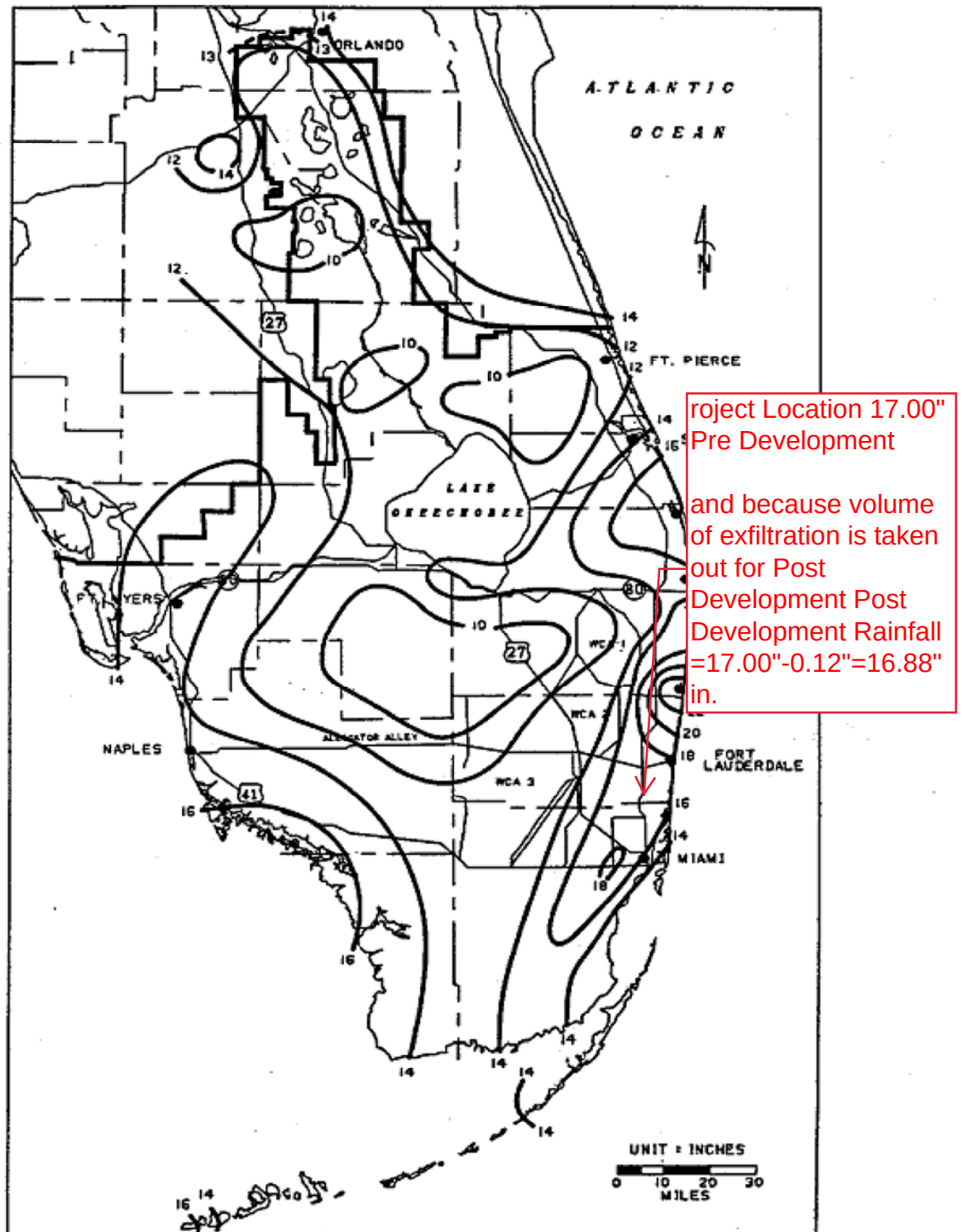


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD

Exhibit E
FEMA Map

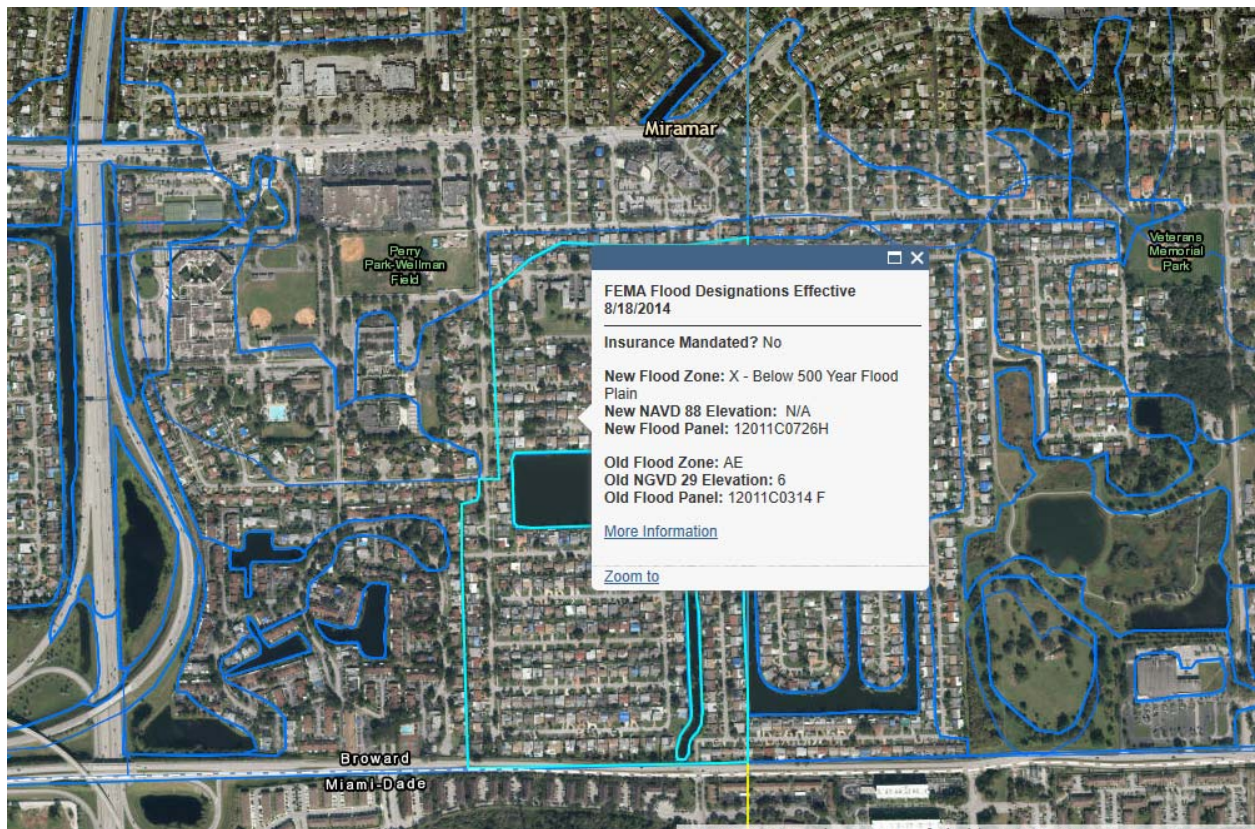


Exhibit F
Pre Improvement Drainage Map



NOT TO SCALE

DRAINAGE LEGEND:

- EXISTING DRAINAGE MANHOLE
- EXISTING DRAINAGE STRUCTURE
- EXISTING DRAINAGE PIPE
- - - BASIN BOUNDARY
- W10-19 OVERLAND WEIR NAME LABEL
- OVERLAND WEIR BETWEEN BASINS

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DESIGNED BY	NAME	DATE	DRAWN BY					NAME	DATE	DM-1
						JAL	JAL	3/20/19	JAL					JAL	3/20/19	
						CHECKED BY	PJG	###	CHECKED BY					DRT	###	
						SUPERVISED BY: PJG										

Exhibit G
Post Improvement Drainage Map



- DRAINAGE LEGEND:**
- EXISTING DRAINAGE MANHOLE
 - EXISTING DRAINAGE STRUCTURE
 - EXISTING DRAINAGE PIPE
 - - - BASIN BOUNDARY
 - PROPOSED DRAINAGE PIPE
 - PROPOSED DRAINAGE PIPE WITH EXFILTRATION TRENCH
 - PROPOSED CATCH BASIN
 - PROPOSED DRAINAGE MANHOLE

TWO 54" 96 LF OUTFALL PIPES
I.E. = (-)3.05

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DATE	BY	DESCRIPTION			DATE	BY	DESCRIPTION							DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE	DM-2
SUPERVISED BY: P.J.G																				

CALCULATIONS



**CRAIN THOMPSON
& ASSOCIATES INC.**
Engineers
Planners
Surveyors
Landscape Architects

Date: 4/23/2020
Project: MIRAMAR PHASE IV
Project No: 17-0015

Calculated By: LZG
Checked By: PJG

Land Use Table

Description	Area	Percentage
Building Area (Ac)	90.54 acres	30.00%
Green Area (Ac)	86.25 acres	28.58%
Hard Pavement (Ac)	99.40 acres	32.94%
Pervious Pavement (Ac)	0.61 acres	0.20%
Lake Water Surface (Ac)	24.99 acres	8.28%
Total Area(Ac)	301.79 acres	100.00%

HISTORIC MIRAMAR DRAINAGE PHASE IV

WATER QUALITY CALCULATIONS

I. GIVEN:

A. Acreages

- | | | | |
|----|--------------------|---|--------------|
| 1. | Project Area Total | = | 301.79 acres |
| 2. | Impervious | | |
| | a. Building (roof) | = | 90.54 acres |
| | b. Hard Pavement | = | 124.39 acres |
| 3. | Pervious Green | = | 86.25 acres |
| 4. | Pervious Pavement | = | 0.61 acres |

B. Minimum Elevations

- | | | |
|----|--------|----------------------|
| 1. | Floors | = Existing Elevation |
|----|--------|----------------------|

C. Zoning: "Residential"

D. Allowable Discharge: Existing Discharge

E. Water Level Elevations

- | | | | |
|----|--------------------------------|---|-----------|
| 1. | Average wet season water table | = | 1.00 NAVD |
|----|--------------------------------|---|-----------|

F. Design storm rainfall amounts

Assume 3.30 acre-ft volume provided in r-tanks and exfiltration is reduced from site rainfall.

$(4.48 \text{ Acre-ft} / 301.79 \text{ Acres}) = .0148 \text{ ft} \times 12 \text{ in/ft} = 0.18 \text{ inches}$

- | | | |
|----|----------------------------------|--|
| 1. | (10 yr - 24 hr rainfall) | = 8.5 inches - .12 inches = 8.38 inches |
| 2. | Design (25 yr - 72 hr rainfall) | = 14.00 inches - .12 inches = 13.88 inches |
| 3. | Floors (100 yr - 72 hr rainfall) | = 17.00 inches - .12 inches = 16.88 inches |

II. DESIGN CRITERIA:

A. Quality

1. The site is primarily "Residential". A minimum of 1 inch over the site, or 2.5" times the percent impervious of water quality treatment shall be provided (whichever is greater)

B. Quantity

1. Roads
 - a. Pavement areas are either existing or to be restored in place at pipe installation.
 - b. Shall be at least 2 ft above the control elevation of 1.00 NAVD.
2. First floor elevations are existing to remain.

III. COMPUTATIONS:

- A. Compute the first inch of runoff from the entire developed site.

$$= 1 \text{ in.} \times 301.79 \text{ acres} \times 1 \text{ ft}/12 \text{ in}$$

$$= \underline{25.15 \text{ ac-ft}} \text{ for the first inch of runoff}$$

- B. Compute 2.5 in time the percentage of imperviousness.

1. Site area, for water quality pervious/impervious calculations only

$$= \text{Total project} - \text{Roof Area} - \text{Lake Area}$$

$$= 301.79 \text{ ac} - 90.54 \text{ ac} - 24.99$$

$$= \underline{186.26 \text{ acre}} \text{ site area, for water quality pervious/impervious}$$

2. Impervious area, for water quality pervious/impervious calculations only

$$= (\text{Site area for water quality pervious/impervious}) - \text{pervious}$$

$$= 186.26 \text{ ac} - 86.86 \text{ ac}$$

$$= \underline{99.40 \text{ ac}} \text{ impervious area, for water quality pervious/impervious}$$

3. Percentage of imperviousness for water quality

$$\frac{\text{Impervious area for water quality}}{\text{Site area for water quality}} \times 100\%$$

$$= 99.40 \text{ ac} / 186.26 \text{ ac}$$

$$= \underline{53.37\%} \text{ impervious}$$

4. For 2.5 time the percentage impervious

$$= 2.5 \text{ in.} \times 0.5337$$

$$= \underline{1.33 \text{ inches}} \text{ to be treated}$$

5. Compute volume required for quality detention

$$= \text{inches to be treated} \times \text{total site area}$$

$$= 1.33 \text{ inches} \times 301.79 \text{ ac (total site)} \times 1 \text{ ft}/12 \text{ in}$$

$$= \underline{33.45 \text{ ac-ft}}$$

However, since the project is an improvement project that is not for construction of roads or a development site but simply a drainage improvement project for addition of water quality to the drainage system via exfiltration trench and swales then there should be no minimum required volume as long as it is a measurable improvement. The proposed exfiltration trench provides 3.08 ac-ft of water quality volume and the proposed swale system connected to the trench provides 1.52 ac-ft of water quality volume. The result is a net improvement of 4.60 ac-ft of water quality volume for the project area.



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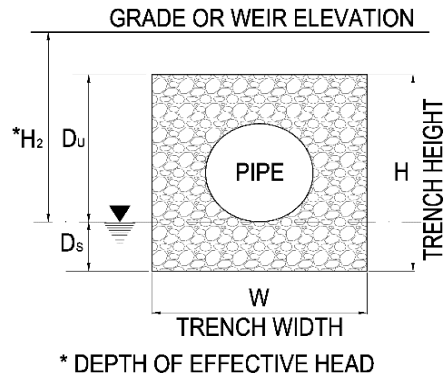
Date: 7/7/2020
Project: MIRAMAR PHASE IV
Project No: 17-0015

Calculated By: LZG
Checked By: PJG

Exfiltration Trench Length Calculations for Trench with no Outfall

K-Values†	
Test Hole #	(cfs/ft ² /ft hd)
P-1	1.57E-04
P-2	1.64E-04
P-3	1.80E-04
P-4	1.57E-04
P-5	1.52E-04
P-6	1.35E-04
P-7	1.80E-04
P-8	1.31E-04
K _{AVG}	1.57E-04

Trench:



Description of Elevations	Elevations (NAVD)
Grade	4.50
No outfall so assume weir=Grade	4.50
Top of Trench	2.00
Seasonal High Water Table	1.00
Bottom of Trench	-4.00

Design Parameters

Factor of Safety 2
Water Quality Volume (V_{WQ}) 14.34 Acre-Inches
% of WQ Required 50% Dry/Wet Retention

Trench Properties	
H ₂ =	3.50 Ft.
W =	6.00 Ft.
D _u =	1.00 Ft.
D _s =	5.00 Ft.
H = D _u + D _s =	6.00 Ft.

Formula Used: Conservative

$$L = \frac{F.S.(V_{WQ})(\%WQ)}{K * [(2 * H * D_u) - D_u^2 + (2 * H * D_s)] + [1.39 * 10^{-4}] * (W * D_u)}$$

Trench Length for Water Quality Requirements:

L_{WQ} = 1972 Feet

Total Trench Length Provided:

L_{PROVIDED} = 1973 Feet

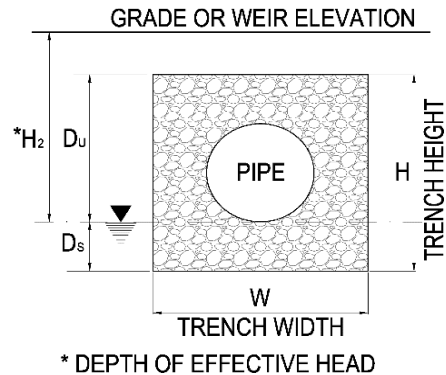
Water Quality Provided in ExfiltrationTrench=

1.20 ac-ft = 0.05 inches over project site

Exfiltration Trench Length Calculations for trench with outfall and weir

K-Values†	
Test Hole #	(cfs/ft ² /ft hd)
P-1	1.57E-04
P-2	1.64E-04
P-3	1.80E-04
P-4	1.57E-04
P-5	1.52E-04
P-6	1.35E-04
P-7	1.80E-04
P-8	1.31E-04
K _{AVG}	1.57E-04

Trench:



Description of Elevations	Elevations (NAVD)
Grade	4.50
Weir	2.00
Top of Trench	2.50
Seasonal High Water Table	1.00
Bottom of Trench	-3.50

Design Parameters

Factor of Safety 2
Water Quality Volume (V_{WQ}) 22.60 Acre-Inches
% of WQ Required 50% Dry/Wet Retention

Trench Properties	
H ₂ =	1.00 Ft.
W =	6.00 Ft.
D _u =	1.50 Ft.
D _s =	4.50 Ft.
H = D _u + D _s =	6.00 Ft.

Formula Used: Conservative

$$L = \frac{F.S.(V_{WQ})(\%WQ)}{K * [(2 * H * D_u) - D_u^2 + (2 * H * D_s)] + [1.39 * 10^{-4}] * (W * D_u)}$$

Trench Length for Water Quality Requirements:

L_{WQ} = 8124 Feet

Total Trench Length Provided:

L_{PROVIDED} = 8125 Feet

Water Quality Provided in ExfiltrationTrench=

1.88 ac-ft = 0.07 inches over project site



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Landscape Architects

Date: 4/23/2020
Project: MIRAMAR PHASE IV
Project No: 17-0015

Calculated By: LZG
Checked By: PJG

Water Quality Swale Volume Calculations

For Volume Assume Typical Swale 8' wide 6" depth

Basin Name	Swale Length (ft)	Volume (cf)
1	2000	4000
2	8309	16618
3	2096	4192
4	724	1448
5	778	1556
6	1860	3720
7	1667	3334
8	519	1038
9	3840	7680
10	2428	4856
11	839	1678
12	1118	2236
13	1067	2134
14	1596	3192
15	644	1288
16	854	1708
17	359	718
18	548	1096
19	1283	2566
20	572	1144

Total Swale Volume Provided:

**66202 cu-ft
1.52 ac-ft**



Stage Area Storage Table

Basin No. 1

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
4.00		5.27	1.32
4.50		10.54	5.27
6.00		26.36	32.95
6.50		31.63	47.44
7.00	15.8	36.90	64.58

Basin No. 2

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.20		0.00	0.00
3.50		3.67	0.55
4.00		9.79	3.92
4.50		15.91	10.34
6.00		34.26	47.97
6.50		40.38	66.63
7.00	19.94	46.50	88.35

Basin No. 3

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.60		0.00	0.00
4.00		0.91	0.18
4.50		2.04	0.92
6.00		5.44	6.52
6.50		6.57	9.52
7.00	3.3	7.70	13.09

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)



Stage Area Storage Table

Basin No. 4

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.90		0.00	0.00
4.00		0.09	0.00
4.50		0.54	0.16
6.00		1.89	1.98
6.50		2.34	3.04
7.00	1.2	2.79	4.32

Basin No. 5

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.70		0.00	0.00
4.00		0.25	0.04
4.50		0.77	0.29
6.00		1.93	2.32
6.50		2.31	3.38
7.00	1.17	2.70	4.63

Basin No. 6

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
4.00		1.14	0.29
4.50		2.28	1.14
6.00		5.71	7.13
6.50		6.85	10.27
7.00	3.43	7.99	13.98

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)



Stage Area Storage Table

Basin No. 7

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.60		0.00	0.00
4.00		0.67	0.13
4.50		1.51	0.68
6.00		4.02	4.83
6.50		4.86	7.05
7.00	2.46	5.70	9.69

Basin No. 8

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.80		0.00	0.00
4.00		0.21	0.02
4.50		0.74	0.26
6.00		2.31	2.54
6.50		2.84	3.83
7.00	1.44	3.36	5.38

Basin No. 9

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.90		0.00	0.00
4.00		0.48	0.02
4.50		2.88	0.86
6.00		10.07	10.57
6.50		12.46	16.20
7.00	6.37	14.86	23.03

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)



Stage Area Storage Table

Basin No. 10

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.80		0.00	0.00
4.00		0.36	0.04
4.50		1.26	0.44
6.00		3.95	4.35
6.50		4.85	6.55
7.00	2.46	5.75	9.20

Basin No. 11

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.70		0.00	0.00
4.00		0.30	0.04
4.50		0.80	0.32
6.00		2.29	2.63
6.50		2.78	3.90
7.00	1.40	3.28	5.41

Basin No. 12

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.70		0.00	0.00
4.00		0.48	0.07
4.50		1.27	0.51
6.00		3.65	4.19
6.50		4.44	6.21
7.00	2.24	5.23	8.63

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)



Stage Area Storage Table

Basin No. 13

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.80		0.00	0.00
4.00		0.27	0.03
4.50		0.93	0.32
6.00		2.92	3.21
6.50		3.58	4.83
7.00	1.82	4.24	6.78

Basin No. 14

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
4.00		0.88	0.22
4.50		1.77	0.88
6.00		4.41	5.52
6.50		5.30	7.95
7.00	2.65	6.18	10.82

Basin No. 15

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
4.00		0.63	0.16
4.50		1.26	0.63
6.00		3.14	3.93
6.50		3.77	5.66
7.00	1.88	4.40	7.70

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)



Stage Area Storage Table

Basin No. 16

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
4.00		0.82	0.21
4.50		1.64	0.82
6.00		4.11	5.13
6.50		4.93	7.39
7.00	2.46	5.75	10.06

Basin No. 17

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.20		0.00	0.00
3.50		0.13	0.02
4.00		0.34	0.14
4.50		0.55	0.36
6.00		1.19	1.67
6.50		1.41	2.32
7.00	0.70	1.62	3.08

Basin No. 18

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.70		0.00	0.00
4.00		0.20	0.03
4.50		0.54	0.22
6.00		1.55	1.79
6.50		1.89	2.65
7.00	0.95	2.23	3.68

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)



Stage Area Storage Table

Basin No. 19

Stage Elevation (NAVD)	Lake Surface (Acres)	Rear Yard (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.70		0.00	0.00
4.00		0.43	0.06
4.50		1.15	0.46
6.00		3.31	3.81
6.50		4.03	5.64
7.00	2.04	4.75	7.84

Basin No. 20

Stage Elevation (NAVD)	Building Area (Acres)	Paved/Green Area (Acres)	Total Storage (Ac-ft)
1.00		0.00	0.00
1.50		0.00	0.00
2.00		0.00	0.00
2.50		0.00	0.00
3.00		0.00	0.00
3.50		0.00	0.00
3.80		0.00	0.00
4.00		0.22	0.02
4.50		0.75	0.26
6.00		2.37	2.61
6.50		2.91	3.93
7.00	1.48	3.45	5.52

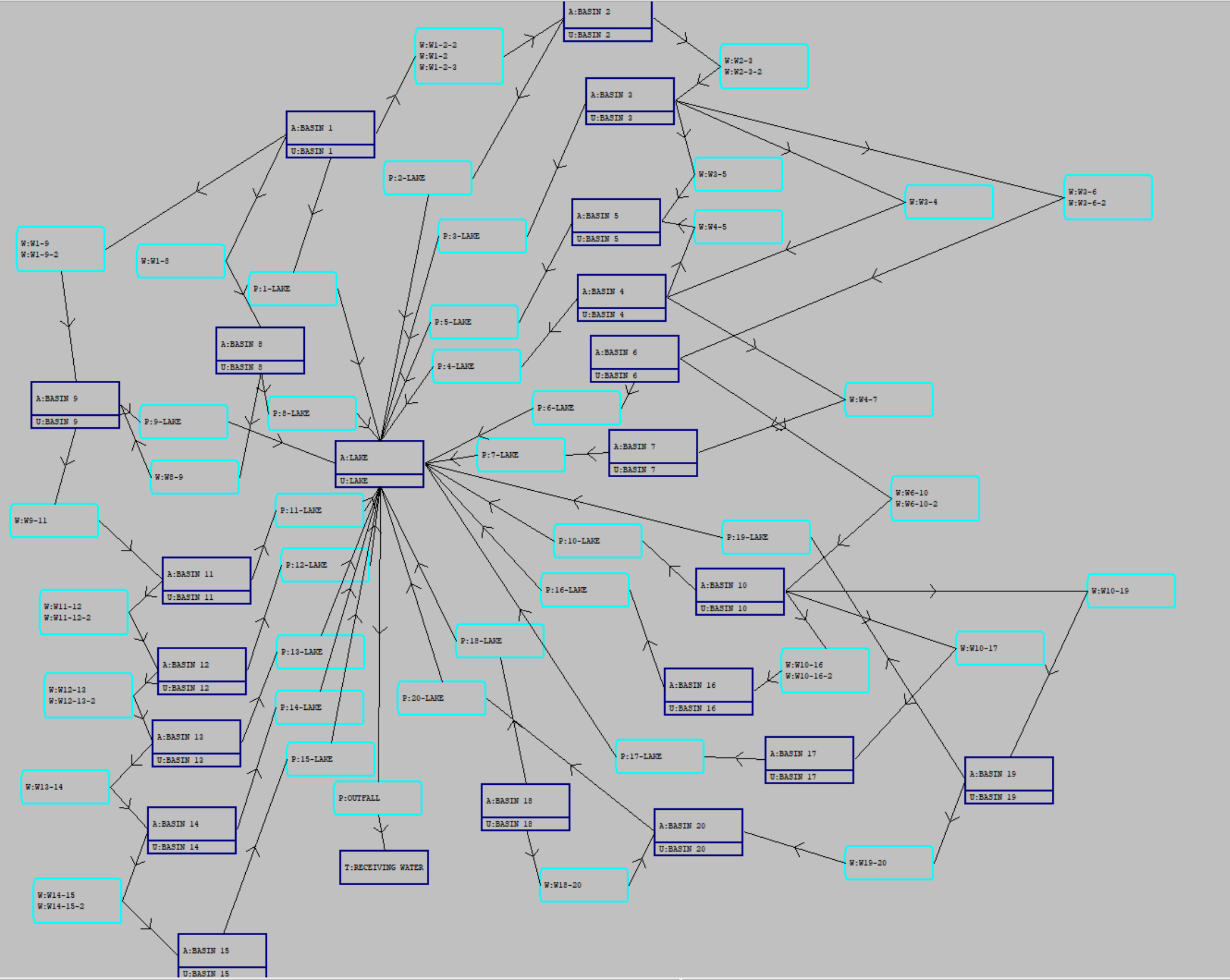
Basin LAKE/REAR YARD

Stage Elevation (NAVD)	Lake Surface (Acres)	Rear Yard (Acres)	Total Storage (Ac-ft)
1.00	24.99	0.00	0.00
1.50	24.99	0.00	12.50
2.00	24.99	0.00	24.99
2.50	24.99	0.00	37.49
3.00	24.99	3.72	50.91
3.50	24.99	6.53	65.97
3.70	24.99	7.65	72.38
4.00	24.99	9.34	82.43
4.50	24.99	12.15	100.30
6.00	24.99	20.58	162.33
6.50	24.99	23.39	185.82
7.00	24.99	26.20	210.71

(Note Exfiltration Storage is Excluded from tables above because Exfil. Volume is Removed from Rainfall in model)

(Note Building Acreage above shown only to indicate it is the area not used for storage)

PRE IMPROVEMENT NODAL DIAGRAM



=====
===== Basins =====
=====

Name: BASIN 1	Node: BASIN 1	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 25.00	
Area(ac): 52.650	Time Shift(hrs): 0.00	
Curve Number: 82.53	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 10	Node: BASIN 10	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 8.210	Time Shift(hrs): 0.00	
Curve Number: 85.57	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 11	Node: BASIN 11	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 4.680	Time Shift(hrs): 0.00	
Curve Number: 84.90	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 12	Node: BASIN 12	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 7.470	Time Shift(hrs): 0.00	
Curve Number: 86.58	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 13	Node: BASIN 13	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.060	Time Shift(hrs): 0.00	
Curve Number: 88.02	Max Allowable Q(cfs): 999999.000	

DCIA(%): 0.00

Name: BASIN 14	Node: BASIN 14	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 8.830	Time Shift(hrs): 0.00	
Curve Number: 86.90	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 15	Node: BASIN 15	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.280	Time Shift(hrs): 0.00	
Curve Number: 86.41	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 16	Node: BASIN 16	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 5.270	Time Shift(hrs): 0.00	
Curve Number: 84.47	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 17	Node: BASIN 17	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 2.320	Time Shift(hrs): 0.00	
Curve Number: 85.20	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 18	Node: BASIN 18	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 3.180	Time Shift(hrs): 0.00	
Curve Number: 85.77	Max Allowable Q(cfs): 999999.000	

DCIA(%): 0.00

Name: BASIN 19	Node: BASIN 19	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.790	Time Shift(hrs): 0.00	
Curve Number: 84.40	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 2	Node: BASIN 2	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 25.00	
Area(ac): 21.230	Time Shift(hrs): 0.00	
Curve Number: 83.36	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 20	Node: BASIN 20	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 4.930	Time Shift(hrs): 0.00	
Curve Number: 85.84	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 3	Node: BASIN 3	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 11.010	Time Shift(hrs): 0.00	
Curve Number: 87.50	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 4	Node: BASIN 4	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 3.990	Time Shift(hrs): 0.00	
Curve Number: 88.48	Max Allowable Q(cfs): 999999.000	

DCIA(%): 0.00

Name: BASIN 5	Node: BASIN 5	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 3.890	Time Shift(hrs): 0.00	
Curve Number: 84.19	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 6	Node: BASIN 6	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 11.420	Time Shift(hrs): 0.00	
Curve Number: 83.93	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 7	Node: BASIN 7	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 8.190	Time Shift(hrs): 0.00	
Curve Number: 84.15	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 8	Node: BASIN 8	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 4.800	Time Shift(hrs): 0.00	
Curve Number: 89.11	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 9	Node: BASIN 9	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 15.00	
Area(ac): 21.230	Time Shift(hrs): 0.00	
Curve Number: 86.38	Max Allowable Q(cfs): 999999.000	

DCIA(%): 0.00

Name: LAKE
Group: BASE

Node: LAKE
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 51.180
Curve Number: 90.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 10.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

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Nodes
=====

Name: BASIN 1
Group: BASE
Type: Stage/Area

Base Flow(cfs): 0.000

Init Stage(ft): 1.000
Warn Stage(ft): 0.000

Stage(ft)	Area(ac)
0.000	0.0000
1.000	0.0001
3.500	0.0002
7.000	39.9000

Name: BASIN 10
Group: BASE
Type: Stage/Area

Base Flow(cfs): 0.000

Init Stage(ft): 1.000
Warn Stage(ft): 0.000

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	6.2000

Name: BASIN 11
Group: BASE
Type: Stage/Area

Base Flow(cfs): 0.000

Init Stage(ft): 1.000
Warn Stage(ft): 0.000

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	6.1700

Name: BASIN 12
Group: BASE
Type: Stage/Area

Base Flow(cfs): 0.000

Init Stage(ft): 1.000
Warn Stage(ft): 0.000

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	4.8500

Name: BASIN 13	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	3.6100

Name: BASIN 14	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	5.6800

Name: BASIN 15	Base Flow(cfs): 0.000	Init Stage(ft): 0.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	3.9300

Name: BASIN 16	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	3.8400

Name: BASIN 17	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.200	0.0002
7.000	1.7300

Name: BASIN 18	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	2.3000

Name: BASIN 19	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	4.8900

Name: BASIN 2	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.200	0.0002
7.000	51.1300

Name: BASIN 20	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	3.3900

Name: BASIN 3	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.600	0.0002
7.000	7.0700

Name: BASIN 4	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.900	0.0002
7.000	2.4000

Name: BASIN 5	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	2.9100

Name: BASIN 6	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	8.5700

Name: BASIN 7	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.600	0.0002
7.000	6.1700

Name: BASIN 8	Base Flow(cfs): 0.000	Init Stage(ft): 0.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	2.6900

Name: BASIN 9 Base Flow(cfs): 0.000 Init Stage(ft): 0.000
 Group: BASE Warn Stage(ft): 0.000
 Type: Stage/Area

Stage(ft)	Area(ac)
1.000	0.0001
3.900	0.0002
7.000	14.1200

Name: LAKE Base Flow(cfs): 0.000 Init Stage(ft): 1.000
 Group: BASE Warn Stage(ft): 0.000
 Type: Stage/Area

Stage(ft)	Area(ac)
1.000	24.9800
3.000	28.7000
7.000	51.1800

Name: RECEIVING WATER Base Flow(cfs): 0.000 Init Stage(ft): 1.000
 Group: BASE Warn Stage(ft): 0.000
 Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	1.000
20.00	2.000
60.00	3.500
72.00	3.500
144.00	1.000

=====
 === Cross Sections ===
 =====

Name: W1-2 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.100	0.030000
10.000	3.800	0.030000
23.000	3.900	0.030000
34.000	4.100	0.030000
44.000	3.700	0.030000

63.000	3.900	0.030000
70.000	4.000	0.030000

Name: W1-2-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
-----	-----	-----
0.000	4.700	0.030000
7.000	4.700	0.030000
14.000	4.700	0.030000
25.000	4.900	0.030000
36.000	4.800	0.030000
43.000	4.800	0.030000
50.000	4.800	0.030000

Name: W1-2-3 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
-----	-----	-----
0.000	4.300	0.030000
7.000	4.300	0.030000
14.000	4.300	0.030000
25.000	4.300	0.030000
36.000	4.100	0.030000
43.000	4.100	0.030000
50.000	4.100	0.030000

Name: W1-8 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
-----	-----	-----
0.000	4.000	0.030000
29.000	3.800	0.030000
55.000	4.400	0.030000

Name: W1-9 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
-----	-----	-----
0.000	6.000	0.030000
7.000	5.800	0.030000
14.000	6.000	0.030000
25.000	6.200	0.030000
36.000	5.800	0.030000
43.000	5.700	0.030000
50.000	6.000	0.030000

Name: W1-9-2 Group: BASE

0.000	4.200	0.030000
7.000	4.100	0.030000
14.000	4.000	0.030000
25.000	4.300	0.030000
36.000	4.000	0.030000
43.000	4.100	0.030000
50.000	4.300	0.030000

Name: W11-12 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
70.000	4.200	0.030000

Name: W11-12-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
12.000	4.100	0.030000
23.000	4.100	0.030000
34.000	4.300	0.030000
45.000	3.900	0.030000
50.000	3.900	0.030000

Name: W12-13 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.700	0.030000
25.000	4.500	0.030000
57.000	4.700	0.030000
70.000	5.000	0.030000

Name: W12-13-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	4.000	0.030000
14.000	4.000	0.030000
25.000	4.100	0.030000
36.000	4.200	0.030000
43.000	4.300	0.030000
50.000	4.400	0.030000

Name: W13-14
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.600	0.030000
31.000	4.700	0.030000
42.000	4.500	0.030000
70.000	4.500	0.030000

Name: W13-14-2
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	3.700	0.030000
7.000	3.800	0.030000
14.000	4.000	0.030000
25.000	4.200	0.030000
36.000	3.900	0.030000
43.000	3.700	0.030000
50.000	4.000	0.030000

Name: W14-15
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	3.900	0.030000
7.000	4.000	0.030000
14.000	4.200	0.030000
25.000	4.600	0.030000
36.000	4.300	0.030000
43.000	4.300	0.030000
50.000	4.600	0.030000

Name: W14-15-2
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	3.500	0.030000
7.000	3.600	0.030000
14.000	3.800	0.030000
25.000	4.100	0.030000
36.000	3.800	0.030000
43.000	3.800	0.030000
50.000	3.800	0.030000

Name: W18-20
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	4.200	0.030000
14.000	4.300	0.030000
25.000	4.500	0.030000
36.000	3.900	0.030000
43.000	3.700	0.030000
50.000	3.800	0.030000

Name: W19-20	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N
0.000	3.700	0.030000
7.000	3.800	0.030000
14.000	3.900	0.030000
25.000	4.300	0.030000
36.000	4.100	0.030000
43.000	4.300	0.030000
50.000	4.300	0.030000

Name: W2-3	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N
0.000	4.500	0.030000
7.000	4.300	0.030000
15.000	4.100	0.030000
34.000	4.400	0.030000
56.000	4.100	0.030000
63.000	4.300	0.030000
70.000	4.500	0.030000

Name: W2-3-2	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N
0.000	4.500	0.030000
80.000	4.300	0.030000

Name: W3-4	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N
0.000	3.700	0.030000
7.000	3.700	0.030000
14.000	4.000	0.030000

25.000	4.200	0.030000
36.000	4.100	0.030000
43.000	4.200	0.030000
50.000	4.300	0.030000

Name: W3-5 Group: BASE
Encroachment: No

Name: W3-5 Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.400	0.030000
7.000	4.000	0.030000
14.000	4.000	0.030000
25.000	4.300	0.030000
36.000	4.100	0.030000
43.000	4.100	0.030000
50.000	4.000	0.030000

Name: W3-6 Group: BASE
Encroachment: No

Name: W3-6 Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	3.800	0.030000
14.000	3.900	0.030000
25.000	4.200	0.030000
36.000	4.000	0.030000
43.000	4.200	0.030000
50.000	4.500	0.030000

Name: W3-6-2 Group: BASE
Encroachment: No

Name: W3-6-2 Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
7.000	4.200	0.030000
14.000	4.400	0.030000
25.000	4.600	0.030000
36.000	4.300	0.030000
43.000	4.300	0.030000
50.000	4.500	0.030000

Name: W4-5 Group: BASE
Encroachment: No

Name: W4-5 Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	3.900	0.030000
7.000	4.000	0.030000
14.000	4.100	0.030000
25.000	4.400	0.030000

36.000	4.000	0.030000
43.000	3.900	0.030000
50.000	4.100	0.030000

Name: W4-7
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	3.900	0.030000
14.000	3.900	0.030000
25.000	4.200	0.030000
36.000	3.900	0.030000
43.000	3.900	0.030000
50.000	4.100	0.030000

Name: W6-10
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.700	0.030000
7.000	4.400	0.030000
14.000	4.100	0.030000
25.000	4.200	0.030000
36.000	4.000	0.030000
43.000	4.200	0.030000
50.000	4.500	0.030000

Name: W6-10-2
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.600	0.030000
7.000	4.400	0.030000
14.000	4.400	0.030000
25.000	4.400	0.030000
36.000	4.000	0.030000
43.000	4.200	0.030000
50.000	4.500	0.030000

Name: W8-9
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
27.000	3.900	0.030000
51.000	4.400	0.030000

Name: W9-11
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
44.000	4.500	0.030000
179.000	4.000	0.030000

==== Pipes =====

Name: 1-LAKE	From Node: BASIN 1	Length(ft): 114.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 15.00	15.00	Bend Loss Coef: 0.00
Rise(in): 15.00	15.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): 0.950	0.950	Inlet Ctrl Spec: Use dc
Manning's N: 0.024000	0.024000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 10-LAKE	From Node: BASIN 10	Length(ft): 110.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 18.00	18.00	Bend Loss Coef: 0.00
Rise(in): 18.00	18.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): 0.650	0.270	Inlet Ctrl Spec: Use dc
Manning's N: 0.012000	0.012000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 11-LAKE	From Node: BASIN 11	Length(ft): 125.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	

Geometry: Circular	Circular	Flow: Both
Span(in): 15.00	15.00	Entrance Loss Coef: 0.20
Rise(in): 15.00	15.00	Exit Loss Coef: 1.00
Invert(ft): 0.370	-0.860	Bend Loss Coef: 0.00
Manning's N: 0.024000	0.024000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

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-----
Name: 12-LAKE      From Node: BASIN 12      Length(ft): 116.00
Group: BASE        To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

      UPSTREAM      DOWNSTREAM
Geometry: Circular  Circular
Span(in): 15.00     15.00
Rise(in): 15.00     15.00
Invert(ft): 0.910   -0.720
Manning's N: 0.024000 0.024000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

-----
Name: 13-LAKE      From Node: BASIN 13      Length(ft): 118.00
Group: BASE        To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

      UPSTREAM      DOWNSTREAM
Geometry: Circular  Circular
Span(in): 15.00     15.00
Rise(in): 15.00     15.00
Invert(ft): 1.090   1.000
Manning's N: 0.024000 0.024000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 14-LAKE	From Node: BASIN 14	Length(ft): 113.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
UPSTREAM	DOWNSTREAM	Solution Algorithm: Automatic
Geometry: Circular	Circular	Flow: Both
Span(in): 15.00	15.00	Entrance Loss Coef: 0.20
Rise(in): 15.00	15.00	Exit Loss Coef: 1.00
Invert(ft): 0.250	-0.290	Bend Loss Coef: 0.00
Manning's N: 0.024000	0.024000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 15-LAKE	From Node: BASIN 15	Length(ft): 102.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
UPSTREAM	DOWNSTREAM	Solution Algorithm: Automatic
Geometry: Circular	Circular	Flow: Both
Span(in): 15.00	15.00	Entrance Loss Coef: 0.20
Rise(in): 15.00	15.00	Exit Loss Coef: 1.00
Invert(ft): -0.140	0.000	Bend Loss Coef: 0.00
Manning's N: 0.011000	0.011000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 16-LAKE	From Node: BASIN 16	Length(ft): 107.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
UPSTREAM	DOWNSTREAM	Solution Algorithm: Automatic
Geometry: Circular	Circular	Flow: Both
Span(in): 15.00	15.00	Entrance Loss Coef: 0.20
Rise(in): 15.00	15.00	Exit Loss Coef: 1.00
Invert(ft): 0.800	-0.130	Bend Loss Coef: 0.00
Manning's N: 0.012000	0.012000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


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-----
Name: 17-LAKE      From Node: BASIN 17      Length(ft): 122.00
Group: BASE        To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
      UPSTREAM      DOWNSTREAM
Geometry: Circular  Circular
Span(in): 15.00     15.00
Rise(in): 15.00     15.00
Invert(ft): 0.740   0.300
Manning's N: 0.012000 0.012000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

-----
Name: 18-LAKE      From Node: BASIN 18      Length(ft): 110.00
Group: BASE        To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
      UPSTREAM      DOWNSTREAM
Geometry: Circular  Circular
Span(in): 15.00     15.00
Rise(in): 15.00     15.00
Invert(ft): 0.790   0.700
Manning's N: 0.024000 0.024000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

-----
Name: 19-LAKE      From Node: BASIN 19      Length(ft): 112.00
Group: BASE        To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
      UPSTREAM      DOWNSTREAM
Geometry: Circular  Circular
Span(in): 18.00     18.00
Rise(in): 18.00     18.00
Invert(ft): 0.870   0.000
Manning's N: 0.012000 0.012000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

```

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name: 2-LAKE	From Node: BASIN 2	Length(ft): 40.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 30.00	30.00	Bend Loss Coef: 0.00
Rise(in): 30.00	30.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): -2.000	-2.150	Inlet Ctrl Spec: Use dc
Manning's N: 0.012000	0.012000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name: 20-LAKE	From Node: BASIN 20	Length(ft): 108.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 18.00	18.00	Bend Loss Coef: 0.00
Rise(in): 18.00	18.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): 0.860	-2.710	Inlet Ctrl Spec: Use dc
Manning's N: 0.024000	0.024000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:

Circular Concrete: Square edge w/ headwall

Name: 3-LAKE	From Node: BASIN 3	Length(ft): 119.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 15.00	15.00	Bend Loss Coef: 0.00
Rise(in): 15.00	15.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): 1.070	-1.050	Inlet Ctrl Spec: Use dc
Manning's N: 0.012000	0.012000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 4-LAKE          From Node: BASIN 4      Length(ft): 118.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
Geometry: Circular    UPSTREAM      DOWNSTREAM
Span(in): 15.00       15.00
Rise(in): 15.00       15.00
Invert(ft): 0.830     -0.020
Manning's N: 0.012000 0.012000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None
-----
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 5-LAKE          From Node: BASIN 5      Length(ft): 120.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
Geometry: Circular    UPSTREAM      DOWNSTREAM
Span(in): 15.00       15.00
Rise(in): 15.00       15.00
Invert(ft): 1.130     -0.090
Manning's N: 0.012000 0.012000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None
-----
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 6-LAKE          From Node: BASIN 6      Length(ft): 111.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
Geometry: Circular    UPSTREAM      DOWNSTREAM
Span(in): 24.00       24.00
Rise(in): 24.00       24.00
Entrance Loss Coef: 0.20
Exit Loss Coef: 1.00
-----
```

Invert(ft): -0.180	-0.280	Bend Loss Coef: 0.00
Manning's N: 0.024000	0.024000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 7-LAKE		From Node: BASIN 7	Length(ft): 121.00
Group: BASE		To Node: LAKE	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance	
Geometry: Circular	Circular	Solution Algorithm: Automatic	
Span(in): 15.00	15.00	Flow: Both	
Rise(in): 15.00	15.00	Entrance Loss Coef: 0.20	
Invert(ft): 1.160	1.000	Exit Loss Coef: 1.00	
Manning's N: 0.012000	0.012000	Bend Loss Coef: 0.00	
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw	
Bot Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc	
		Stabilizer Option: None	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 8-LAKE		From Node: BASIN 8	Length(ft): 125.00
Group: BASE		To Node: LAKE	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance	
Geometry: Circular	Circular	Solution Algorithm: Automatic	
Span(in): 15.00	15.00	Flow: Both	
Rise(in): 15.00	15.00	Entrance Loss Coef: 0.20	
Invert(ft): -0.280	-2.160	Exit Loss Coef: 1.00	
Manning's N: 0.024000	0.024000	Bend Loss Coef: 0.00	
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw	
Bot Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc	
		Stabilizer Option: None	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 9-LAKE		From Node: BASIN 9	Length(ft): 142.00
Group: BASE		To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance	

	UPSTREAM	DOWNSTREAM	Solution Algorithm: Automatic
Geometry:	Circular	Circular	Flow: Both
Span(in):	12.00	12.00	Entrance Loss Coef: 0.20
Rise(in):	12.00	12.00	Exit Loss Coef: 1.00
Invert(ft):	0.690	0.000	Bend Loss Coef: 0.00
Manning's N:	0.024000	0.024000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

-----
Name: OUTFALL          From Node: LAKE          Length(ft): 94.00
Group: BASE            To Node: RECEIVING WATER      Count: 2
                        Friction Equation: Average Conveyance
                        Solution Algorithm: Automatic
                        Flow: Both
                        Entrance Loss Coef: 0.50
                        Exit Loss Coef: 1.00
                        Bend Loss Coef: 0.00
                        Outlet Ctrl Spec: Use dc or tw
                        Inlet Ctrl Spec: Use dc
                        Stabilizer Option: None

      UPSTREAM          DOWNSTREAM
Geometry: Circular      Circular
Span(in): 54.00         54.00
Rise(in): 54.00         54.00
Invert(ft): -3.500      -3.500
Manning's N: 0.012000   0.012000
Top Clip(in): 0.000     0.000
Bot Clip(in): 0.000     0.000

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

=====
=== Weirs =====
=====

```

```

Name: W1-2          From Node: BASIN 1
Group: BASE         To Node: BASIN 2
Flow: Both          Count: 1
Type: Vertical: Mavis Geometry: Irregular

      XSec: W1-2
      Invert(ft): 3.700
      Control Elevation(ft): 3.700
      Struct Opening Dim(ft): 9999.00

      Bottom Clip(ft): 0.000
      Top Clip(ft): 0.000
      Weir Discharge Coef: 3.200
      Orifice Discharge Coef: 0.600

```

TABLE

```

-----
Name: W1-2-2        From Node: BASIN 1

```

Group: BASE To Node: BASIN 2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-2-2
 Invert(ft): 4.700
Control Elevation(ft): 4.700
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W1-2-3 From Node: BASIN 1
Group: BASE To Node: BASIN 2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-2-3
 Invert(ft): 4.100
Control Elevation(ft): 4.100
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W1-8 From Node: BASIN 1
Group: BASE To Node: BASIN 8
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-8
 Invert(ft): 3.800
Control Elevation(ft): 3.800
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W1-9 From Node: BASIN 1
Group: BASE To Node: BASIN 9
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-9
 Invert(ft): 5.700
Control Elevation(ft): 5.700
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000

Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W1-9-2 From Node: BASIN 1
Group: BASE To Node: BASIN 9
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-9-2
 Invert(ft): 4.100
Control Elevation(ft): 4.100
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-16 From Node: BASIN 10
Group: BASE To Node: BASIN 16
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W10-16
 Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-16-2 From Node: BASIN 10
Group: BASE To Node: BASIN 16
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W10-16-2
 Invert(ft): 3.600
Control Elevation(ft): 3.600
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-17 From Node: BASIN 10
Group: BASE To Node: BASIN 17
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W10-17
Invert(ft): 4.200
Control Elevation(ft): 4.200
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-19 From Node: BASIN 10
Group: BASE To Node: BASIN 19
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W10-19
Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W11-12 From Node: BASIN 11
Group: BASE To Node: BASIN 12
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W11-12
Invert(ft): 4.200
Control Elevation(ft): 4.200
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W11-12-2 From Node: BASIN 11
Group: BASE To Node: BASIN 12
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W11-12-2
Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W12-13 From Node: BASIN 12
Group: BASE To Node: BASIN 13
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W12-13
 Invert(ft): 4.500
Control Elevation(ft): 4.500
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W12-13-2 From Node: BASIN 12
Group: BASE To Node: BASIN 13
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W12-13-2
 Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W13-14 From Node: BASIN 13
Group: BASE To Node: BASIN 14
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W13-14
 Invert(ft): 4.500
Control Elevation(ft): 4.500
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W14-15 From Node: BASIN 14
Group: BASE To Node: BASIN 15
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W14-15
 Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W14-15-2 From Node: BASIN 14
Group: BASE To Node: BASIN 15
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W14-15-2
Invert(ft): 3.500
Control Elevation(ft): 3.500
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W18-20 From Node: BASIN 18
Group: BASE To Node: BASIN 20
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W18-20
Invert(ft): 3.700
Control Elevation(ft): 3.700
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W19-20 From Node: BASIN 19
Group: BASE To Node: BASIN 20
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W19-20
Invert(ft): 3.700
Control Elevation(ft): 3.700
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W2-3 From Node: BASIN 2
Group: BASE To Node: BASIN 3

Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W2-3
 Invert(ft): 4.100
Control Elevation(ft): 4.100
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W2-3-2 From Node: BASIN 2
Group: BASE To Node: BASIN 3
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W2-3-2
 Invert(ft): 4.500
Control Elevation(ft): 4.500
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W3-4 From Node: BASIN 3
Group: BASE To Node: BASIN 4
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W3-4
 Invert(ft): 3.700
Control Elevation(ft): 3.700
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W3-5 From Node: BASIN 3
Group: BASE To Node: BASIN 5
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W3-5
 Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200

Orifice Discharge Coef: 0.600

Name: W3-6 From Node: BASIN 3
Group: BASE To Node: BASIN 6
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W3-6
 Invert(ft): 3.800
Control Elevation(ft): 3.800
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W3-6-2 From Node: BASIN 3
Group: BASE To Node: BASIN 6
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W3-6-2
 Invert(ft): 4.200
Control Elevation(ft): 4.200
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W4-5 From Node: BASIN 4
Group: BASE To Node: BASIN 5
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W4-5
 Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W4-7 From Node: BASIN 4
Group: BASE To Node: BASIN 7
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W4-7

Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W6-10 From Node: BASIN 6
Group: BASE To Node: BASIN 10
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W6-10
Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W6-10-2 From Node: BASIN 6
Group: BASE To Node: BASIN 10
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W6-10-2
Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W8-9 From Node: BASIN 8
Group: BASE To Node: BASIN 9
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W8-9
Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

```

-----
Name: W9-11          From Node: BASIN 9
Group: BASE          To Node: BASIN 11
Flow: Both           Count: 1
Type: Vertical: Mavis Geometry: Irregular

      XSec: W9-11
      Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

      TABLE

      Bottom Clip(ft): 0.000
      Top Clip(ft): 0.000
      Weir Discharge Coef: 3.200
      Orifice Discharge Coef: 0.600

```

```

=====
=== Hydrology Simulations ===
=====

```

```

Name: 100yr
Filename: C:\Users\zgambale\Desktop\Miramar ICPR\ZACH ICPR\100yr.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Sfwmd72
Rainfall Amount(in): 17.00

Time(hrs)      Print Inc(min)
-----
144.000        15.00

```

```

-----
Name: 10yr
Filename: C:\Users\zgambale\Desktop\Miramar ICPR\ZACH ICPR\10yr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: SFWMD24
Rainfall Amount(in): 8.50

Time(hrs)      Print Inc(min)
-----
24.000         15.00

```

```

-----
Name: 25yr
Filename: C:\Users\zgambale\Desktop\Miramar ICPR\ZACH ICPR\25yr.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Sfwmd72
Rainfall Amount(in): 14.00

Time(hrs)      Print Inc(min)
-----
75.000         15.00

```

```

=====
=== Routing Simulations ===
=====

```

```

Name: 100yr          Hydrology Sim: 100yr

```

Filename: N:\clerical\JOBS\2015\15-0008-001-04 550 Building Parking Garage\Permits\BCEPD-Surface Water\100yr.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 144.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

144.000 15.000

Group Run

BASE Yes

Name: 10YR Hydrology Sim: 10yr
Filename: N:\clerical\JOBS\2015\15-0008-001-04 550 Building Parking Garage\Permits\BCEPD-Surface Water\10YR.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 48.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

48.000 15.000

Group Run

BASE Yes

Name: 25yr Hydrology Sim: 25yr
Filename: N:\clerical\JOBS\2015\15-0008-001-04 550 Building Parking Garage\Permits\BCEPD-Surface Water\25yr.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 75.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

75.000 15.000

Group	Run
-----	-----
BASE	Yes

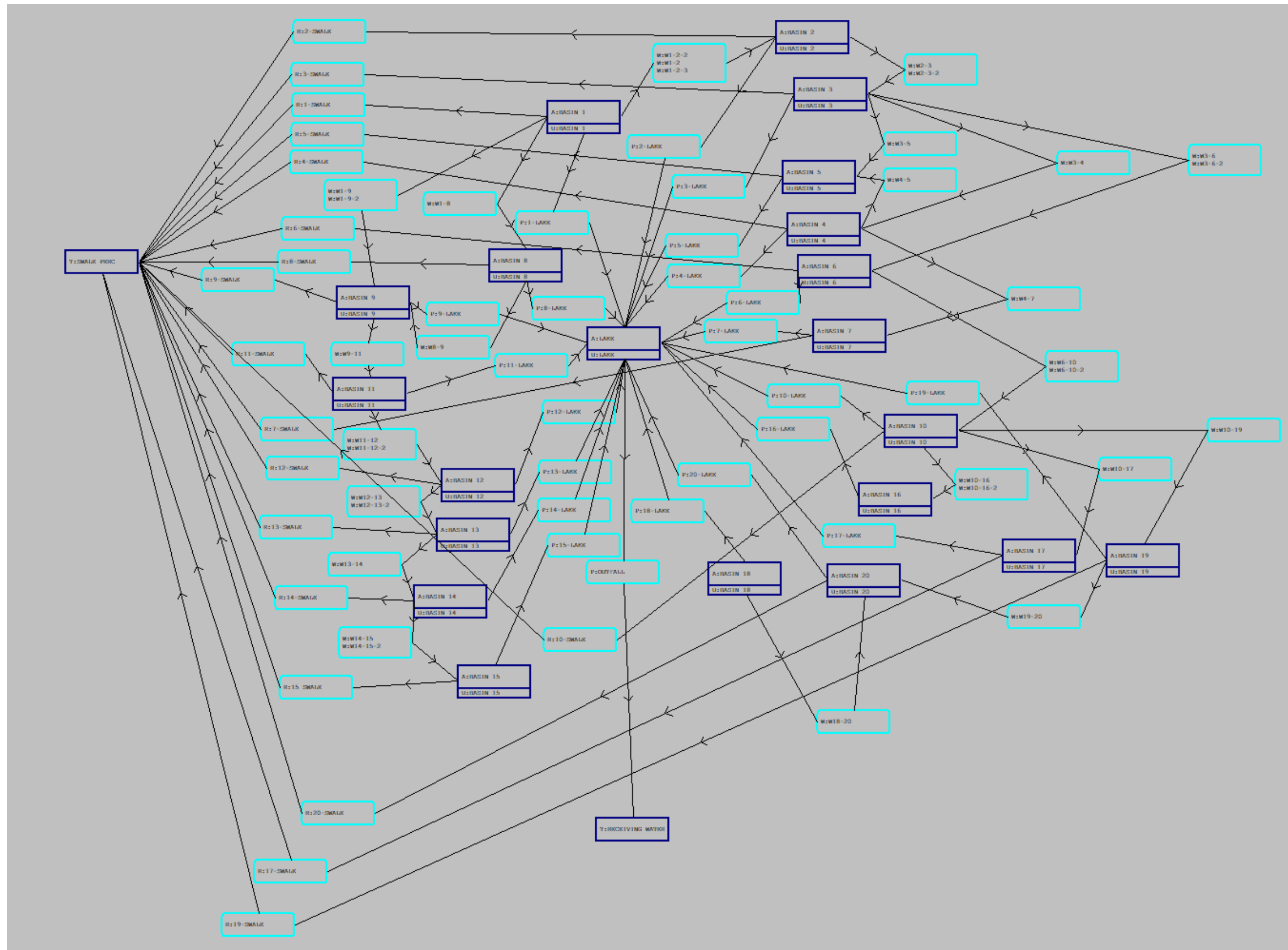
Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BASIN 1	BASE	10YR	13.14	4.796	0.000	-0.0149	595058	12.25	161.565	12.36	92.823
BASIN 10	BASE	10YR	12.43	4.662	0.000	-0.0089	67468	12.00	47.992	13.47	34.504
BASIN 11	BASE	10YR	12.98	4.804	0.000	-0.0089	47805	11.71	20.115	14.37	12.338
BASIN 12	BASE	10YR	12.70	4.807	0.000	-0.0107	76440	11.71	29.527	13.48	9.668
BASIN 13	BASE	10YR	12.60	4.819	0.000	-0.0112	58800	12.00	23.515	12.09	14.349
BASIN 14	BASE	10YR	12.54	4.842	0.000	-0.0086	103254	12.00	49.536	12.09	12.070
BASIN 15	BASE	10YR	12.54	4.843	0.000	-0.0162	73566	12.00	36.319	12.23	9.154
BASIN 16	BASE	10YR	12.44	4.664	0.000	-0.0175	83280	11.94	39.347	12.12	8.318
BASIN 17	BASE	10YR	12.43	4.656	0.000	-0.0142	27052	12.12	28.413	12.25	7.923
BASIN 18	BASE	10YR	12.42	4.681	0.000	-0.0105	28875	12.00	15.425	12.19	7.328
BASIN 19	BASE	10YR	12.43	4.671	0.000	-0.0215	60914	12.00	26.370	13.52	17.926
BASIN 2	BASE	10YR	13.25	4.751	0.000	-0.1066	826600	12.25	232.850	13.32	97.689
BASIN 20	BASE	10YR	12.42	4.678	0.000	-0.0089	41237	12.00	20.120	12.11	7.805
BASIN 3	BASE	10YR	13.16	4.684	0.000	-0.0110	106974	13.30	56.024	13.37	57.040
BASIN 4	BASE	10YR	13.16	4.675	0.000	-0.0050	30384	11.75	14.022	11.71	10.018
BASIN 5	BASE	10YR	13.16	4.676	0.000	-0.0172	34785	11.77	19.736	12.07	8.045
BASIN 6	BASE	10YR	12.44	4.652	0.000	-0.0333	114561	11.93	62.514	13.47	44.162
BASIN 7	BASE	10YR	13.17	4.672	0.000	-0.0173	78263	12.00	31.345	12.13	8.181
BASIN 8	BASE	10YR	13.11	4.798	0.000	-0.0050	45676	17.78	3.319	17.73	4.102
BASIN 9	BASE	10YR	13.10	4.804	0.000	-0.6900	188743	11.75	33.636	13.48	17.400
LAKE	BASE	10YR	48.00	3.045	0.000	0.0017	1261315	12.00	430.939	14.16	177.775
RECEIVING WATER	BASE	10YR	48.00	3.050	0.000	0.0008	21	14.16	177.775	0.00	0.000

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BASIN 1	BASE	25yr	61.78	5.201	0.000	0.0025	844748	60.25	197.967	60.89	64.259
BASIN 10	BASE	25yr	62.02	5.145	0.000	0.0047	113556	59.87	41.686	61.42	25.674
BASIN 11	BASE	25yr	61.82	5.204	0.000	0.0033	122467	61.21	7.405	68.75	4.549
BASIN 12	BASE	25yr	61.84	5.203	0.000	0.0031	96247	59.75	11.425	61.21	6.098
BASIN 13	BASE	25yr	61.84	5.203	0.000	-0.0059	68933	59.83	18.670	59.82	6.232
BASIN 14	BASE	25yr	61.86	5.201	0.000	0.0044	120276	59.84	47.321	61.21	6.039
BASIN 15	BASE	25yr	61.87	5.200	0.000	0.0071	83159	59.85	34.495	60.17	5.912
BASIN 16	BASE	25yr	62.03	5.144	0.000	0.0048	78579	59.98	29.885	62.16	5.346
BASIN 17	BASE	25yr	62.03	5.141	0.000	0.0050	38499	59.88	29.979	62.17	5.114
BASIN 18	BASE	25yr	62.05	5.130	0.000	0.0050	43436	60.00	19.208	60.31	7.817
BASIN 19	BASE	25yr	62.04	5.136	0.000	0.0050	92705	60.00	28.486	61.53	12.685
BASIN 2	BASE	25yr	61.87	5.185	0.000	0.0064	1163184	60.19	241.108	61.21	70.814
BASIN 20	BASE	25yr	62.04	5.132	0.000	0.0050	61475	60.00	23.884	60.21	4.959
BASIN 3	BASE	25yr	61.96	5.170	0.000	0.0040	142261	61.21	46.727	61.32	43.110
BASIN 4	BASE	25yr	61.92	5.169	0.000	0.0046	42803	59.75	13.098	63.48	15.930
BASIN 5	BASE	25yr	61.97	5.167	0.000	0.0050	56355	60.00	18.353	62.10	5.208
BASIN 6	BASE	25yr	62.00	5.157	0.000	0.0045	176717	59.76	56.491	61.41	32.667
BASIN 7	BASE	25yr	61.98	5.165	0.000	0.0042	123758	60.00	37.370	62.12	5.190
BASIN 8	BASE	25yr	61.80	5.202	0.000	0.0049	51356	74.00	3.254	73.96	3.697
BASIN 9	BASE	25yr	61.80	5.204	0.000	-0.6900	258733	59.72	23.198	61.21	5.696
LAKE	BASE	25yr	61.53	4.170	0.000	0.0015	1536602	60.00	421.825	61.53	154.023
RECEIVING WATER	BASE	25yr	60.00	3.500	0.000	0.0005	21	61.53	154.023	0.00	0.000

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BASIN 1	BASE	100yr	127.96	6.069	0.000	0.0044	1179788	60.00	249.369	60.81	66.993
BASIN 10	BASE	100yr	144.00	6.069	0.000	0.0049	177600	59.75	29.209	61.20	17.537
BASIN 11	BASE	100yr	109.30	6.076	0.000	0.0050	102856	132.56	34.341	109.30	30.234
BASIN 12	BASE	100yr	132.56	6.071	0.000	0.0047	163713	109.30	29.994	132.56	10.569
BASIN 13	BASE	100yr	109.30	6.070	0.000	0.0048	131020	59.73	13.348	61.16	3.941
BASIN 14	BASE	100yr	132.56	6.069	0.000	0.0047	197602	60.00	39.803	61.24	3.866
BASIN 15	BASE	100yr	127.96	6.069	0.000	0.0062	140685	60.00	37.341	60.15	3.447
BASIN 16	BASE	100yr	144.00	6.069	0.000	0.0045	183845	60.00	45.023	60.16	2.961
BASIN 17	BASE	100yr	144.00	6.069	0.000	0.0046	53283	60.00	15.651	60.15	2.847
BASIN 18	BASE	100yr	144.00	6.069	0.000	0.0050	69738	60.00	23.694	60.14	8.119
BASIN 19	BASE	100yr	144.00	6.069	0.000	0.0050	148538	59.75	24.470	61.31	7.096
BASIN 2	BASE	100yr	142.77	6.069	0.000	0.0069	1529247	60.08	223.290	61.16	45.997
BASIN 20	BASE	100yr	144.00	6.069	0.000	0.0049	106562	60.00	27.294	60.13	2.954
BASIN 3	BASE	100yr	144.00	6.069	0.000	0.0044	243567	61.04	40.009	61.22	30.145
BASIN 4	BASE	100yr	143.56	6.069	0.000	0.0048	85037	60.45	9.047	57.15	4.558
BASIN 5	BASE	100yr	144.00	6.069	0.000	0.0046	84435	60.00	19.596	60.67	2.748
BASIN 6	BASE	100yr	144.00	6.069	0.000	0.0046	255465	59.75	34.061	61.23	21.836
BASIN 7	BASE	100yr	144.00	6.069	0.000	0.0048	180304	60.00	40.953	60.60	2.744
BASIN 8	BASE	100yr	109.30	6.069	0.000	0.0044	103791	60.40	4.320	109.30	1.702
BASIN 9	BASE	100yr	132.56	6.070	0.000	-0.6900	453076	60.41	27.627	132.56	34.387
LAKE	BASE	100yr	142.77	6.069	0.000	0.0032	2001542	60.00	440.986	0.00	0.000
RECEIVING WATER	BASE	100yr	60.00	3.500	0.000	0.0006	0	0.00	0.000	0.00	0.000

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
OUTFALL	BASE	25yr	61.64	152.738	3.052	61.64	4.159	60.00	3.500

POST IMPROVEMENT NODAL DIAGRAM



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Basins
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Name: BASIN 1	Node: BASIN 1	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 25.00	
Area(ac): 52.650	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 10	Node: BASIN 10	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 8.210	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 11	Node: BASIN 11	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 4.680	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 12	Node: BASIN 12	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 7.470	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 13	Node: BASIN 13	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.060	Time Shift(hrs): 0.00	

Curve Number: 90.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN 14 Node: BASIN 14 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 8.830 Time Shift(hrs): 0.00
Curve Number: 90.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN 15 Node: BASIN 15 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 6.280 Time Shift(hrs): 0.00
Curve Number: 90.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN 16 Node: BASIN 16 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 5.270 Time Shift(hrs): 0.00
Curve Number: 90.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN 17 Node: BASIN 17 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 2.320 Time Shift(hrs): 0.00
Curve Number: 90.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN 18 Node: BASIN 18 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00

Area(ac): 3.180	Time Shift(hrs): 0.00
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00	

Name: BASIN 19	Node: BASIN 19	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.790	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 2	Node: BASIN 2	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 25.00	
Area(ac): 21.230	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 20	Node: BASIN 20	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 4.930	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 3	Node: BASIN 3	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 11.010	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 4	Node: BASIN 4	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	

Rainfall Amount(in): 0.000	Time of Conc(min): 10.00
Area(ac): 3.990	Time Shift(hrs): 0.00
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00	

Name: BASIN 5	Node: BASIN 5	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 3.890	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 6	Node: BASIN 6	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 11.420	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 7	Node: BASIN 7	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 8.190	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 8	Node: BASIN 8	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 4.800	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: BASIN 9	Node: BASIN 9	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	

Rainfall File:	Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000	Time of Conc(min): 15.00
Area(ac): 21.230	Time Shift(hrs): 0.00
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00	

Name: LAKE	Node: LAKE	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File:	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 51.180	Time Shift(hrs): 0.00	
Curve Number: 90.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

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Nodes
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Name: BASIN 1	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
0.000	0.0000
1.000	0.0001
3.500	0.0002
7.000	36.9000

Name: BASIN 10	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	5.7500

Name: BASIN 11	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	3.2800

Name: BASIN 12	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	5.2300

Name: BASIN 13	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	4.2400

Name: BASIN 14	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	6.1800

Name: BASIN 15	Base Flow(cfs): 0.000	Init Stage(ft): 0.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	4.4000

Name: BASIN 16	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.500	0.0002
7.000	5.7500

Name: BASIN 17	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.200	0.0002
7.000	1.6200

Name: BASIN 18	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	2.2300

Name: BASIN 19	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.700	0.0002
7.000	4.7500

Name: BASIN 2	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.200	0.0002
7.000	46.5000

Name: BASIN 20	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002

7.000	3.4500		

Name: BASIN 3	Base Flow(cfs): 0.000	Init Stage(ft): 1.000	
Group: BASE		Warn Stage(ft): 0.000	
Type: Stage/Area			
Stage(ft)	Area(ac)		

1.000	0.0001		
3.600	0.0002		
7.000	7.7000		

Name: BASIN 4	Base Flow(cfs): 0.000	Init Stage(ft): 1.000	
Group: BASE		Warn Stage(ft): 0.000	
Type: Stage/Area			
Stage(ft)	Area(ac)		

1.000	0.0001		
3.900	0.0002		
7.000	2.7900		

Name: BASIN 5	Base Flow(cfs): 0.000	Init Stage(ft): 1.000	
Group: BASE		Warn Stage(ft): 0.000	
Type: Stage/Area			
Stage(ft)	Area(ac)		

1.000	0.0001		
3.700	0.0002		
7.000	2.7000		

Name: BASIN 6	Base Flow(cfs): 0.000	Init Stage(ft): 1.000	
Group: BASE		Warn Stage(ft): 0.000	
Type: Stage/Area			
Stage(ft)	Area(ac)		

1.000	0.0001		
3.500	0.0002		
7.000	7.9900		

Name: BASIN 7	Base Flow(cfs): 0.000	Init Stage(ft): 1.000	
Group: BASE		Warn Stage(ft): 0.000	
Type: Stage/Area			
Stage(ft)	Area(ac)		

1.000	0.0001		

3.600	0.0002
7.000	5.7000

Name: BASIN 8	Base Flow(cfs): 0.000	Init Stage(ft): 0.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.800	0.0002
7.000	3.3600

Name: BASIN 9	Base Flow(cfs): 0.000	Init Stage(ft): 0.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	0.0001
3.900	0.0002
7.000	14.8600

Name: LAKE	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Stage/Area		

Stage(ft)	Area(ac)
1.000	24.9800
3.000	28.7000
7.000	51.1800

Name: RECEIVING WATER	Base Flow(cfs): 0.000	Init Stage(ft): 1.000
Group: BASE		Warn Stage(ft): 0.000
Type: Time/Stage		

Time(hrs)	Stage(ft)
0.00	1.000
20.00	2.000
60.00	3.500
72.00	3.500
144.00	1.000

Name: SWALE PERC	Base Flow(cfs): 0.000	Init Stage(ft): 0.000
Group: BASE		Warn Stage(ft): 0.000
Type: Time/Stage		

Time(hrs)	Stage(ft)
0.00	1.000
20.00	2.000
72.00	2.500
144.00	1.000
4000.00	1.000

=====
 === Cross Sections ===
 =====

Name: W1-2 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.100	0.030000
10.000	3.800	0.030000
23.000	3.900	0.030000
34.000	4.100	0.030000
44.000	3.700	0.030000
63.000	3.900	0.030000
70.000	4.000	0.030000

Name: W1-2-2 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.700	0.030000
7.000	4.700	0.030000
14.000	4.700	0.030000
25.000	4.900	0.030000
36.000	4.800	0.030000
43.000	4.800	0.030000
50.000	4.800	0.030000

Name: W1-2-3 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
7.000	4.300	0.030000
14.000	4.300	0.030000
25.000	4.300	0.030000
36.000	4.100	0.030000
43.000	4.100	0.030000
50.000	4.100	0.030000

Name: W1-8 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N

0.000	4.000	0.030000
29.000	3.800	0.030000
55.000	4.400	0.030000

Name: W1-9	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N

0.000	6.000	0.030000
7.000	5.800	0.030000
14.000	6.000	0.030000
25.000	6.200	0.030000
36.000	5.800	0.030000
43.000	5.700	0.030000
50.000	6.000	0.030000

Name: W1-9-2	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N

0.000	4.100	0.030000
96.000	4.600	0.030000
130.000	4.500	0.030000

Name: W10-16	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N

0.000	4.300	0.030000
7.000	4.000	0.030000
14.000	3.900	0.030000
25.000	4.500	0.030000
36.000	3.900	0.030000
43.000	4.000	0.030000
50.000	4.200	0.030000

Name: W10-16-2	Group: BASE
Encroachment: No	

Station(ft)	Elevation(ft)	Manning's N

0.000	4.100	0.030000
7.000	4.000	0.030000
14.000	4.000	0.030000
25.000	4.500	0.030000
36.000	4.000	0.030000

43.000	3.600	0.030000
50.000	3.700	0.030000

Name: W10-17 Group: BASE
Encroachment: No

Name: W10-17 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
7.000	4.300	0.030000
14.000	4.200	0.030000
25.000	4.500	0.030000
36.000	4.200	0.030000
43.000	4.300	0.030000
50.000	4.600	0.030000

Name: W10-19 Group: BASE
Encroachment: No

Name: W10-19 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.200	0.030000
7.000	4.100	0.030000
14.000	4.000	0.030000
25.000	4.300	0.030000
36.000	4.000	0.030000
43.000	4.100	0.030000
50.000	4.300	0.030000

Name: W11-12 Group: BASE
Encroachment: No

Name: W11-12 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
70.000	4.200	0.030000

Name: W11-12-2 Group: BASE
Encroachment: No

Name: W11-12-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
12.000	4.100	0.030000
23.000	4.100	0.030000
34.000	4.300	0.030000
45.000	3.900	0.030000
50.000	3.900	0.030000

Name: W12-13 Group: BASE
Encroachment: No

Name: W12-13 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.700	0.030000
25.000	4.500	0.030000
57.000	4.700	0.030000
70.000	5.000	0.030000

Name: W12-13-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	4.000	0.030000
14.000	4.000	0.030000
25.000	4.100	0.030000
36.000	4.200	0.030000
43.000	4.300	0.030000
50.000	4.400	0.030000

Name: W13-14 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.600	0.030000
31.000	4.700	0.030000
42.000	4.500	0.030000
70.000	4.500	0.030000

Name: W13-14-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	3.700	0.030000
7.000	3.800	0.030000
14.000	4.000	0.030000
25.000	4.200	0.030000
36.000	3.900	0.030000
43.000	3.700	0.030000
50.000	4.000	0.030000

Name: W14-15 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	3.900	0.030000

7.000	4.000	0.030000
14.000	4.200	0.030000
25.000	4.600	0.030000
36.000	4.300	0.030000
43.000	4.300	0.030000
50.000	4.600	0.030000

 Name: W14-15-2 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	3.500	0.030000
7.000	3.600	0.030000
14.000	3.800	0.030000
25.000	4.100	0.030000
36.000	3.800	0.030000
43.000	3.800	0.030000
50.000	3.800	0.030000

 Name: W18-20 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	4.200	0.030000
14.000	4.300	0.030000
25.000	4.500	0.030000
36.000	3.900	0.030000
43.000	3.700	0.030000
50.000	3.800	0.030000

 Name: W19-20 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	3.700	0.030000
7.000	3.800	0.030000
14.000	3.900	0.030000
25.000	4.300	0.030000
36.000	4.100	0.030000
43.000	4.300	0.030000
50.000	4.300	0.030000

 Name: W2-3 Group: BASE
 Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.500	0.030000

Name: W2-3-2 Group: BASE
Encroachment: No

Name: W3-4 Group: BASE
Encroachment: No

Name: W3-5 Group: BASE
Encroachment: No

Name: W3-6 Group: BASE
Encroachment: No

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50.000	4.500	0.030000
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Name: W3-6-2 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.300	0.030000
7.000	4.200	0.030000
14.000	4.400	0.030000
25.000	4.600	0.030000
36.000	4.300	0.030000
43.000	4.300	0.030000
50.000	4.500	0.030000

Name: W4-5 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	3.900	0.030000
7.000	4.000	0.030000
14.000	4.100	0.030000
25.000	4.400	0.030000
36.000	4.000	0.030000
43.000	3.900	0.030000
50.000	4.100	0.030000

Name: W4-7 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
7.000	3.900	0.030000
14.000	3.900	0.030000
25.000	4.200	0.030000
36.000	3.900	0.030000
43.000	3.900	0.030000
50.000	4.100	0.030000

Name: W6-10 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	4.700	0.030000
7.000	4.400	0.030000
14.000	4.100	0.030000
25.000	4.200	0.030000
36.000	4.000	0.030000
43.000	4.200	0.030000

50.000	4.500	0.030000
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Name: W6-10-2
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.600	0.030000
7.000	4.400	0.030000
14.000	4.400	0.030000
25.000	4.400	0.030000
36.000	4.000	0.030000
43.000	4.200	0.030000
50.000	4.500	0.030000

Name: W8-9
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
27.000	3.900	0.030000
51.000	4.400	0.030000

Name: W9-11
Encroachment: No

Group: BASE

Station(ft)	Elevation(ft)	Manning's N
0.000	4.000	0.030000
44.000	4.500	0.030000
179.000	4.000	0.030000

==== Operating Tables =====

Name: 1-SWALE
Type: Rating Curve
Function: Head vs. Discharge

Group: BASE

Head(ft)	Discharge(cfs)
4.00	4.63
5.00	4.63
6.00	4.63
7.00	4.63

Name: 10-SWALE
Type: Rating Curve
Function: Head vs. Discharge

Group: BASE

Head(ft)	Discharge(cfs)
4.00	5.62
5.00	5.62
6.00	5.62
7.00	5.62

Name: 11-SWALE Group: BASE
 Type: Rating Curve
 Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	0.00
5.00	0.00
6.00	0.00
7.00	0.00

Name: 12-SWALE Group: BASE
 Type: Rating Curve
 Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	2.59
5.00	2.59
6.00	2.59
7.00	2.59

Name: 13-SWALE Group: BASE
 Type: Rating Curve
 Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	2.47
5.00	2.47
6.00	2.47
7.00	2.47

Name: 14-SWALE Group: BASE
 Type: Rating Curve
 Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	3.69
5.00	3.69
6.00	3.69
7.00	3.69

Name: 15-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.49
5.00	1.49
6.00	1.49
7.00	1.49

Name: 16-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.98
5.00	1.98
6.00	1.98
7.00	1.98

Name: 17-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	0.83
5.00	0.83
6.00	0.83
7.00	0.83

Name: 18-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.27
5.00	1.27
6.00	1.27
7.00	1.27

Name: 19-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	2.97
5.00	2.97
6.00	2.97
7.00	2.97

Name: 2-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	19.23
5.00	19.23
6.00	19.23
7.00	19.23

Name: 20-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.32
5.00	1.32
6.00	1.32
7.00	1.32

Name: 3-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	4.85
5.00	4.85
6.00	4.85
7.00	4.85

Name: 4-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.68
5.00	1.68
6.00	1.68
7.00	1.68

Name: 5-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.80
5.00	1.80
6.00	1.80
7.00	1.80

Name: 6-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	4.31
5.00	4.31
6.00	4.31
7.00	4.31

Name: 7-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	3.86
5.00	3.86
6.00	3.86
7.00	3.86

Name: 8-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
4.00	1.20
5.00	1.20
6.00	1.20
7.00	1.20

Name: 9-SWALE Group: BASE
Type: Rating Curve
Function: Head vs. Discharge

Head(ft)	Discharge(cfs)
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4.00	8.89
5.00	8.89
6.00	8.89
7.00	8.89

=====
===== Pipes =====
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Name: 1-LAKE	From Node: BASIN 1	Length(ft): 114.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	Flow: Both
Geometry: Circular	Circular	Entrance Loss Coef: 0.20
Span(in): 15.00	15.00	Exit Loss Coef: 1.00
Rise(in): 15.00	15.00	Bend Loss Coef: 0.00
Invert(ft): 0.950	0.950	Outlet Ctrl Spec: Use dc or tw
Manning's N: 0.024000	0.024000	Inlet Ctrl Spec: Use dc
Top Clip(in): 0.000	0.000	Stabilizer Option: None
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 10-LAKE	From Node: BASIN 10	Length(ft): 110.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	Flow: Both
Geometry: Circular	Circular	Entrance Loss Coef: 0.20
Span(in): 18.00	18.00	Exit Loss Coef: 1.00
Rise(in): 18.00	18.00	Bend Loss Coef: 0.00
Invert(ft): 0.650	0.270	Outlet Ctrl Spec: Use dc or tw
Manning's N: 0.012000	0.012000	Inlet Ctrl Spec: Use dc
Top Clip(in): 0.000	0.000	Stabilizer Option: None
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 11-LAKE	From Node: BASIN 11	Length(ft): 125.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	Flow: Both
Geometry: Circular	Circular	Entrance Loss Coef: 0.20
Span(in): 15.00	15.00	Exit Loss Coef: 1.00
Rise(in): 15.00	15.00	Bend Loss Coef: 0.00
Invert(ft): 0.370	-0.860	Outlet Ctrl Spec: Use dc or tw
Manning's N: 0.024000	0.024000	

Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 12-LAKE	From Node: BASIN 12	Length(ft): 116.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 15.00	15.00	Bend Loss Coef: 0.00
Rise(in): 15.00	15.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): 0.910	-0.720	Inlet Ctrl Spec: Use dc
Manning's N: 0.024000	0.024000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 13-LAKE	From Node: BASIN 13	Length(ft): 118.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
UPSTREAM	DOWNSTREAM	Entrance Loss Coef: 0.20
Geometry: Circular	Circular	Exit Loss Coef: 1.00
Span(in): 15.00	15.00	Bend Loss Coef: 0.00
Rise(in): 15.00	15.00	Outlet Ctrl Spec: Use dc or tw
Invert(ft): 1.090	1.000	Inlet Ctrl Spec: Use dc
Manning's N: 0.024000	0.024000	Stabilizer Option: None
Top Clip(in): 0.000	0.000	
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 14-LAKE	From Node: BASIN 14	Length(ft): 113.00
Group: BASE	To Node: LAKE	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	

Geometry: Circular	Circular	Flow: Both
Span(in): 15.00	15.00	Entrance Loss Coef: 0.20
Rise(in): 15.00	15.00	Exit Loss Coef: 1.00
Invert(ft): 0.250	-0.290	Bend Loss Coef: 0.00
Manning's N: 0.024000	0.024000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 15-LAKE	From Node: BASIN 15
Group: BASE	To Node: LAKE
	Length(ft): 102.00
	Count: 1
	Friction Equation: Average Conveyance
	Solution Algorithm: Automatic
	Flow: Both
UPSTREAM	DOWNSTREAM
Geometry: Circular	Circular
Span(in): 15.00	15.00
Rise(in): 15.00	15.00
Invert(ft): -0.140	0.000
Manning's N: 0.011000	0.011000
Top Clip(in): 0.000	0.000
Bot Clip(in): 0.000	0.000
	Entrance Loss Coef: 0.20
	Exit Loss Coef: 1.00
	Bend Loss Coef: 0.00
	Outlet Ctrl Spec: Use dc or tw
	Inlet Ctrl Spec: Use dc
	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 16-LAKE	From Node: BASIN 16
Group: BASE	To Node: LAKE
	Length(ft): 107.00
	Count: 1
	Friction Equation: Average Conveyance
	Solution Algorithm: Automatic
	Flow: Both
UPSTREAM	DOWNSTREAM
Geometry: Circular	Circular
Span(in): 15.00	15.00
Rise(in): 15.00	15.00
Invert(ft): 0.800	-0.130
Manning's N: 0.012000	0.012000
Top Clip(in): 0.000	0.000
Bot Clip(in): 0.000	0.000
	Entrance Loss Coef: 0.20
	Exit Loss Coef: 1.00
	Bend Loss Coef: 0.00
	Outlet Ctrl Spec: Use dc or tw
	Inlet Ctrl Spec: Use dc
	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

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Name: 17-LAKE          From Node: BASIN 17      Length(ft): 122.00
Group: BASE            To Node: LAKE          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: Both
                                Entrance Loss Coef: 0.20
                                Exit Loss Coef: 1.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw
                                Inlet Ctrl Spec: Use dc
                                Stabilizer Option: None

UPSTREAM      DOWNSTREAM
Geometry: Circular
Span(in): 15.00    15.00
Rise(in): 15.00    15.00
Invert(ft): 0.740  0.300
Manning's N: 0.012000  0.012000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

-----
Name: 18-LAKE          From Node: BASIN 18      Length(ft): 110.00
Group: BASE            To Node: LAKE          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: Both
                                Entrance Loss Coef: 0.20
                                Exit Loss Coef: 1.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw
                                Inlet Ctrl Spec: Use dc
                                Stabilizer Option: None

UPSTREAM      DOWNSTREAM
Geometry: Circular
Span(in): 15.00    15.00
Rise(in): 15.00    15.00
Invert(ft): 0.790  0.700
Manning's N: 0.024000  0.024000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```

-----
Name: 19-LAKE          From Node: BASIN 19      Length(ft): 112.00
Group: BASE            To Node: LAKE          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: Both
                                Entrance Loss Coef: 0.20
                                Exit Loss Coef: 1.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw
                                Inlet Ctrl Spec: Use dc
                                Stabilizer Option: None

UPSTREAM      DOWNSTREAM
Geometry: Circular
Span(in): 18.00    18.00
Rise(in): 18.00    18.00
Invert(ft): 0.870  0.000
Manning's N: 0.012000  0.012000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 2-LAKE          From Node: BASIN 2      Length(ft): 40.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM              DOWNSTREAM
Geometry: Circular    Circular
Span(in): 30.00       30.00
Rise(in): 30.00       30.00
Invert(ft): -2.000    -2.150
Manning's N: 0.012000 0.012000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000
                                     Entrance Loss Coef: 0.20
                                     Exit Loss Coef: 1.00
                                     Bend Loss Coef: 0.00
                                     Outlet Ctrl Spec: Use dc or tw
                                     Inlet Ctrl Spec: Use dc
                                     Stabilizer Option: None
-----
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 20-LAKE         From Node: BASIN 20     Length(ft): 108.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM              DOWNSTREAM
Geometry: Circular    Circular
Span(in): 18.00       18.00
Rise(in): 18.00       18.00
Invert(ft): 0.860     -2.710
Manning's N: 0.024000 0.024000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000
                                     Entrance Loss Coef: 0.20
                                     Exit Loss Coef: 1.00
                                     Bend Loss Coef: 0.00
                                     Outlet Ctrl Spec: Use dc or tw
                                     Inlet Ctrl Spec: Use dc
                                     Stabilizer Option: None
-----
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 3-LAKE          From Node: BASIN 3      Length(ft): 119.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM              DOWNSTREAM
Geometry: Circular    Circular
Span(in): 15.00       15.00
Rise(in): 15.00       15.00
Invert(ft): 1.070     -1.050
Manning's N: 0.012000 0.012000
Top Clip(in): 0.000   0.000
Bot Clip(in): 0.000   0.000
                                     Entrance Loss Coef: 0.20
                                     Exit Loss Coef: 1.00
                                     Bend Loss Coef: 0.00
                                     Outlet Ctrl Spec: Use dc or tw
                                     Inlet Ctrl Spec: Use dc
                                     Stabilizer Option: None
-----
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 4-LAKE          From Node: BASIN 4      Length(ft): 118.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM              DOWNSTREAM
Geometry: Circular    Circular
Span(in): 15.00        15.00
Rise(in): 15.00        15.00
Invert(ft): 0.830      -0.020
Manning's N: 0.012000  0.012000
Top Clip(in): 0.000    0.000
Bot Clip(in): 0.000    0.000
                                     Entrance Loss Coef: 0.20
                                     Exit Loss Coef: 1.00
                                     Bend Loss Coef: 0.00
                                     Outlet Ctrl Spec: Use dc or tw
                                     Inlet Ctrl Spec: Use dc
                                     Stabilizer Option: None
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 5-LAKE          From Node: BASIN 5      Length(ft): 120.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM              DOWNSTREAM
Geometry: Circular    Circular
Span(in): 15.00        15.00
Rise(in): 15.00        15.00
Invert(ft): 1.130      -0.090
Manning's N: 0.012000  0.012000
Top Clip(in): 0.000    0.000
Bot Clip(in): 0.000    0.000
                                     Entrance Loss Coef: 0.20
                                     Exit Loss Coef: 1.00
                                     Bend Loss Coef: 0.00
                                     Outlet Ctrl Spec: Use dc or tw
                                     Inlet Ctrl Spec: Use dc
                                     Stabilizer Option: None
```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

```
-----
Name: 6-LAKE          From Node: BASIN 6      Length(ft): 111.00
Group: BASE           To Node: LAKE          Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM              DOWNSTREAM
Geometry: Circular    Circular
Span(in): 24.00        24.00
Rise(in): 24.00        24.00
                                     Entrance Loss Coef: 0.20
                                     Exit Loss Coef: 1.00
```

Invert(ft): -0.180	-0.280	Bend Loss Coef: 0.00
Manning's N: 0.024000	0.024000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in): 0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 7-LAKE	From Node: BASIN 7	Length(ft): 121.00
Group: BASE	To Node: LAKE	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 15.00	15.00	Flow: Both
Rise(in): 15.00	15.00	Entrance Loss Coef: 0.20
Invert(ft): 1.160	1.000	Exit Loss Coef: 1.00
Manning's N: 0.012000	0.012000	Bend Loss Coef: 0.00
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw
Bot Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 8-LAKE	From Node: BASIN 8	Length(ft): 125.00
Group: BASE	To Node: LAKE	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 15.00	15.00	Flow: Both
Rise(in): 15.00	15.00	Entrance Loss Coef: 0.20
Invert(ft): -0.280	-2.160	Exit Loss Coef: 1.00
Manning's N: 0.024000	0.024000	Bend Loss Coef: 0.00
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw
Bot Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: 9-LAKE	From Node: BASIN 9	Length(ft): 142.00
Group: BASE	To Node: LAKE	Count: 1

UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 12.00	12.00	Flow: Both
Rise(in): 12.00	12.00	Entrance Loss Coef: 0.20
Invert(ft): 0.690	0.000	Exit Loss Coef: 1.00
Manning's N: 0.024000	0.024000	Bend Loss Coef: 0.00
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw
Bot Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: OUTFALL	From Node: LAKE	Length(ft): 94.00
Group: BASE	To Node: RECEIVING WATER	Count: 2
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 54.00	54.00	Flow: Both
Rise(in): 54.00	54.00	Entrance Loss Coef: 0.50
Invert(ft): -3.500	-3.500	Exit Loss Coef: 1.00
Manning's N: 0.012000	0.012000	Bend Loss Coef: 0.00
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw
Bot Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dc
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

==== Weirs =====

Name: W1-2	From Node: BASIN 1
Group: BASE	To Node: BASIN 2
Flow: Both	Count: 1
Type: Vertical: Mavis	Geometry: Irregular
XSec: W1-2	
Invert(ft): 3.700	
Control Elevation(ft): 3.700	
Struct Opening Dim(ft): 9999.00	
TABLE	
Bottom Clip(ft): 0.000	
Top Clip(ft): 0.000	
Weir Discharge Coef: 3.200	
Orifice Discharge Coef: 0.600	

Name: W1-2-2 From Node: BASIN 1
Group: BASE To Node: BASIN 2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-2-2
 Invert(ft): 4.700
Control Elevation(ft): 4.700
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W1-2-3 From Node: BASIN 1
Group: BASE To Node: BASIN 2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-2-3
 Invert(ft): 4.100
Control Elevation(ft): 4.100
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W1-8 From Node: BASIN 1
Group: BASE To Node: BASIN 8
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-8
 Invert(ft): 3.800
Control Elevation(ft): 3.800
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W1-9 From Node: BASIN 1
Group: BASE To Node: BASIN 9
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W1-9
 Invert(ft): 5.700
Control Elevation(ft): 5.700
Struct Opening Dim(ft): 9999.00

TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W1-9-2 From Node: BASIN 1
Group: BASE To Node: BASIN 9
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W1-9-2
Invert(ft): 4.100
Control Elevation(ft): 4.100
Struct Opening Dim(ft): 9999.00

TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-16 From Node: BASIN 10
Group: BASE To Node: BASIN 16
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W10-16
Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-16-2 From Node: BASIN 10
Group: BASE To Node: BASIN 16
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W10-16-2
Invert(ft): 3.600
Control Elevation(ft): 3.600
Struct Opening Dim(ft): 9999.00

TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W10-17 From Node: BASIN 10

Group: BASE To Node: BASIN 17
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W10-17
 Invert(ft): 4.200
Control Elevation(ft): 4.200
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

TABLE

Name: W10-19 From Node: BASIN 10
Group: BASE To Node: BASIN 19
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W10-19
 Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

TABLE

Name: W11-12 From Node: BASIN 11
Group: BASE To Node: BASIN 12
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W11-12
 Invert(ft): 4.200
Control Elevation(ft): 4.200
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

TABLE

Name: W11-12-2 From Node: BASIN 11
Group: BASE To Node: BASIN 12
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W11-12-2
 Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000

TABLE

Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W12-13 From Node: BASIN 12
Group: BASE To Node: BASIN 13
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W12-13
 Invert(ft): 4.500
Control Elevation(ft): 4.500
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W12-13-2 From Node: BASIN 12
Group: BASE To Node: BASIN 13
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W12-13-2
 Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W13-14 From Node: BASIN 13
Group: BASE To Node: BASIN 14
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W13-14
 Invert(ft): 4.500
Control Elevation(ft): 4.500
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W14-15 From Node: BASIN 14
Group: BASE To Node: BASIN 15
Flow: Both Count: 1

Type: Vertical: Mavis Geometry: Irregular

 XSec: W14-15
 Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

TABLE

Name: W14-15-2 From Node: BASIN 14
Group: BASE To Node: BASIN 15
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W14-15-2
 Invert(ft): 3.500
Control Elevation(ft): 3.500
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

TABLE

Name: W18-20 From Node: BASIN 18
Group: BASE To Node: BASIN 20
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W18-20
 Invert(ft): 3.700
Control Elevation(ft): 3.700
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

TABLE

Name: W19-20 From Node: BASIN 19
Group: BASE To Node: BASIN 20
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W19-20
 Invert(ft): 3.700
Control Elevation(ft): 3.700
Struct Opening Dim(ft): 9999.00

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200

TABLE

Orifice Discharge Coef: 0.600

Name: W2-3 From Node: BASIN 2
Group: BASE To Node: BASIN 3
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W2-3
 Invert(ft): 4.100
Control Elevation(ft): 4.100
Struct Opening Dim(ft): 9999.00

 TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W2-3-2 From Node: BASIN 2
Group: BASE To Node: BASIN 3
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W2-3-2
 Invert(ft): 4.500
Control Elevation(ft): 4.500
Struct Opening Dim(ft): 9999.00

 TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W3-4 From Node: BASIN 3
Group: BASE To Node: BASIN 4
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W3-4
 Invert(ft): 3.700
Control Elevation(ft): 3.700
Struct Opening Dim(ft): 9999.00

 TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W3-5 From Node: BASIN 3
Group: BASE To Node: BASIN 5
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W3-5
Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00
TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W3-6 From Node: BASIN 3
Group: BASE To Node: BASIN 6
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W3-6
Invert(ft): 3.800
Control Elevation(ft): 3.800
Struct Opening Dim(ft): 9999.00
TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W3-6-2 From Node: BASIN 3
Group: BASE To Node: BASIN 6
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W3-6-2
Invert(ft): 4.200
Control Elevation(ft): 4.200
Struct Opening Dim(ft): 9999.00
TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W4-5 From Node: BASIN 4
Group: BASE To Node: BASIN 5
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W4-5
Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00
TABLE
Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W4-7 From Node: BASIN 4
Group: BASE To Node: BASIN 7
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W4-7
 Invert(ft): 3.900
Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W6-10 From Node: BASIN 6
Group: BASE To Node: BASIN 10
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W6-10
 Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W6-10-2 From Node: BASIN 6
Group: BASE To Node: BASIN 10
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W6-10-2
 Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

 Bottom Clip(ft): 0.000
 Top Clip(ft): 0.000
 Weir Discharge Coef: 3.200
 Orifice Discharge Coef: 0.600

Name: W8-9 From Node: BASIN 8
Group: BASE To Node: BASIN 9
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

 XSec: W8-9
 Invert(ft): 3.900

Control Elevation(ft): 3.900
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

Name: W9-11 From Node: BASIN 9
Group: BASE To Node: BASIN 11
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Irregular

XSec: W9-11
Invert(ft): 4.000
Control Elevation(ft): 4.000
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600

==== Rating Curves =====

Name: 1-SWALE From Node: BASIN 1 Count: 1
Group: BASE To Node: SWALE PERC Flow: Both

	TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1:	1-SWALE	4.000	3.500
#2:		0.000	0.000
#3:		0.000	0.000
#4:		0.000	0.000

Name: 10-SWALE From Node: BASIN 10 Count: 1
Group: BASE To Node: SWALE PERC Flow: Both

	TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1:	10-SWALE	4.000	3.500
#2:		0.000	0.000
#3:		0.000	0.000
#4:		0.000	0.000

Name: 11-SWALE From Node: BASIN 11 Count: 1
Group: BASE To Node: SWALE PERC Flow: Both

	TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1:	11-SWALE	4.000	3.500
#2:		0.000	0.000
#3:		0.000	0.000
#4:		0.000	0.000

Name: 12-SWALE	From Node: BASIN 12	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both
TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 12-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 13-SWALE	From Node: BASIN 13	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both
TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 13-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 14-SWALE	From Node: BASIN 14	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both
TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 14-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 15-SWALE	From Node: BASIN 15	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both
TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 15-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 17-SWALE	From Node: BASIN 17	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both
TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 17-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 19-SWALE	From Node: BASIN 19	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 19-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 2-SWALE	From Node: BASIN 2	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 2-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 20-SWALE	From Node: BASIN 20	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 20-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 3-SWALE	From Node: BASIN 3	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 3-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 4-SWALE	From Node: BASIN 4	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 4-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 5-SWALE	From Node: BASIN 5	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
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#1: 5-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 6-SWALE	From Node: BASIN 6	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 6-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 7-SWALE	From Node: BASIN 7	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 7-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 8-SWALE	From Node: BASIN 8	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 8-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

Name: 9-SWALE	From Node: BASIN 9	Count: 1
Group: BASE	To Node: SWALE PERC	Flow: Both

TABLE	ELEV ON(ft)	ELEV OFF(ft)
#1: 9-SWALE	4.000	3.500
#2:	0.000	0.000
#3:	0.000	0.000
#4:	0.000	0.000

=====
 === Hydrology Simulations ===
 =====

Name: 100yr
 Filename: C:\Users\zgamble\Desktop\Miramar ICPR\ZACH ICPR\100yr.R32
 Override Defaults: Yes
 Storm Duration(hrs): 72.00

Rainfall File: Sfwmd72
Rainfall Amount(in): 16.88

Time(hrs)	Print Inc(min)
144.000	15.00

Name: 10yr
Filename: C:\Users\zgambles\Desktop\Miramar ICPR\ZACH ICPR\10yr.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: SFWMD24
Rainfall Amount(in): 8.38

Time(hrs)	Print Inc(min)
24.000	15.00

Name: 25yr
Filename: C:\Users\zgambles\Desktop\Miramar ICPR\ZACH ICPR\25yr.R32

Override Defaults: Yes
Storm Duration(hrs): 72.00
Rainfall File: Sfwmd72
Rainfall Amount(in): 13.88

Time(hrs)	Print Inc(min)
75.000	15.00

=====
==== Routing Simulations =====
=====

Name: 100yr Hydrology Sim: 100yr
Filename: N:\clerical\JOBS\2015\15-0008-001-04 550 Building Parking Garage\Permits\BCEPD-Surface Water\100yr.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00	Delta Z Factor: 0.00500
Time Step Optimizer: 10.000	
Start Time(hrs): 0.000	End Time(hrs): 144.00
Min Calc Time(sec): 0.5000	Max Calc Time(sec): 60.0000
Boundary Stages:	Boundary Flows:

Time(hrs)	Print Inc(min)
144.000	15.000

Group	Run
BASE	Yes

Name: 10YR Hydrology Sim: 10yr
Filename: N:\clerical\JOBS\2015\15-0008-001-04 550 Building Parking Garage\Permits\BCEPD-Surface Water\10YR.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 48.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

48.000 15.000

Group Run

BASE Yes

Name: 25yr Hydrology Sim: 25yr
Filename: N:\clerical\JOBS\2015\15-0008-001-04 550 Building Parking Garage\Permits\BCEPD-Surface Water\25yr.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 75.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs) Print Inc(min)

75.000 15.000

Group Run

BASE Yes

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BASIN 1	BASE	10YR	12.86	4.677	0.000	-0.0150	540569	12.25	159.089	12.41	103.401
BASIN 10	BASE	10YR	12.38	4.572	0.000	-0.0168	60468	12.00	45.580	12.05	27.201
BASIN 11	BASE	10YR	12.53	4.715	0.000	-0.0104	43945	11.71	20.575	13.44	9.734
BASIN 12	BASE	10YR	12.50	4.726	0.000	-0.0183	70825	11.75	29.124	13.44	11.545
BASIN 13	BASE	10YR	12.49	4.738	0.000	-0.0185	54122	12.00	22.878	12.12	13.831
BASIN 14	BASE	10YR	12.50	4.761	0.000	-0.0062	97012	12.00	45.321	12.13	13.806
BASIN 15	BASE	10YR	12.50	4.762	0.000	-0.0164	69098	12.00	33.729	12.24	10.541
BASIN 16	BASE	10YR	12.39	4.575	0.000	-0.0159	76941	11.97	36.603	12.11	8.248
BASIN 17	BASE	10YR	12.39	4.564	0.000	-0.0140	25340	12.16	23.908	12.31	8.611
BASIN 18	BASE	10YR	12.35	4.593	0.000	-0.0089	26310	12.00	15.182	12.23	7.997
BASIN 19	BASE	10YR	12.37	4.581	0.000	-0.0325	55257	12.00	25.331	13.16	16.367
BASIN 2	BASE	10YR	13.12	4.609	0.000	-0.1065	751323	12.28	219.374	13.24	103.586
BASIN 20	BASE	10YR	12.36	4.589	0.000	-0.0121	37072	12.00	19.431	12.10	9.060
BASIN 3	BASE	10YR	12.33	4.554	0.000	-0.0202	94099	13.18	44.149	13.24	48.367
BASIN 4	BASE	10YR	12.30	4.564	0.000	0.0063	26054	11.77	14.282	13.33	11.269
BASIN 5	BASE	10YR	12.30	4.559	0.000	-0.0217	30634	11.79	19.011	12.07	9.776
BASIN 6	BASE	10YR	12.36	4.566	0.000	-0.0269	106057	11.97	61.591	13.13	34.583
BASIN 7	BASE	10YR	12.28	4.578	0.000	-0.0298	71448	12.00	32.587	12.15	11.948
BASIN 8	BASE	10YR	12.70	4.687	0.000	-0.0050	40582	15.65	7.821	15.60	9.031
BASIN 9	BASE	10YR	12.57	4.706	0.000	-0.6900	168252	11.75	40.684	11.70	18.056
LAKE	BASE	10YR	48.00	3.045	0.000	0.0015	1261316	12.00	425.051	13.64	173.222
RECEIVING WATER	BASE	10YR	48.00	3.050	0.000	0.0004	21	13.64	173.222	0.00	0.000
SWALE PERC	BASE	10YR	48.00	2.269	0.000	1.0000	0	12.17	71.430	0.00	0.000

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BASIN 1	BASE	25yr	61.27	5.079	0.000	-0.0034	725301	60.00	202.620	60.85	81.721
BASIN 10	BASE	25yr	61.41	4.995	0.000	0.0237	93533	59.91	46.481	61.35	29.321
BASIN 11	BASE	25yr	61.23	5.079	0.000	-0.0043	59716	61.01	21.535	64.62	11.917
BASIN 12	BASE	25yr	61.23	5.077	0.000	0.0100	95065	59.73	23.158	61.01	12.474
BASIN 13	BASE	25yr	61.23	5.075	0.000	0.0104	73572	59.93	25.898	59.92	10.553
BASIN 14	BASE	25yr	61.22	5.071	0.000	0.0046	120858	59.94	55.002	59.93	9.943
BASIN 15	BASE	25yr	61.22	5.070	0.000	0.0071	85977	59.95	39.283	60.21	7.192
BASIN 16	BASE	25yr	61.42	4.994	0.000	0.0050	106921	60.00	40.528	60.21	5.077
BASIN 17	BASE	25yr	61.41	4.990	0.000	0.0050	33243	59.91	27.142	60.20	5.687
BASIN 18	BASE	25yr	61.41	4.979	0.000	0.0046	37648	60.00	19.301	60.30	8.405
BASIN 19	BASE	25yr	61.41	4.984	0.000	0.0124	80490	60.00	26.879	61.45	14.304
BASIN 2	BASE	25yr	61.35	5.053	0.000	0.0069	987595	60.21	248.058	61.27	96.266
BASIN 20	BASE	25yr	61.41	4.980	0.000	0.0052	55409	60.00	23.902	60.20	6.154
BASIN 3	BASE	25yr	61.39	5.029	0.000	0.0200	141013	61.14	54.182	61.29	53.176
BASIN 4	BASE	25yr	61.40	5.023	0.000	0.0069	44017	59.75	14.255	61.05	9.277
BASIN 5	BASE	25yr	61.39	5.024	0.000	0.0074	47184	60.00	18.674	61.42	6.692
BASIN 6	BASE	25yr	61.40	5.010	0.000	0.0091	150188	59.82	57.889	61.35	38.211
BASIN 7	BASE	25yr	61.41	5.019	0.000	0.0164	103634	60.00	37.897	61.45	8.726
BASIN 8	BASE	25yr	61.25	5.079	0.000	0.0050	58527	67.64	6.568	67.59	7.379
BASIN 9	BASE	25yr	61.23	5.080	0.000	-0.6900	246485	59.72	38.619	61.01	27.859
LAKE	BASE	25yr	61.30	4.141	0.000	0.0015	1529573	60.00	414.036	61.30	150.684
RECEIVING WATER	BASE	25yr	60.00	3.500	0.000	0.0003	21	61.30	150.684	0.00	0.000
SWALE PERC	BASE	25yr	72.00	2.500	0.000	1.0000	0	59.74	71.430	0.00	0.000

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BASIN 1	BASE	100yr	62.12	5.487	0.000	0.0040	912562	60.00	247.569	60.82	82.038
BASIN 10	BASE	100yr	64.25	5.470	0.000	0.0234	130760	59.76	39.123	61.20	21.067
BASIN 11	BASE	100yr	62.17	5.488	0.000	-0.0050	77416	62.16	24.371	66.20	18.936
BASIN 12	BASE	100yr	62.16	5.489	0.000	0.0110	123535	66.20	20.902	61.26	12.429
BASIN 13	BASE	100yr	62.17	5.487	0.000	0.0105	97373	59.75	23.308	61.16	7.281
BASIN 14	BASE	100yr	62.16	5.486	0.000	0.0049	152791	59.76	47.352	61.26	7.254
BASIN 15	BASE	100yr	62.17	5.486	0.000	0.0062	108769	60.00	37.701	60.12	5.348
BASIN 16	BASE	100yr	64.25	5.471	0.000	0.0046	141078	60.00	43.866	60.12	3.370
BASIN 17	BASE	100yr	64.25	5.471	0.000	0.0049	42176	60.00	16.675	60.11	4.064
BASIN 18	BASE	100yr	64.23	5.474	0.000	0.0050	52222	60.00	23.552	60.21	9.457
BASIN 19	BASE	100yr	64.24	5.472	0.000	0.0125	111084	59.87	27.129	61.29	9.078
BASIN 2	BASE	100yr	62.23	5.477	0.000	0.0070	1213752	60.10	249.037	61.15	72.417
BASIN 20	BASE	100yr	64.23	5.473	0.000	0.0056	78572	60.00	27.705	60.12	4.659
BASIN 3	BASE	100yr	62.30	5.471	0.000	0.0188	184557	61.05	46.678	61.21	40.136
BASIN 4	BASE	100yr	64.31	5.469	0.000	0.0071	61523	59.75	13.182	60.96	6.990
BASIN 5	BASE	100yr	64.32	5.469	0.000	0.0076	63068	60.00	19.513	60.06	4.781
BASIN 6	BASE	100yr	64.30	5.470	0.000	0.0091	195917	59.75	51.506	61.22	27.374
BASIN 7	BASE	100yr	64.24	5.468	0.000	0.0159	136442	60.00	41.613	60.07	6.969
BASIN 8	BASE	100yr	62.12	5.488	0.000	0.0050	77192	92.41	5.428	92.36	5.851
BASIN 9	BASE	100yr	62.16	5.489	0.000	-0.6900	331714	59.69	32.053	62.16	31.432
LAKE	BASE	100yr	64.62	5.479	0.000	0.0029	1857242	60.00	443.222	0.00	0.000
RECEIVING WATER	BASE	100yr	60.00	3.500	0.000	0.0006	0	0.00	0.000	0.00	0.000
SWALE PERC	BASE	100yr	72.00	2.500	0.000	1.0000	0	55.65	71.430	0.00	0.000

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
OUTFALL	BASE	25yr	61.30	150.684	3.052	61.30	4.141	60.00	3.500