

CLEMENTS ROAD

**Nassau County
Board of County Commissioners
Nassau County, Florida**



DRAINAGE REPORT (DRAFT)

MAY 2021

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PROJECT DESCRIPTION

The intent of this project is to analyze the historical and current conditions of the drainage basins associated with existing wetland areas located on the north and south side of Clements Road primarily at the existing residence at 95329 Clements Road (See Figure 1 – Location Map). This study is being prepared to determine the cause(s) of roadway overtopping that has been occurring during several rainfall events. A map of the existing drainage basins is provided in Appendix A – Drainage Map. For the purposes of this report, Clements Road will be referenced to have an east/west alignment.

DRAINAGE PATTERNS

Historical: The historical wetland area, located between Clements Road and Littleberry Lane, extended from just south of SR 200 to south of College Parkway near the wetlands associated with Kingsley Creek to the east. Though relatively flat, runoff was conveyed from the north to the south with eventual outfall to Kingsley Creek. Land cover consisted primarily of woodland areas.

Existing: The historical wetland area was divided into two areas by the construction of Clements Road. Clements Road is a dirt road with an existing roadside ditch on either side. An existing 18” corrugated metal pipe (CMP) across Clements Road now connects the North Wetland area to the South Roadside Ditch. The South Roadside Ditch discharged runoff to the South Wetland area until an Unpermitted Pond was constructed just south of Clements Road in the 1980s.

The Unpermitted Pond was constructed in the low point of the historical wetland area, disrupting historical drainage patterns from north to south in the area. During some rainfall events, runoff now pools in the South Roadside Ditch until it eventually overflows the North Berm of the Unpermitted Pond. The Unpermitted Pond discharges to the South Wetland area to the south via a 6” corrugated plastic pipe (CPP). During these rainfall events, the Unpermitted Pond will also overflow the South Berm of the Unpermitted Pond and discharge additional runoff into the South Wetland area.

The South Wetland area conveys runoff to the south toward a ditch that was constructed in 2017 by the adjacent Woodbridge Planned Unit Development (PUD) – Phase 3. Per the developer’s engineer, McCranie & Associates, Inc., it was discovered that property owners to the south had developed their land and blocked the natural flow of the wetlands to the south. Late in 2017, the ditch and associated ditch weirs were constructed along the south border of the Woodbridge PUD. This restores the flow of runoff from the South Wetland to the east with eventual outfall into Kingsley Creek.

The existing land cover primarily consists of woodland areas with a few rural properties and ponds. Due to the minor amount of cleared/developed land cover, land cover in the area has conservatively been considered woodland area or ponds.

NASSAU COUNTY

CLEMENTS ROAD DRAINAGE STUDY

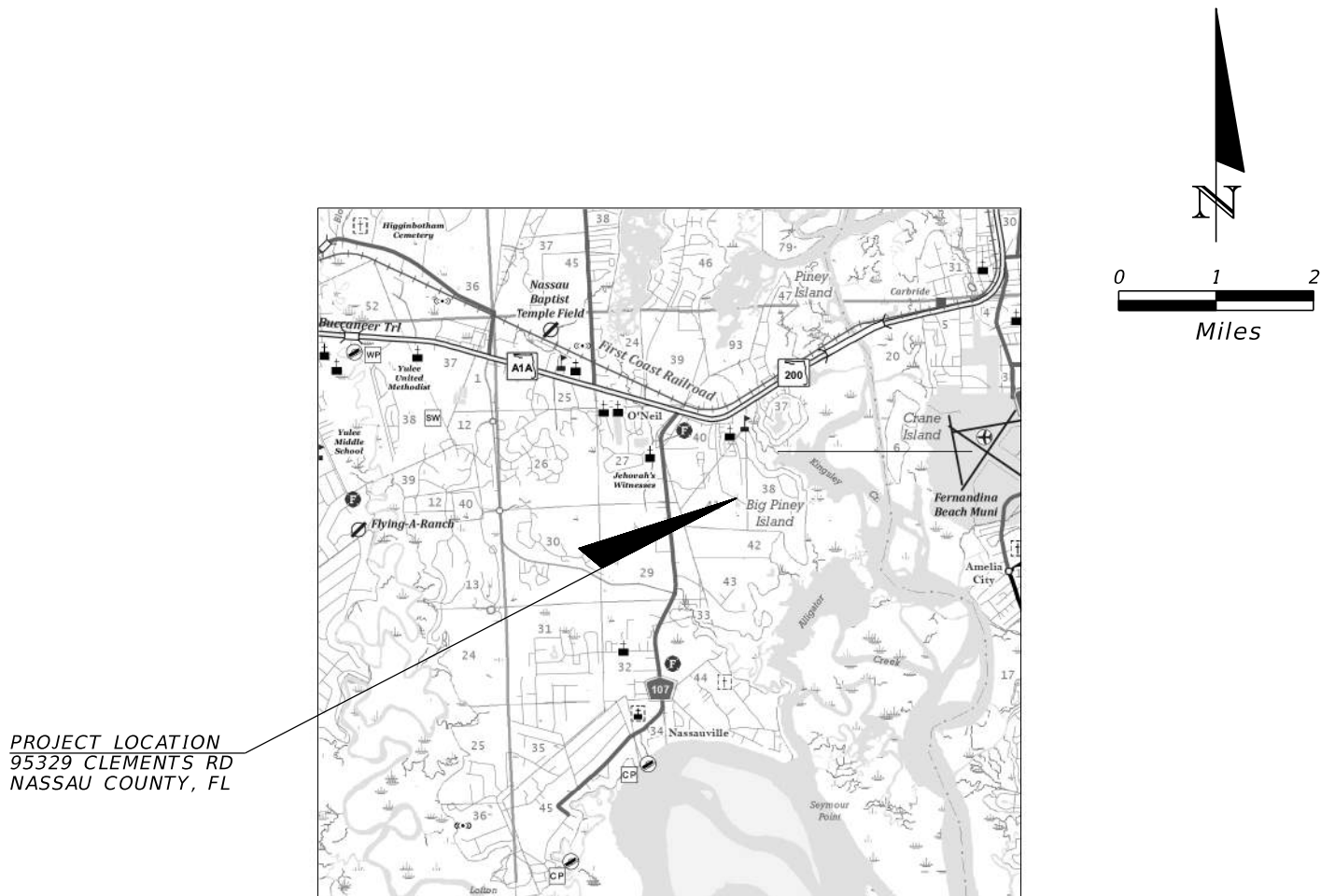


FIGURE 1 - LOCATION MAP

STORMWATER NETWORK

Interconnected Channel and Pond Routing Version 4 (ICPR4) was used to model the existing drainage network. The Drainage Maps in Appendix A delineate the locations for the basins, nodes and pond locations. The existing stormwater system consists of the following elements. A Node-Link Diagram for graphical representation of these elements is also provided in Figure 2 – ICPR Network.

BASINS/NODES

- North Wetland: This basin includes the area bordered by the residential Otter Run Subdivision to the north, Clements Road to the west and south, and Littleberry Lane to the east. Because this basin interacts with the roadside ditch running along the north side of Clements Road, the north roadside ditch area has been considered a part of this basin. Runoff from this basin is collected in the North Wetland Node and discharged under Clements Road to the South Roadside Ditch via an existing 18” CMP (pipe link) crossing.
- South Roadside Ditch: This basin includes the areas that drain to the South Roadside Ditch. This area includes Clements Road, the ditch area, and a Berm along the south side of the ditch. Runoff from this basin is collected in the South Roadside Ditch Node.
- Unpermitted Pond: This basin includes the pond area within the top of berm surrounding the private pond located at 95329 Clements Road. Runoff is collected in the pond and discharges to the South Wetland via a 6” CPP. Runoff also discharges to the South Wetland via a low point in the South Berm of the Unpermitted Pond during overtopping conditions.
- South Wetland: This basin includes the area bordered by Clements Road to the north, the Woodbridge PUD to the west, SEPSA Shooting Club (95243 Clements Road) to the east, and a constructed ditch to the south. Runoff from this basin is collected in the South Wetland Node and discharged to the constructed ditch to the south via a wide trapezoidal channel. Information for this system was verified against the previous drainage report completed for the Woodbridge PUD (See Appendix D – Woodbridge PUD Phase 3 Information).

NODES

- Pond 12: This pond was constructed with Phase 3 of the Woodbridge PUD. The basin draining to this pond includes a portion of the Woodbridge Phase 3 development. Runoff from this basin is collected into Pond 12 and discharged to the South Wetland via a control structure. Pond 12 has been incorporated into the model via a time-discharge rating curve representing the control structure outflow. Information for this system was verified against the previous drainage report completed for the Woodbridge PUD.

Pond 15: This pond was constructed with Phase 3 of the Woodbridge PUD. The basin draining to this pond includes a portion of the Woodbridge Phase 4 development. Runoff from this basin is collected into Pond 15 and discharged to the South Wetland via a control structure. Pond 15 has been incorporated into the model via a time-discharge rating curve representing the control structure outflow. Information for this system was verified against the previous drainage report completed for the Woodbridge PUD.

bdy-3: This is a time-stage boundary node and the terminus for the network. Information for this system was verified against the previous drainage report completed for the Woodbridge PUD.

LINKS

18" CMP: Pipe link connecting the North Wetland Basin to the South Roadside Ditch.

Clements Road: Weir link connecting the North Wetland Basin to the South Roadside Ditch.

North Berm of
Unpermitted Pond: Weir link connecting the South Roadside Ditch to the Unpermitted Pond.

6" CPP: Pipe link connecting the Unpermitted Pond to the South Wetland Basin.

South Berm of
Unpermitted Pond: Weir link connecting the Unpermitted Pond to the South Wetland Basin.

Pond 12
Control Structure: Time-discharge link connecting Pond 12 (Woodbridge PUD - Phase 3) to the South Wetland Basin.

Pond 15
Control Structure: Time-discharge link connecting Pond 15 (Woodbridge PUD - Phase 3) to the South Wetland Basin.

w-off-3: Trapezoidal weir link connecting the South Wetland Basin to the bdy-3 node.

NODE-LINK DIAGRAM

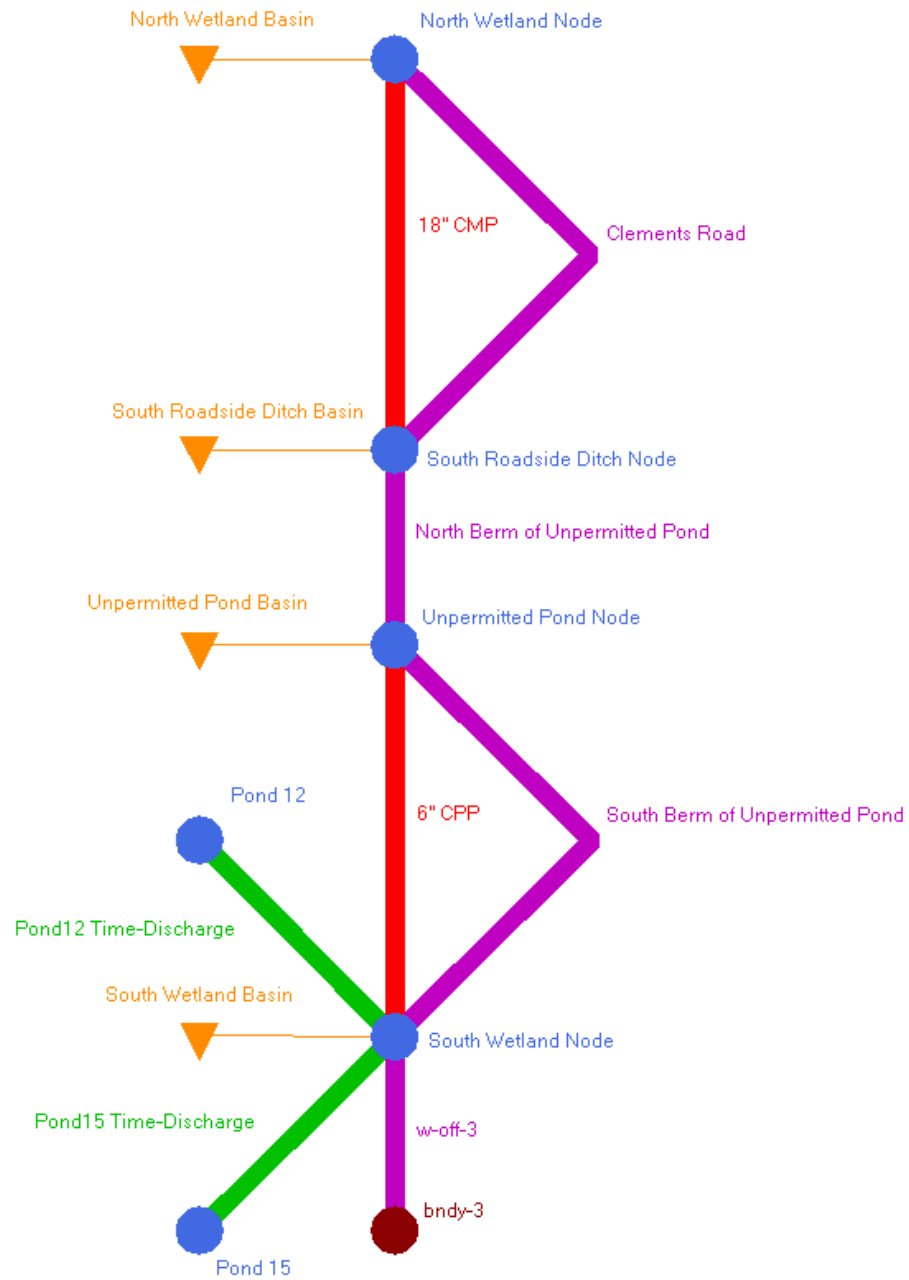


FIGURE 2 - ICPR NETWORK

SUMMARY

A Mean Annual, 10-yr/24-hr and 25-yr/24-hr storm event, using the FLMOD rainfall distribution, were routed through the drainage network for the existing conditions.

- A. The peak stage in the North Wetland overtops Clements Road during the 10-yr/24-hr and 25-yr/24-hr storm events, discharging into the South Roadside Ditch.
- B. The peak stage in the South Roadside Ditch overtops the North Berm of the Unpermitted Pond during the Mean Annual, 10-yr/24-hr and 25-yr/24-hr storm events, discharging runoff into the Unpermitted Pond.
- C. The Unpermitted Pond reaches capacity and overtops the South Berm of the Unpermitted Pond during the Mean Annual, 10-yr/24-hr and 25-yr/24-hr storm events, discharging into the South Wetland.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study confirms that roadway overtopping is occurring along Clements Road primarily at the existing residence at 95329 Clements Road as observed by Nassau County staff and local residents. The drainage network experiences overtopping during the 10-yr/24-hr and 25-yr/24-hr storm events, with both the North and South Berms of the Unpermitted Pond overtopping.

The construction of Clements Road divided the historical wetland in the area, creating the need for a crossing at Clements Road in order to maintain flow between the North Wetland and South Wetland. Based on review of the area and topographic contour data, the Unpermitted Pond appears to have been constructed in the low point of the historical wetlands, likely hindering runoff flow from the South Roadside Ditch to the South Wetland area.

Based on preliminary analysis of potential improvements, the issue of overtopping along Clements Road may be addressed by implementing improvements primarily at the existing residence at 95329 Clements Road. Potential improvements include:

- A. Adding capacity to the existing cross drain at Clements Road. Currently, an 18" CMP connects the North Wetland Basin to the South Roadside ditch. Installing additional barrels at this crossing would increase the capacity of the cross drain, allowing additional runoff from the North Wetland to flow to the South Roadside Ditch and potentially reduce the maximum stages in the North Wetland.
- B. Construction of a ditch, adjacent to the Unpermitted Pond, connecting the South Roadside Ditch to the South Wetland Basin. Construction of a ditch between the South Roadside Ditch and South Wetland to the east of the Unpermitted Pond would allow runoff within the South Roadside Ditch to discharge to the South Wetland, bypassing the Unpermitted Pond and potentially reducing maximum stages in the South Roadside Ditch.

- C. Construction of a piped connection between the South Roadside Ditch and Unpermitted Pond as well as construction of a control structure near the south end of the Unpermitted Pond. The control structure would require lowering the normal water level in the Unpermitted Pond enough so that the piped connection between the South Roadside Ditch and Unpermitted Pond could flow freely under normal conditions, allowing stages within the South Roadside Ditch to remain below the elevation of Clements Road.

Although these potential improvements have been evaluated preliminarily, further investigation and analysis will be necessary to confirm the effectiveness of these improvements.



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Clements Road

DRAINAGE REPORT (DRAFT)

Appendix A – Drainage Map



REVISIONS				PETERS AND YAFFEE, INC. 9822 TAPESTRY PARK CIRCLE, SUITE 205 JACKSONVILLE, FL 32246 JAY SNYDER, P.E. 86566	NASSAU COUNTY CLEMENTS ROAD DRAINAGE STUDY		DRAINAGE MAP	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		COUNTY	ROAD NO.		
					NASSAU	CLEMENTS ROAD		9



REVISIONS				NASSAU COUNTY CLEMENTS ROAD DRAINAGE STUDY		SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION			
				COUNTY	ROAD NO.	
				NASSAU	CLEMENTS ROAD	10

PETERS AND YAFFEE, INC.
9822 TAPESTRY PARK CIRCLE, SUITE 205
JACKSONVILLE, FL 32246
JAY SNYDER, P.E. 86566

DRAINAGE MAP



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Appendix B – Basin Calculations

BASIN COMPUTATIONS

DRAINAGE BASIN INFORMATION

NORTH WETLAND BASIN

I. Drainage Area

(Based on contours from Nassau County GIS data)

<u>Land Use</u>	<u>Quantity</u>	<u>Unit</u>	<u>Soil Type</u>	<u>%Imperv.</u>	<u>SCS Curve Number (CN)</u>
Woodlands, Good Cover =	16.804	acres	A/D	0%	CN = 77
Woodlands, Good Cover =	26.802	acres	B/D	0%	CN = 77
Woodlands, Thin Stand =	1.218	acres	A	0%	CN = 45
Existing Ponds =	2.343	acres	A/D	100%	CN = 100
 Total Drainage Area =	 47.167	 acres	 Total % Imperv. =	 5%	 Comp. CN = 77

II. Time of Concentration

a. Shallow Conc. Flow	L = 2010 ft.	S = 0.001 ft/ft	V = 10.50 ft/m
(Forest with heavy ground litter)			
		Travel Time =	192 minutes

SOUTH ROADSIDE DITCH BASIN

I. Drainage Area

<u>Land Use</u>	<u>Quantity</u>	<u>Unit</u>	<u>Soil Type</u>	<u>%Imperv.</u>	<u>SCS Curve Number (CN)</u>
Woodlands, Thin Stand =	0.494	acres	A	0%	CN = 45
Woodlands, Thin Stand =	0.969	acres	B/D	0%	CN = 83
 Total =	 1.463	 acres	 Total % Imperv. =	 0%	 Comp. CN = 70

II. Time of Concentration

a. Channel Flow	L = 1500 ft.	R (A/P) = .586 ft.	
(Bare earth)	n = 0.03	S = 0.003 ft/ft	V = 114.33 ft/m
Manning's: $v = \frac{1.49}{n} (R)^{2/3} (S)^{1/2}$		Travel Time =	13 minutes

BASIN COMPUTATIONS

DRAINAGE BASIN INFORMATION

UNPERMITTED POND BASIN

I. Drainage Area

<u>Land Use</u>	<u>Quantity</u>	<u>Unit</u>	<u>Soil Type</u>	<u>%Imperv.</u>	<u>SCS Curve Number (CN)</u>
Existing Pond =	1.388	acres	B/D	100%	CN = 100
Woodlands, Thin Stand =	1.586	acres	B/D	0%	CN = 83
Total =	2.974	acres	Total % Imperv. =	47%	Comp. CN = 91

II. Time of Concentration

Assume minimum travel time Travel Time = 10 minutes

SOUTH WETLAND BASIN

I. Drainage Area

<u>Land Use</u>	<u>Quantity</u>	<u>Unit</u>	<u>Soil Type</u>	<u>%Imperv.</u>	<u>SCS Curve Number (CN)</u>
Woodlands, Good Cover =	37.910	acres	A/D	0%	CN = 77
Woodlands, Good Cover =	1.097	acres	B/D	0%	CN = 77
Total =	39.007	acres	Total % Imperv. =	0%	Comp. CN = 77

II. Time of Concentration

a. Shallow Conc. Flow L= 3000 ft. S= 0.001 ft/ft V= 10.50 ft/m
 (Forest with heavy ground litter)

Travel Time = 286 minutes



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Appendix C – ICPR Analysis

NODE-LINK DIAGRAM



Simple Basin: North Wetland Basin

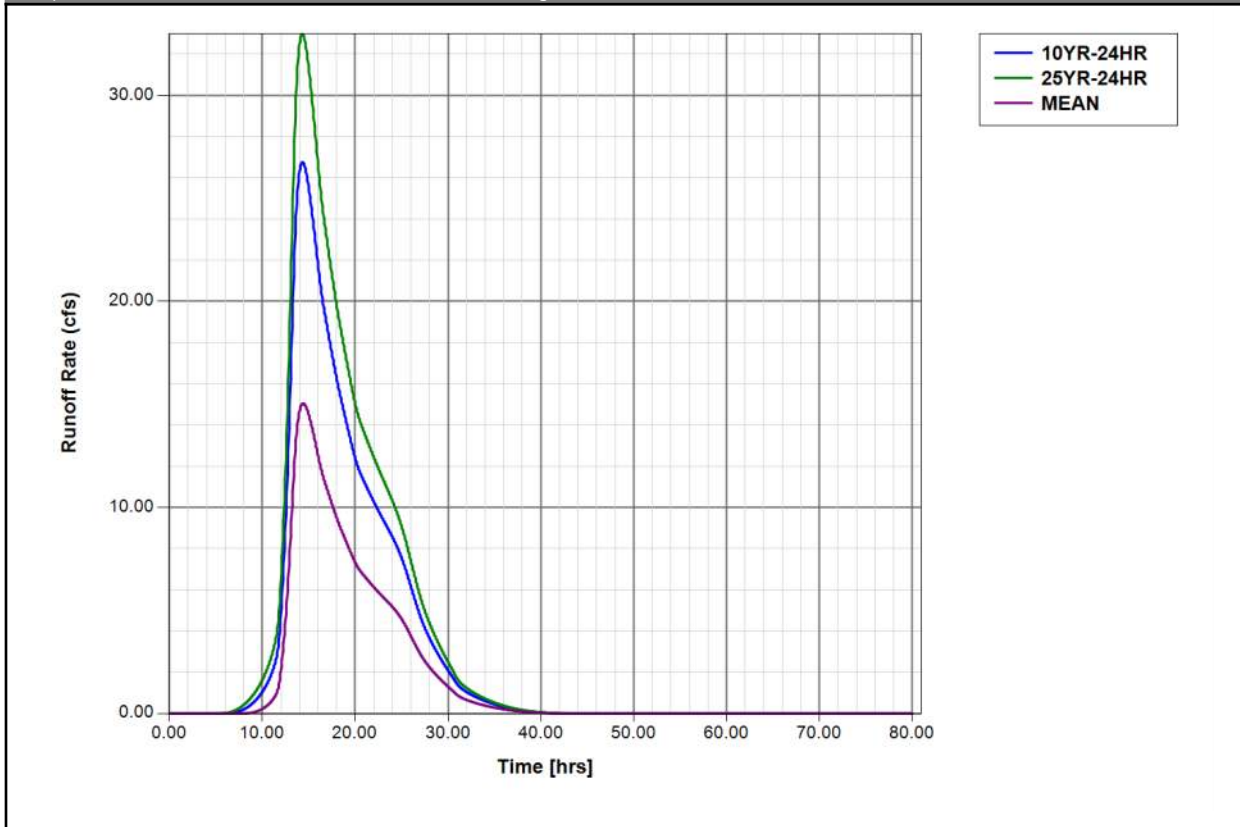
Scenario: Existing
 Node: North Wetland Node
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 192.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH256
 Peaking Factor: 256.0
 Area: 47.1670 ac
 Curve Number: 77.0
 % Impervious: 5.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment: Info based on 2-ft contour information for Nassau County (<https://www.fgdl.org/metadataexplorer/explorer.jsp>) and Nassau County GIS tax map (<https://maps.nassauflpa.com/NassauTaxMap/#>)

Simple Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
North Wetland Basin	10YR-24H R	26.75	14.3667	7.44	4.86	47.1670	77.9	5.00	0.00
North Wetland Basin	25YR-24H R	32.97	14.3500	8.64	5.97	47.1670	77.9	5.00	0.00
North Wetland Basin	MEAN	15.05	14.4333	5.10	2.79	47.1670	77.9	5.00	0.00

Simple Basin Runoff Rate: North Wetland Basin [Existing]



Simple Basin: South Roadside Ditch Basin

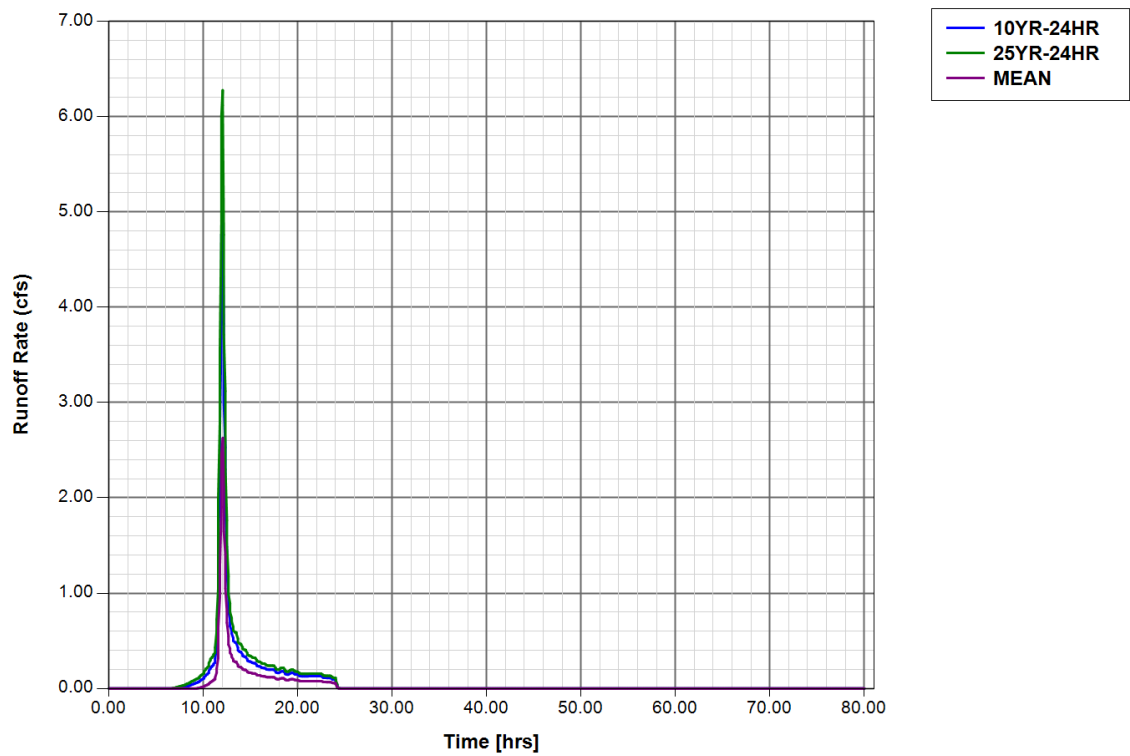
Scenario: Existing
 Node: South Roadside Ditch Node
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 13.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 1.4630 ac
 Curve Number: 70.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment: Info based on CADD file (SURVRD01-21113 ETM-SS10.dgn) and 2-ft contour information for Nassau County
 (<https://www.fgdl.org/metadataexplorer/explorer.jsp>)

Simple Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
South Roadside Ditch Basin	10YR-24H R	5.00	12.0500	7.44	4.00	1.4630	70.0	0.00	0.00
South Roadside Ditch Basin	25YR-24H R	6.28	12.0500	8.64	5.03	1.4630	70.0	0.00	0.00
South Roadside Ditch Basin	MEAN	2.63	12.0667	5.10	2.12	1.4630	70.0	0.00	0.00

Simple Basin Runoff Rate: South Roadside Ditch Basin [Existing]



Simple Basin: South Wetland Basin

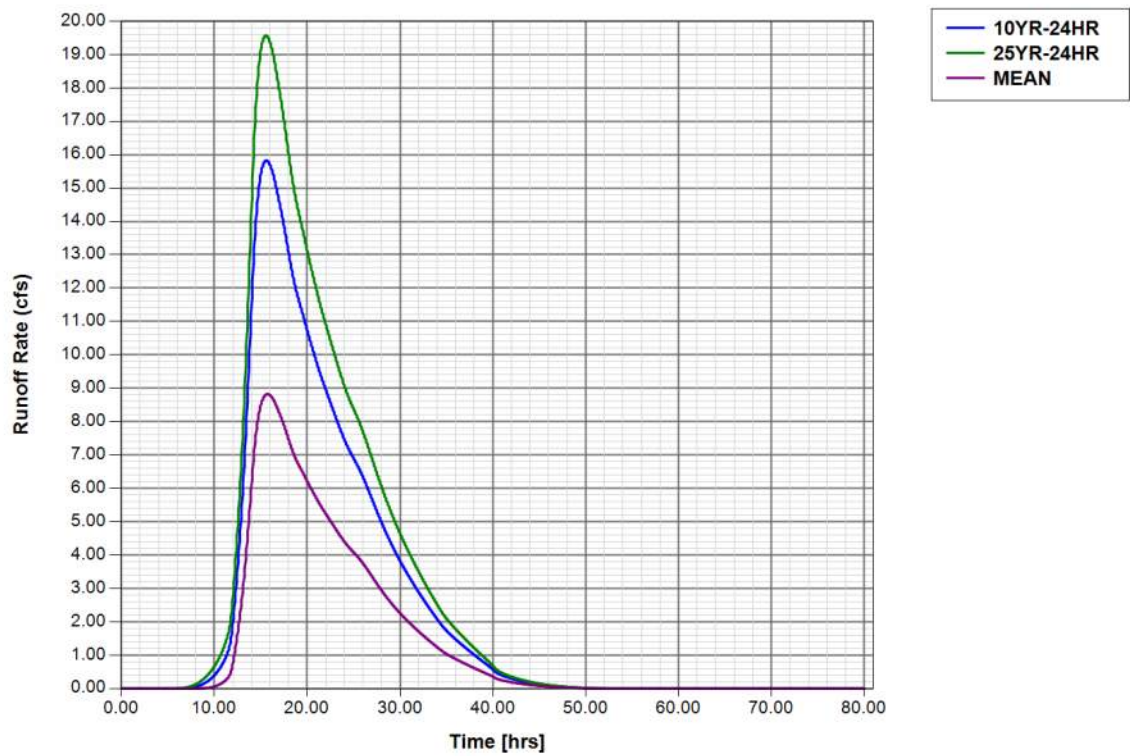
Scenario: Existing
 Node: South Wetland Node
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 286.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH256
 Peaking Factor: 256.0
 Area: 39.0070 ac
 Curve Number: 77.0
 % Impervious: 0.00
 % DCIA: 0.00
 % Direct: 0.00
 Rainfall Name:

Comment: Information based on M&A, Inc. Drainage Report for Woodbridge PUD Phase 3 (Rev. 10-2-16), SJRWMD permit document record 6424066.

Simple Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
South Wetland Basin	10YR-24H R	15.83	15.6500	7.44	4.76	39.0070	77.0	0.00	0.00
South Wetland Basin	25YR-24H R	19.57	15.6167	8.64	5.86	39.0070	77.0	0.00	0.00
South Wetland Basin	MEAN	8.83	15.7667	5.10	2.71	39.0070	77.0	0.00	0.00

Simple Basin Runoff Rate: South Wetland Basin [Existing]



Simple Basin: Unpermitted Pond Basin

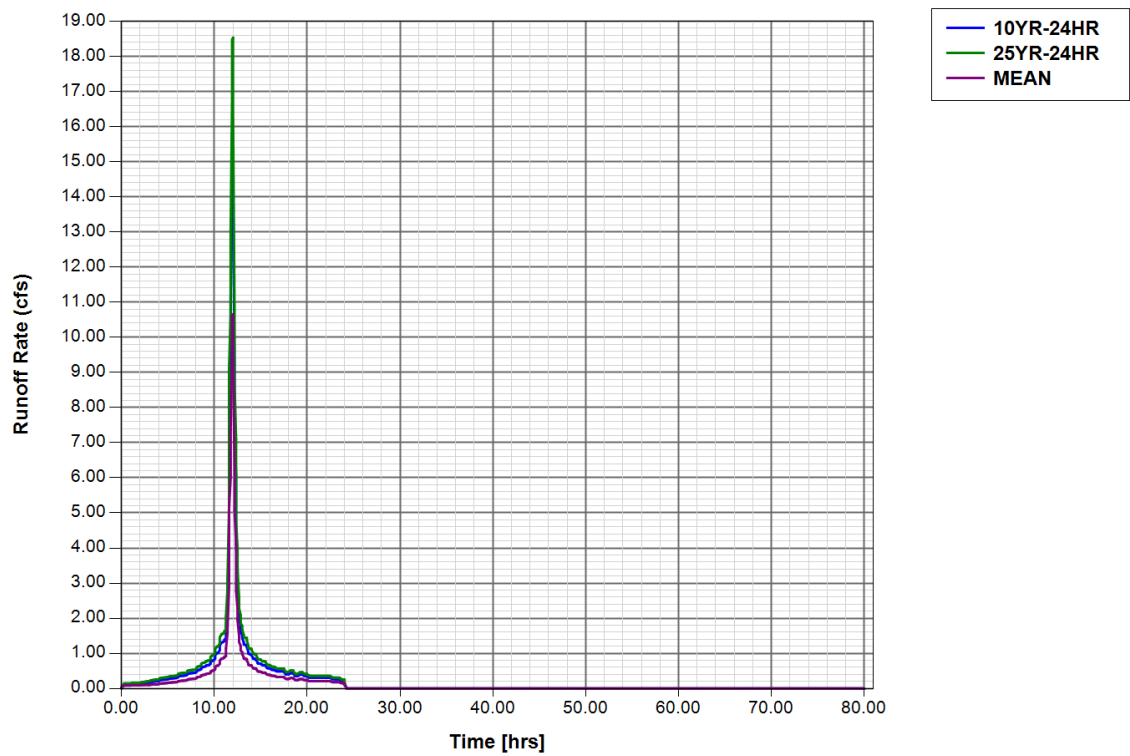
Scenario: Existing
 Node: Unpermitted Pond Node
 Hydrograph Method: NRCS Unit Hydrograph
 Infiltration Method: Curve Number
 Time of Concentration: 10.0000 min
 Max Allowable Q: 0.00 cfs
 Time Shift: 0.0000 hr
 Unit Hydrograph: UH484
 Peaking Factor: 484.0
 Area: 2.9740 ac
 Curve Number: 91.0
 % Impervious: 47.00
 % DCIA: 47.00
 % Direct: 0.00
 Rainfall Name:

Comment: Info based on CADD file (SURVRD01-21113 ETM-SS10.dgn). Area includes Pond water area and area between top of bank and water level.

Simple Basin Runoff Summary [Existing]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
Unpermitted Pond Basin	10YR-24H R	15.87	12.0167	7.44	6.89	2.9740	95.3	47.00	47.00
Unpermitted Pond Basin	25YR-24H R	18.53	12.0167	8.64	8.09	2.9740	95.2	47.00	47.00
Unpermitted Pond Basin	MEAN	10.66	12.0167	5.10	4.57	2.9740	95.4	47.00	47.00

Simple Basin Runoff Rate: Unpermitted Pond Basin [Existing]



Node: North Wetland Node

Scenario: Existing
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 5.00 ft
 Warning Stage: 8.27 ft

Stage [ft]	Area [ac]	Area [ft2]
5.00	0.1210	5271
6.00	0.1670	7275
7.00	3.7360	162740
8.00	11.8230	515010
9.00	26.5710	1157433

Comment: a. Info based on 2-ft contour information for Nassau County (<https://www.fgdl.org/metadataexplorer/explorer.jsp>) and Nassau County GIS Tax Map 4.0 (<https://maps.nassauflpa.com/NassauTaxMap/#>)

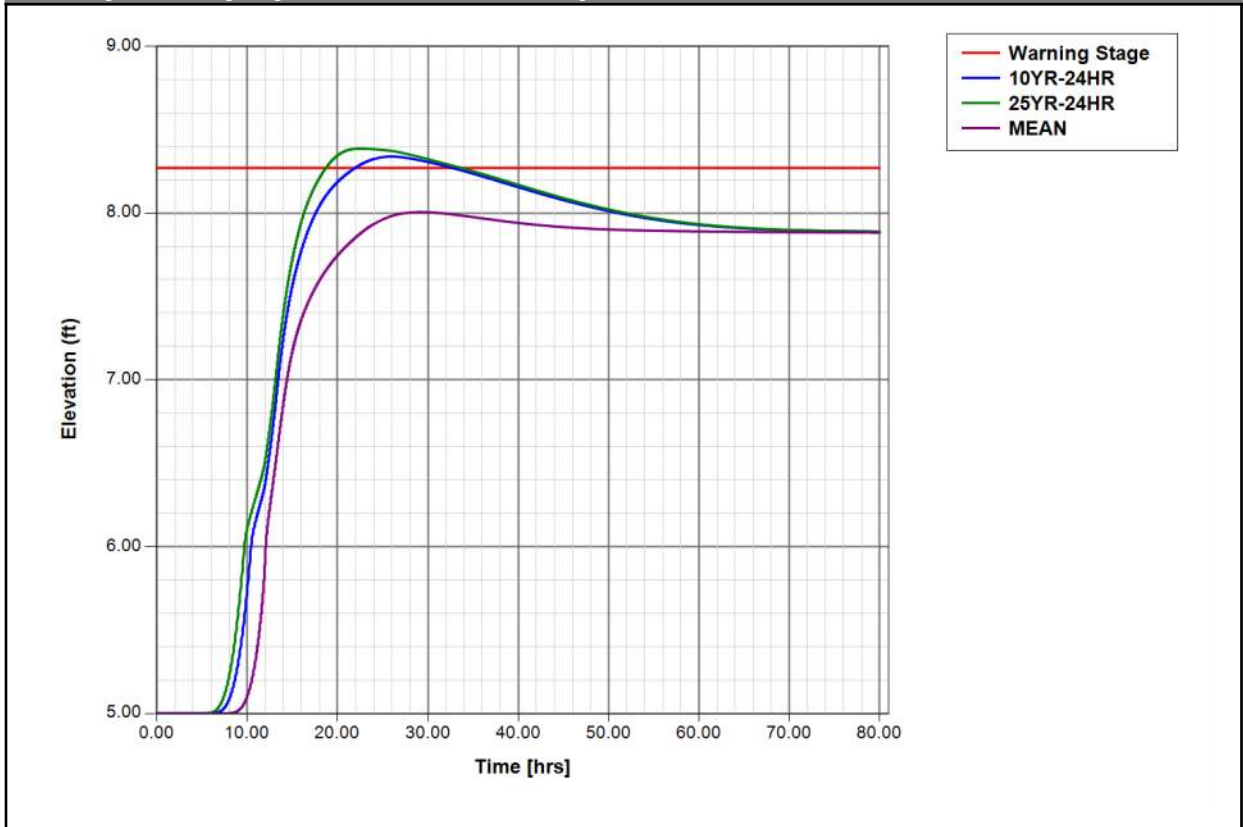
Node Max Conditions w/ Times [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
North Wetland Node	10YR-24 HR	8.27	8.34	0.0001	27.41	6.28	732554	25.9648	7.5449	14.3205	25.9648
North Wetland Node	25YR-24 HR	8.27	8.39	0.0001	33.61	11.89	762868	22.5522	7.3685	14.2146	22.5522
North Wetland Node	MEAN	8.27	8.01	0.0001	15.36	1.63	518593	29.2867	9.9925	14.4166	29.2184

Node Mass Balance Condensed [Existing]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
North Wetland Node	10YR-24HR	843138	468300	374838
North Wetland Node	25YR-24HR	1033977	658919	375059
North Wetland Node	MEAN	481909	109846	372063

Node Stage w/Warning Stage: North Wetland Node [Existing]



Node: Pond 12

Scenario: Existing
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 7.90 ft
 Warning Stage: 10.00 ft

Stage [ft]	Area [ac]	Area [ft2]
-12.00	0.7300	31799
-10.00	0.8400	36590
-8.00	0.9600	41818
-6.00	1.0800	47045
-4.00	1.2000	52272
-2.00	1.3300	57935
0.00	1.4700	64033
2.00	1.6100	70132
4.00	1.7500	76230
6.00	1.8900	82328
7.00	2.0400	88862
8.00	2.1900	95396
9.00	2.3400	101930
10.00	2.4900	108464

Comment: Information based on M&A, Inc. Drainage Report for Woodbridge PUD Phase 3 (Rev. 10-2-16), SJRWMD permit document record 6424066.

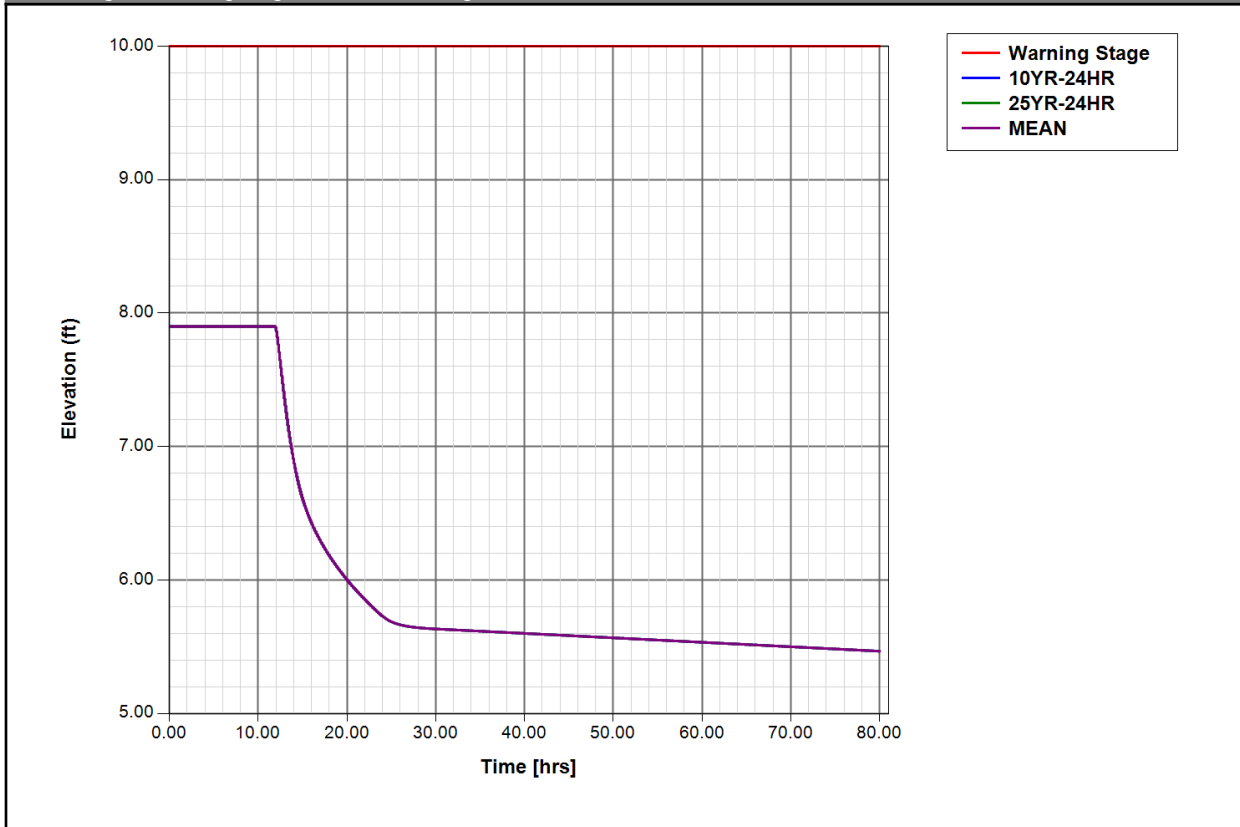
Node Max Conditions w/ Times [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
Pond 12	10YR-24 HR	10.00	7.90	-0.0001	0.00	15.48	94743	0.0000	12.3038	0.0000	12.4900
Pond 12	25YR-24 HR	10.00	7.90	-0.0001	0.00	15.48	94743	0.0000	12.3040	0.0000	12.4900
Pond 12	MEAN	10.00	7.90	-0.0001	0.00	15.48	94743	0.0000	12.3037	0.0000	12.4900

Node Mass Balance Condensed [Existing]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
Pond 12	10YR-24HR	0	211664	-211664
Pond 12	25YR-24HR	0	211664	-211664
Pond 12	MEAN	0	211663	-211663

Node Stage w/Warning Stage: Pond 12 [Existing]



Node: Pond 15

Scenario: Existing
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 6.37 ft
 Warning Stage: 8.87 ft

Stage [ft]	Area [ac]	Area [ft2]
-3.13	0.0100	436
-2.13	0.0200	871
-1.13	0.0400	1742
-0.13	0.0600	2614
0.87	0.0800	3485
1.87	0.1100	4792
2.87	0.1500	6534
3.87	0.1900	8276
4.87	0.2300	10019
5.87	0.2800	12197
6.87	0.3200	13939
7.87	0.3700	16117
8.87	0.4300	18731

Comment: Information based on M&A, Inc. Drainage Report for Woodbridge PUD Phase 3 (Rev. 10-2-16), SJRWMD permit document record 6424066.

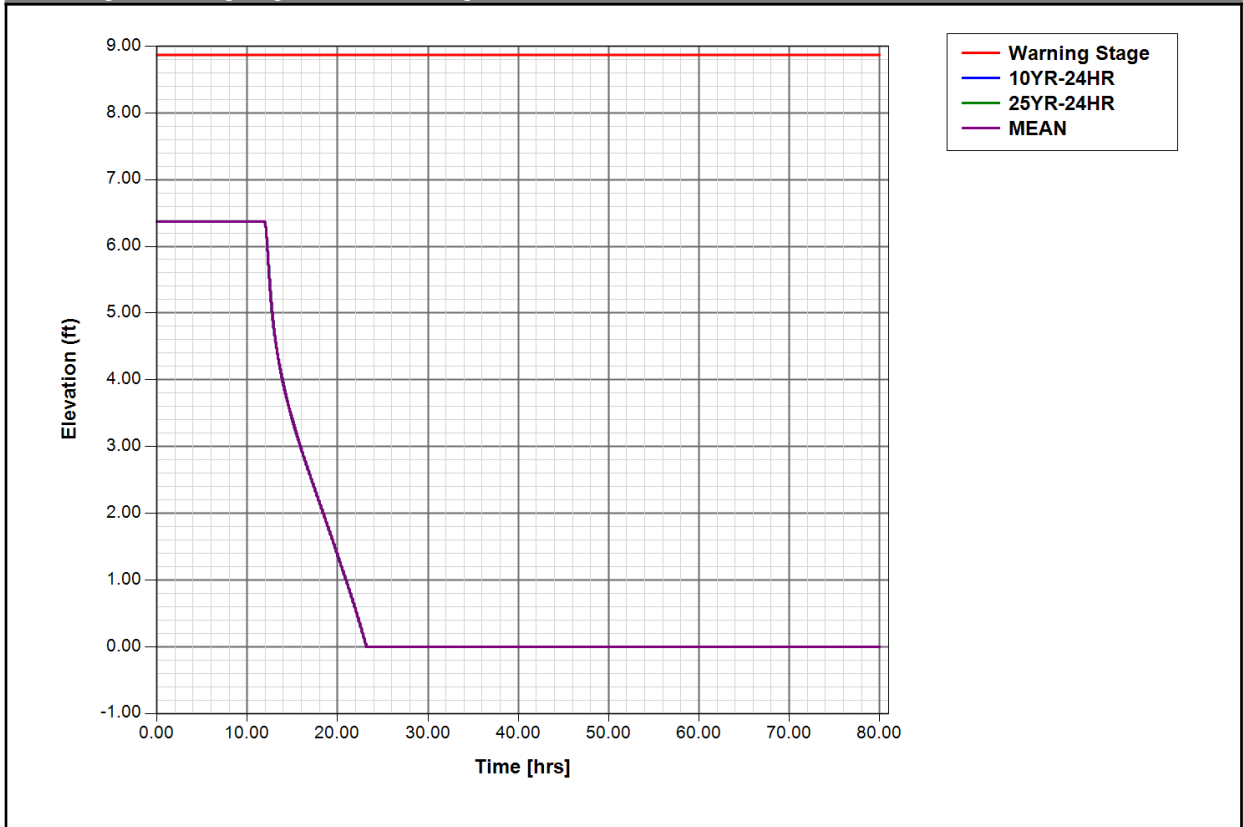
Node Max Conditions w/ Times [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
Pond 15	10YR-24 HR	8.87	6.37	-0.0001	0.00	7.18	13068	0.0000	11.9936	0.0000	12.3100
Pond 15	25YR-24 HR	8.87	6.37	-0.0001	0.00	7.18	13068	0.0000	11.9936	0.0000	12.3100
Pond 15	MEAN	8.87	6.37	-0.0001	0.00	7.18	13068	0.0000	11.9936	0.0000	12.3100

Node Mass Balance Condensed [Existing]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
Pond 15	10YR-24HR	0	46481	-46481
Pond 15	25YR-24HR	0	46481	-46481
Pond 15	MEAN	0	46481	-46481

Node Stage w/Warning Stage: Pond 15 [Existing]



Node: South Roadside Ditch Node

Scenario: Existing
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 6.50 ft
 Warning Stage: 7.87 ft

Stage [ft]	Area [ac]	Area [ft2]
6.50	0.0490	2134
7.00	0.1140	4966
7.50	0.1790	7797
7.87	0.2270	9888

Comment: Assume typical section for ditch based on surveyed portion of ditch (SURVRD01-21113 ETM-SS10.dgn)

Length of ditch based on Field Visit (5/18/21) and contour information from Nassau County GIS Tax Map 4.0
 (<https://maps.nassauflpa.com/NassauTaxMap/#>)

Stage information based on surveyed portion of ditch (SURVRD01-21113 ETM-SS10.dgn), assumed typical section and length of ditch.

Node Max Conditions w/ Times [Existing]

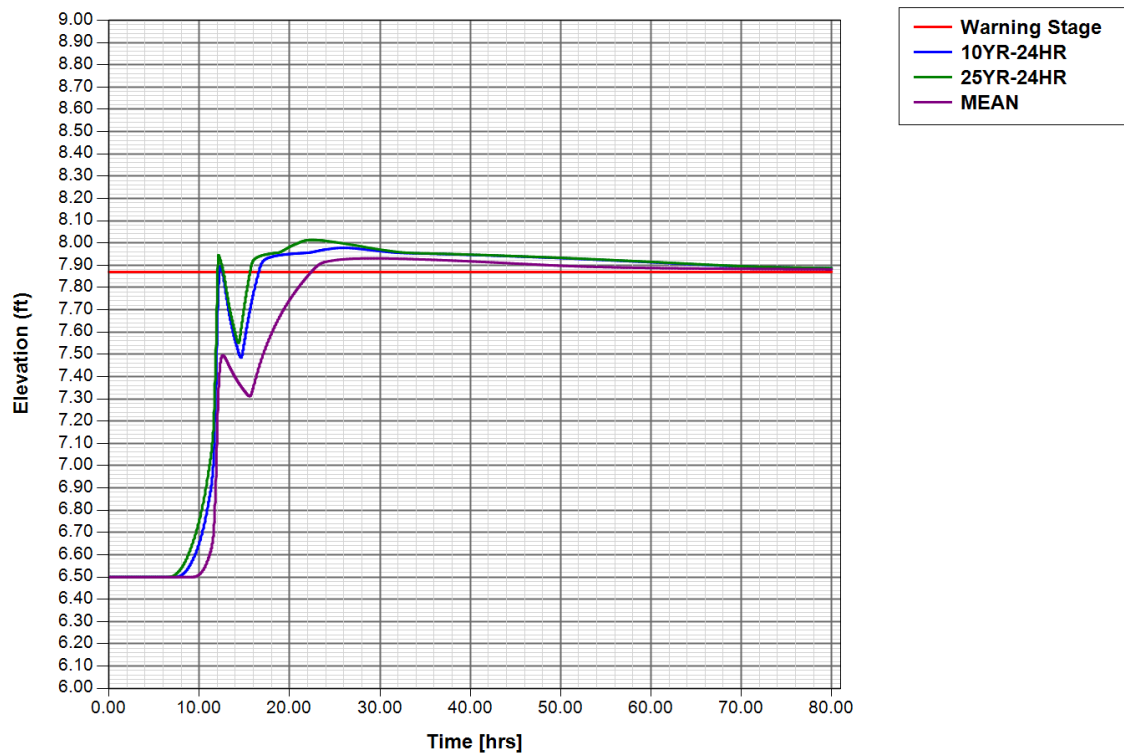
Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
South Roadside Ditch Node	10YR-24 HR	7.87	7.98	0.0001	6.28	6.28	9925	25.9861	11.3564	25.9648	25.9861
South Roadside Ditch Node	25YR-24 HR	7.87	8.01	0.0001	12.04	12.04	9925	22.5493	11.5698	22.5337	22.5493
South Roadside Ditch Node	MEAN	7.87	7.93	0.0001	2.63	1.63	9907	29.3919	11.6352	12.0667	29.3933

Node Mass Balance Condensed [Existing]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
South Roadside Ditch	10YR-24HR	489528	481105	8423

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
Node				
South Roadside Ditch Node	25YR-24HR	685640	677211	8429
South Roadside Ditch Node	MEAN	121084	112718	8366

Node Stage w/Warning Stage: South Roadside Ditch Node [Existing]



Node: South Wetland Node

Scenario: Existing
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 5.87 ft
 Warning Stage: 6.87 ft

Stage [ft]	Area [ac]	Area [ft2]
5.87	0.7800	33977
6.87	3.1000	135036
7.87	14.5700	634669

Comment: Information based on M&A, Inc. Drainage Report for Woodbridge PUD Phase 3 (Rev. 10-2-16), SJRWMD permit document record 6424066. Reviewed and agree with information for wet-4 and wet-5. These basins from M&A report were combined to develop South Wetland basin in model.

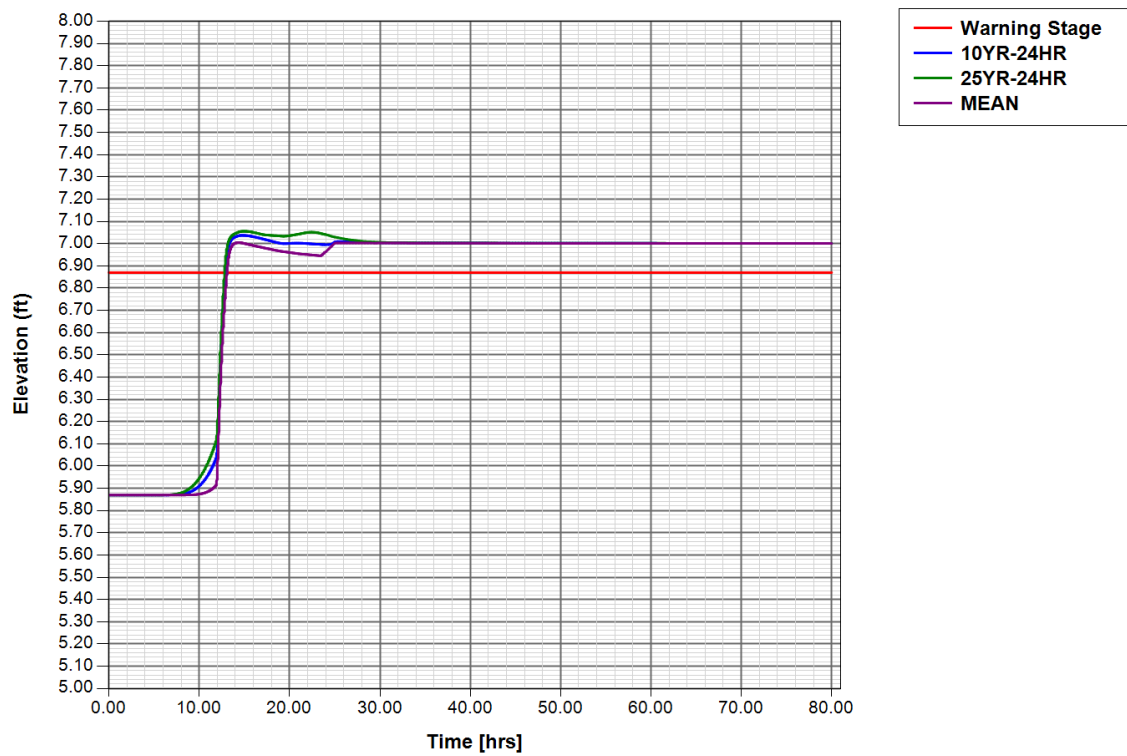
Node Max Conditions w/ Times [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
South Wetland Node	10YR-24 HR	6.87	7.04	0.0001	25.44	21.88	218538	14.7740	12.0028	12.4100	14.7740
South Wetland Node	25YR-24 HR	6.87	7.06	0.0001	26.59	25.64	227775	14.9792	12.0078	12.4100	14.9792
South Wetland Node	MEAN	6.87	7.00	0.0001	23.62	15.91	202333	14.4404	11.9947	12.3900	14.4404

Node Mass Balance Condensed [Existing]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
South Wetland Node	10YR-24HR	1408360	1301869	106491
South Wetland Node	25YR-24HR	1771302	1664807	106495
South Wetland Node	MEAN	743592	637163	106429

Node Stage w/Warning Stage: South Wetland Node [Existing]



Node: Unpermitted Pond Node

Scenario: Existing
 Type: Stage/Area
 Base Flow: 0.00 cfs
 Initial Stage: 6.00 ft
 Warning Stage: 7.26 ft

Stage [ft]	Area [ac]	Area [ft2]
6.00	1.2830	55887
7.00	1.4070	61289
7.26	1.4570	63467

Comment: Areas and stages based on survey file (SURVRD01-21113 ETM-SS10.dgn)

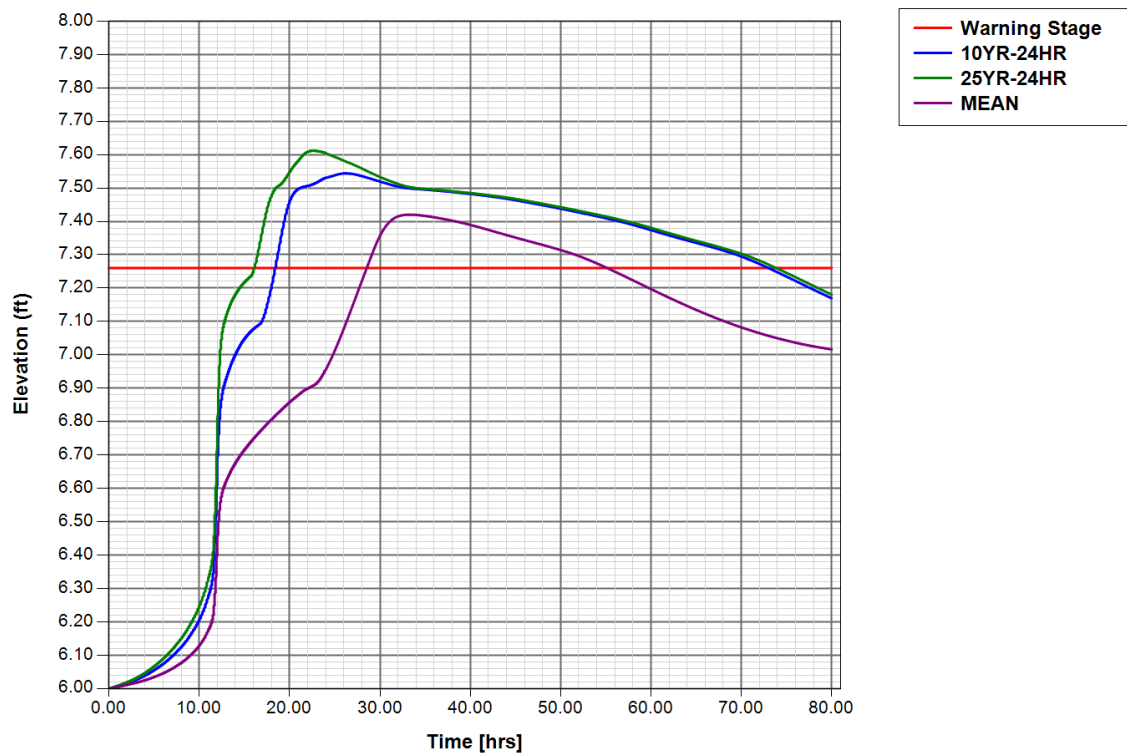
Node Max Conditions w/ Times [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
Unpermitted Pond Node	10YR-24 HR	7.26	7.54	0.0001	15.87	6.26	63467	26.2421	18.3979	12.0166	26.2421
Unpermitted Pond Node	25YR-24 HR	7.26	7.61	0.0001	18.53	12.37	63467	22.6254	11.6665	12.0166	22.6254
Unpermitted Pond Node	MEAN	7.26	7.42	0.0001	10.66	1.45	63467	33.2845	26.2900	12.0166	33.2845

Node Mass Balance Condensed [Existing]

Node Name	Sim Name	Total Inflow [ft3]	Total Outflow [ft3]	Stored Volume (Flow Based) [ft3]
Unpermitted Pond Node	10YR-24HR	545083	475982	69101
Unpermitted Pond Node	25YR-24HR	752834	683043	69791
Unpermitted Pond Node	MEAN	161906	102295	59611

Node Stage w/Warning Stage: Unpermitted Pond Node [Existing]



Node: bndy-3

Scenario: Existing
 Type: Time/Stage
 Base Flow: 0.00 cfs
 Initial Stage: 6.00 ft
 Warning Stage: 8.00 ft
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	6.00
0	0	0	25.0000	7.00
0	0	0	50.0000	7.00

Comment: Information based on M&A, Inc. Drainage Report for Woodbridge PUD Phase 3 (Rev. 10-2-16), SJRWMD permit document record 6424066.

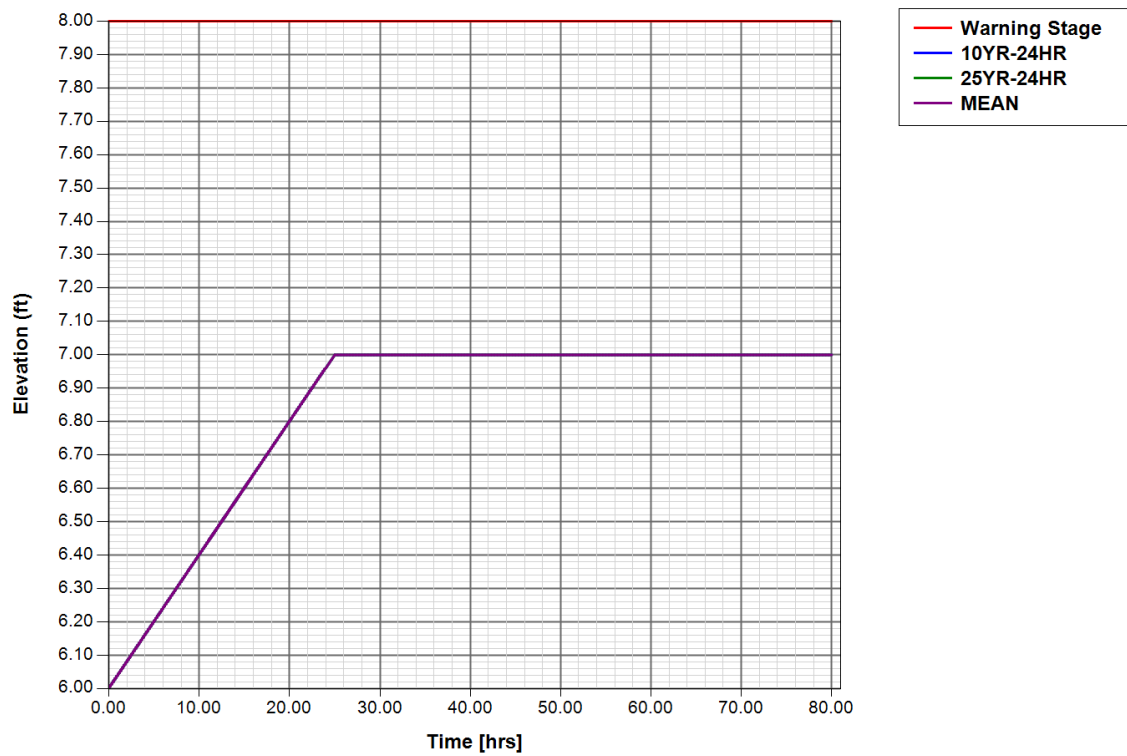
Node Max Conditions w/ Times [Existing]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft ²]	Time to Max Stage [hr]	Time to Min/Max Delta Stage [hr]	Time to Max Total Inflow [hr]	Time to Max Total Outflow [hr]
bndy-3	10YR-24 HR	8.00	7.00	0.0001	21.88	0.00	0	25.0005	0.0028	14.7744	0.0000
bndy-3	25YR-24 HR	8.00	7.00	0.0001	25.64	0.00	0	25.0012	0.0028	14.9796	0.0000
bndy-3	MEAN	8.00	7.00	0.0001	15.80	0.00	0	25.0001	0.0028	14.4408	0.0000

Node Mass Balance Condensed [Existing]

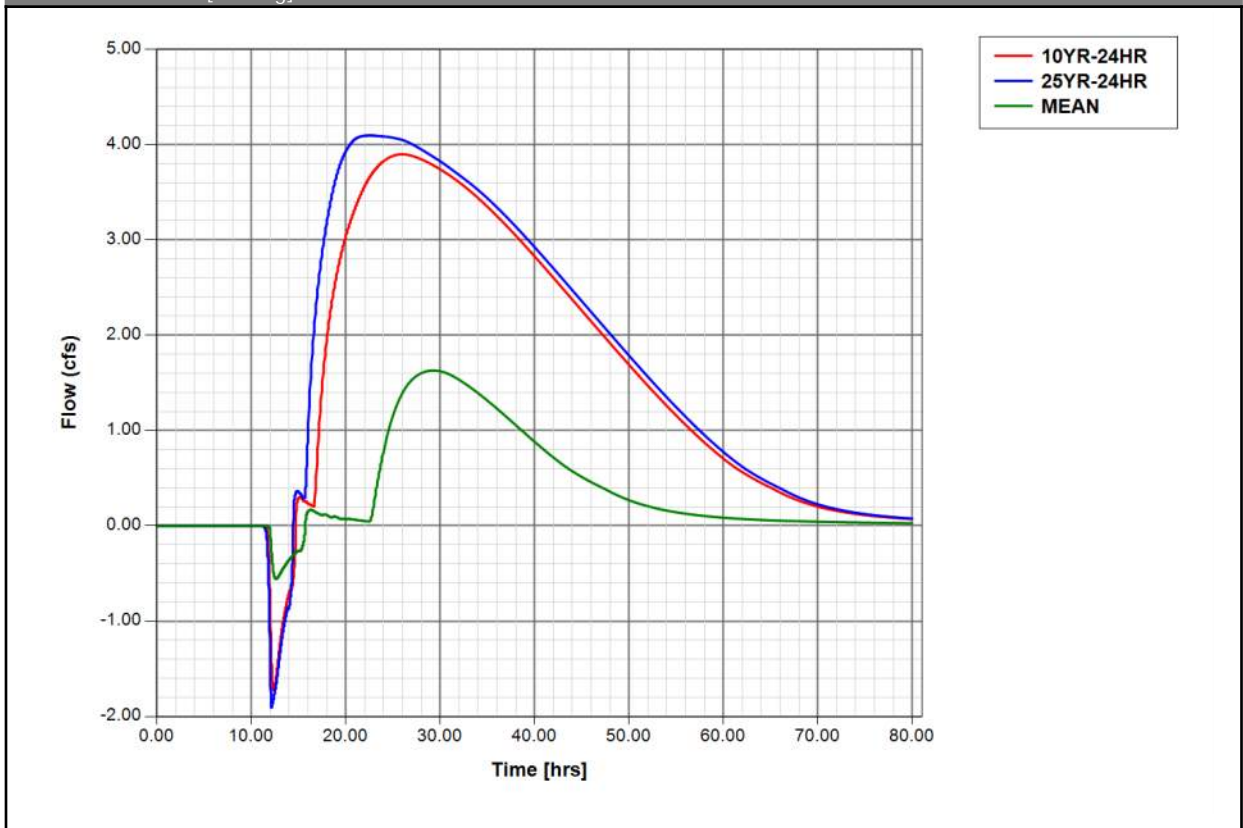
Node Name	Sim Name	Total Inflow [ft ³]	Total Outflow [ft ³]	Stored Volume (Flow Based) [ft ³]
bndy-3	10YR-24HR	1301708	0	1301708
bndy-3	25YR-24HR	1664861	0	1664861
bndy-3	MEAN	632503	0	632503

Node Stage w/Warning Stage: bndy-3 [Existing]



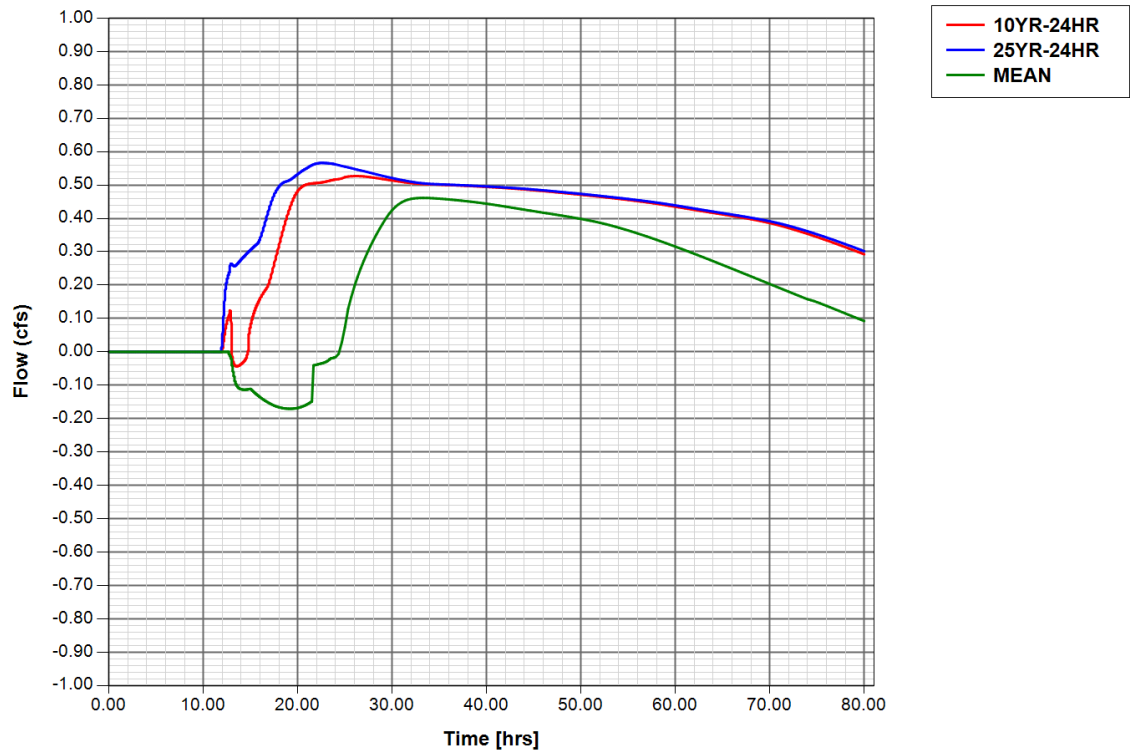
Pipe Link: 18" CMP		Upstream	Downstream
Scenario:	Existing	Invert: 6.99 ft	Invert: 6.94 ft
From Node:	North Wetland	Manning's N: 0.0200	Manning's N: 0.0200
	Node	Geometry: Circular	Geometry: Circular
To Node:	South Roadside	Max Depth: 1.50 ft	Max Depth: 1.50 ft
	Ditch Node	Bottom Clip	
Link Count:	1	Default: 0.00 ft	Default: 0.00 ft
Flow Direction:	Both	Op Table:	Op Table:
Damping:	0.0000	Ref Node:	Ref Node:
Length:	25.48 ft	Manning's N: 0.0000	Manning's N: 0.0000
FHWA Code:	6	Top Clip	
Entr Loss Coef:	0.90	Default: 0.00 ft	Default: 0.00 ft
Exit Loss Coef:	1.00	Op Table:	Op Table:
Bend Loss Coef:	0.00	Ref Node:	Ref Node:
Bend Location:	0.00 dec	Manning's N: 0.0000	Manning's N: 0.0000
Energy Switch:	Energy		
Comment: Pipe info from CADD file (SURVRD01-21113 ETM-SS10.dgn)			

Link Flow: 18" CMP [Existing]



Pipe Link: 6" CPP		Upstream	Downstream
Scenario:	Existing	Invert: 6.55 ft	Invert: 6.61 ft
From Node:	Unpermitted Pond	Manning's N: 0.0120	Manning's N: 0.1200
	Node	Geometry: Circular	Geometry: Circular
To Node:	South Wetland	Max Depth: 0.50 ft	Max Depth: 0.50 ft
	Node	Bottom Clip	
Link Count:	1	Default: 0.00 ft	Default: 0.00 ft
Flow Direction:	Both	Op Table:	Op Table:
Damping:	0.0000 ft	Ref Node:	Ref Node:
Length:	16.15 ft	Manning's N: 0.0000	Manning's N: 0.0000
FHWA Code:	6	Top Clip	
Entr Loss Coef:	0.90	Default: 0.00 ft	Default: 0.00 ft
Exit Loss Coef:	1.00	Op Table:	Op Table:
Bend Loss Coef:	0.00	Ref Node:	Ref Node:
Bend Location:	0.00 dec	Manning's N: 0.0000	Manning's N: 0.0000
Energy Switch:	Energy		
Comment:			

Link Flow: 6" CPP [Existing]



Weir Link: Clements Road

Scenario: Existing
From Node: North Wetland Node
To Node: South Roadside Ditch Node
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 8.26 ft
Control Elevation: 8.26 ft
Cross Section: Clements Road

Bottom Clip

Default: 0.00 ft
Op Table:
Ref Node:

Top Clip

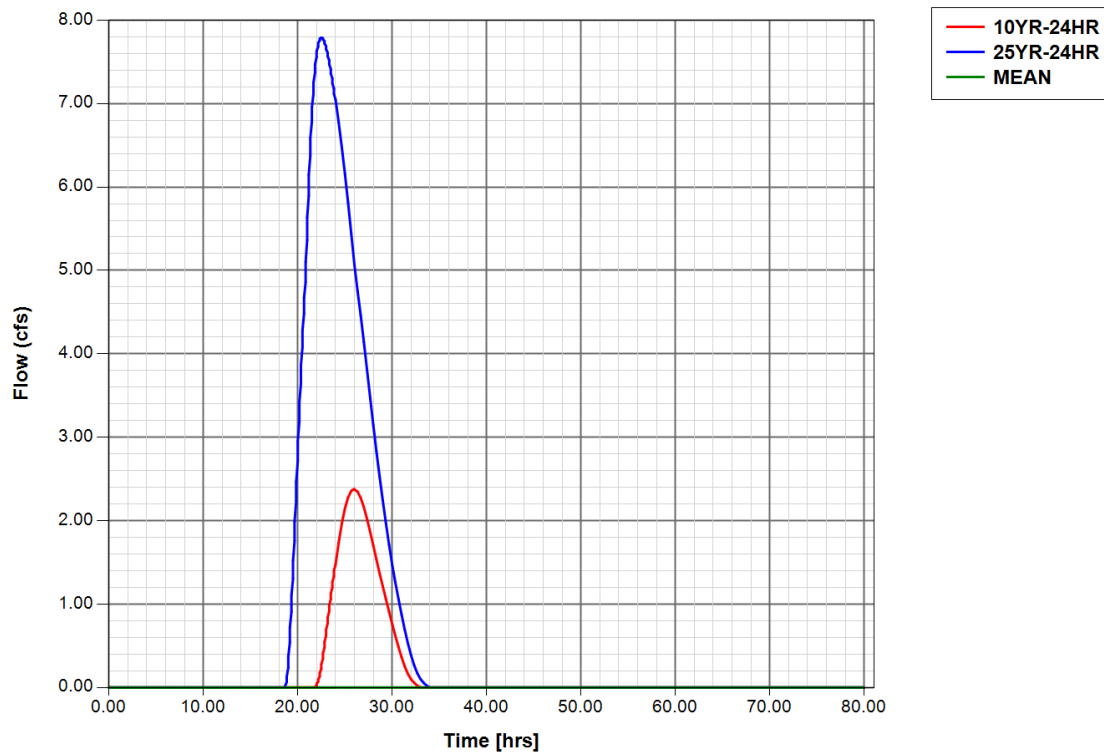
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients

Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Link Flow: Clements Road [Existing]



Weir Link: North Berm of Unpermitted Pond

Scenario: Existing
From Node: South Roadside Ditch Node
To Node: Unpermitted Pond Node
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 7.87 ft
Control Elevation: 7.87 ft
Cross Section: North Bank - Unpermitted Pond

Bottom Clip

Default: 0.00 ft
Op Table:
Ref Node:

Top Clip

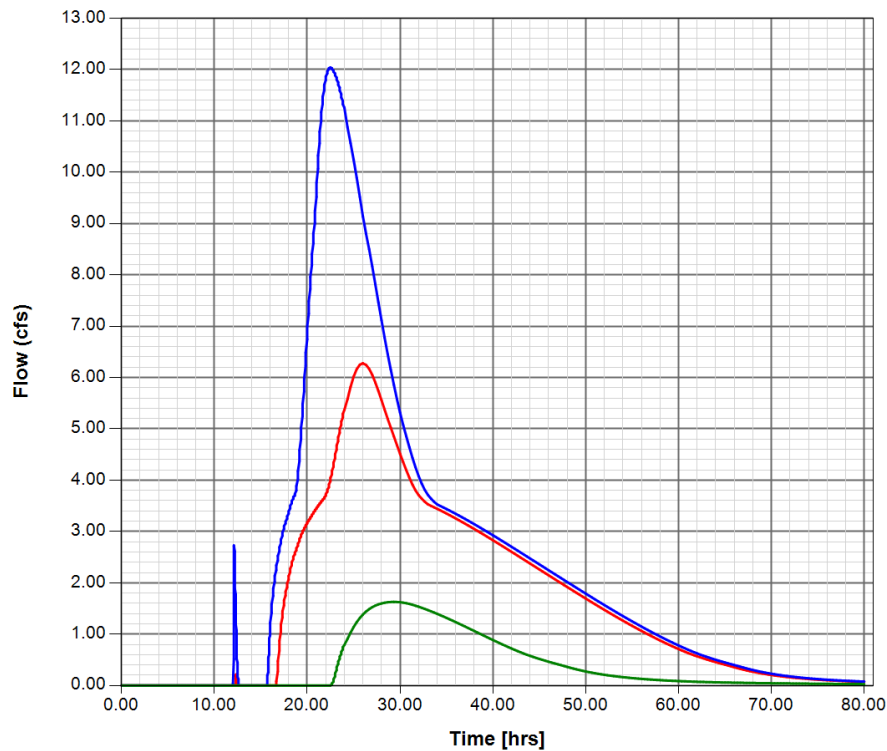
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients

Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

Comment:

Link Flow: North Berm of Unpermitted Pond [Existing]



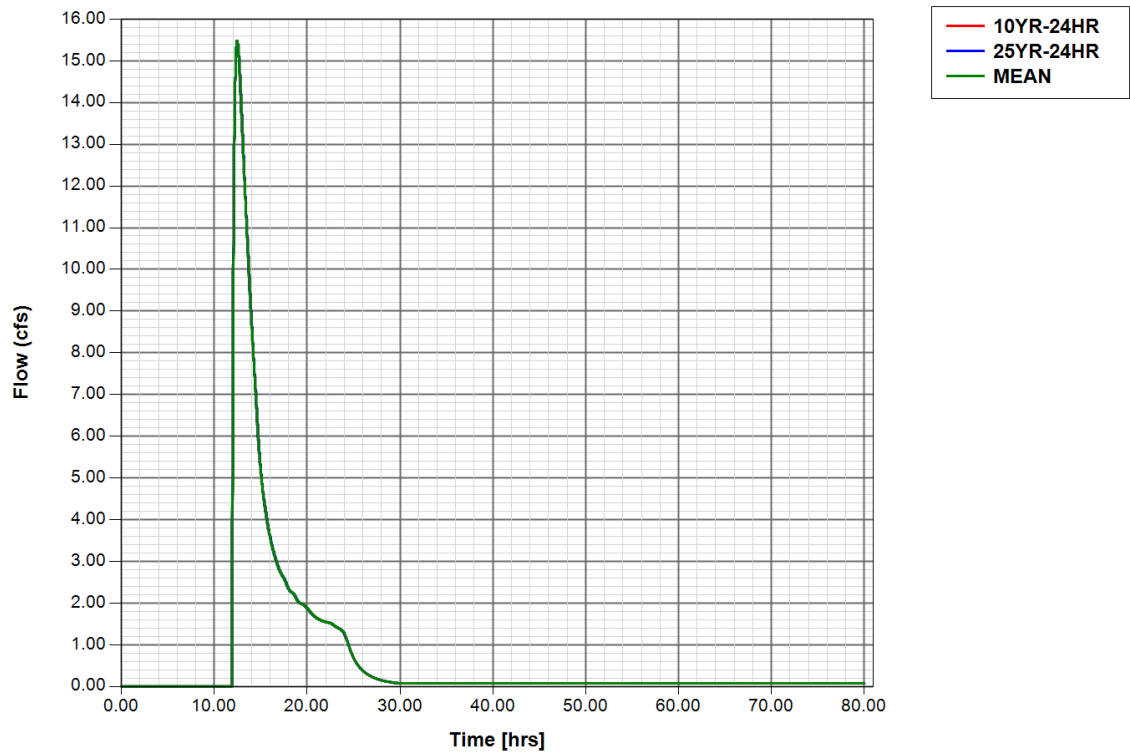
Rating Curve Link: Pond12 Time-Discharge

Scenario: Existing
From Node: Pond 12
To Node: South Wetland Node
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
Pond12	0.00	Pond 12	0.00	Pond 12

Comment:

Link Flow: Pond12 Time-Discharge [Existing]



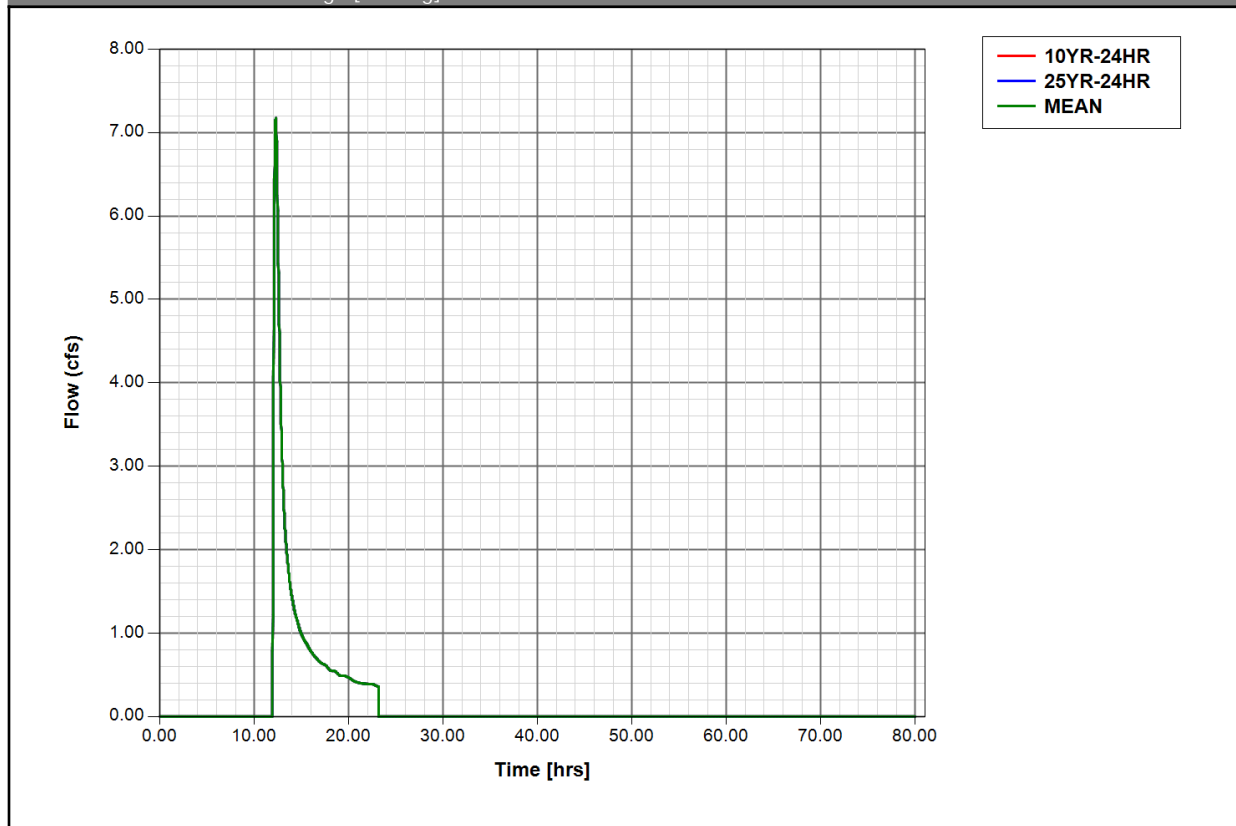
Rating Curve Link: Pond15 Time-Discharge

Scenario: Existing
From Node: Pond 15
To Node: South Wetland Node
Link Count: 1
Flow Direction: Both

Table	Elev On [ft]	Elev On Node	Elev Off [ft]	Elev Off Node
Pond15	0.00	Pond 15	0.00	Pond 15

Comment:

Link Flow: Pond15 Time-Discharge [Existing]



Weir Link: South Berm of Unpermitted Pond

Scenario: Existing
From Node: Unpermitted Pond Node
To Node: South Wetland Node
Link Count: 1
Flow Direction: Both
Damping: 0.0000 ft
Weir Type: Broad Crested Vertical
Geometry Type: Irregular
Invert: 7.26 ft
Control Elevation: 7.26 ft
Cross Section: South Bank - Unpermitted Pond

Bottom Clip

Default: 0.00 ft
Op Table:
Ref Node:

Top Clip

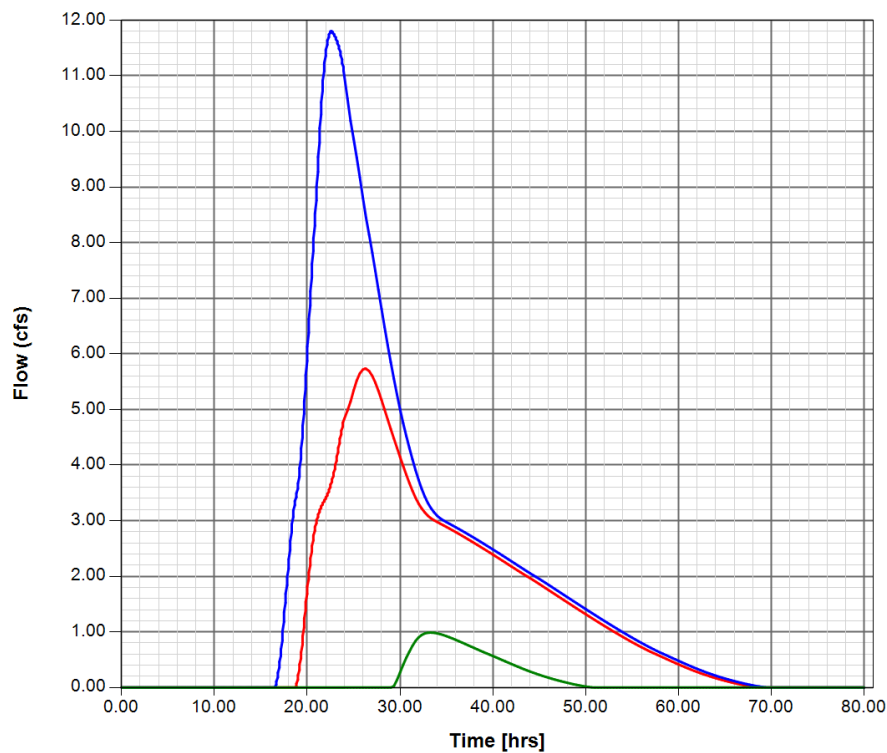
Default: 0.00 ft
Op Table:
Ref Node:

Discharge Coefficients

Weir Default: 2.800
Weir Table:
Orifice Default: 0.600
Orifice Table:

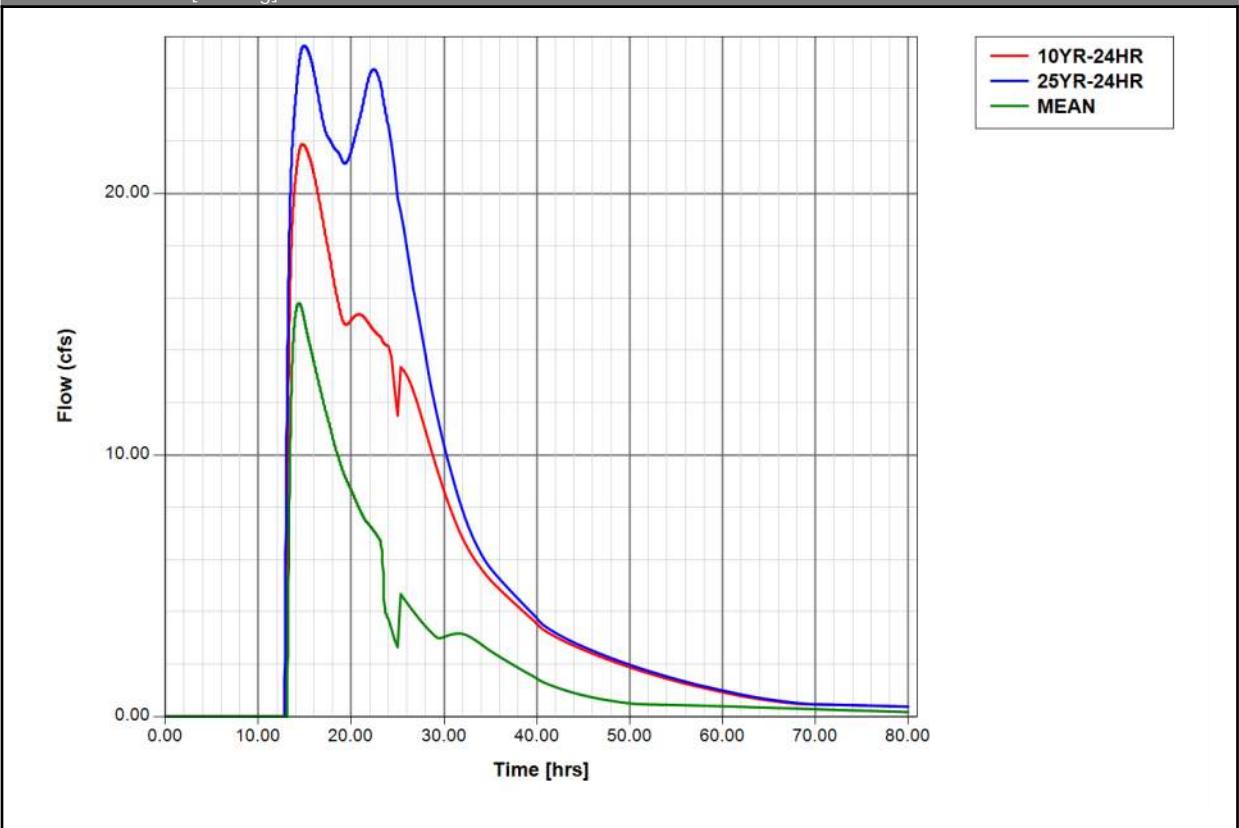
Comment:

Link Flow: South Berm of Unpermitted Pond [Existing]



Weir Link: w-off-3		
Scenario:	Existing	Bottom Clip
From Node:	South Wetland Node	Default: 0.00 ft
To Node:	bndy-3	Op Table:
Link Count:	1	Ref Node:
Flow Direction:	Both	Top Clip
Damping:	0.0000 ft	Default: 0.00 ft
Weir Type:	Gravel Road Vertical	Op Table:
Geometry Type:	Trapezoidal	Ref Node:
Invert:	6.87 ft	Discharge Coefficients
Control Elevation:	6.87 ft	Weir Default: 2.640
Max Depth:	9999.00 ft	Weir Table:
Extrapolation Method:	Normal Projection	Orifice Default: 0.600
Bottom Width:	120.00 ft	Orifice Table:
Left Slope:	10.000 (h:v)	
Right Slope:	10.000 (h:v)	
Comment:		

Link Flow: w-off-3 [Existing]



Weir Cross Section: Clements Road

Scenario: Existing

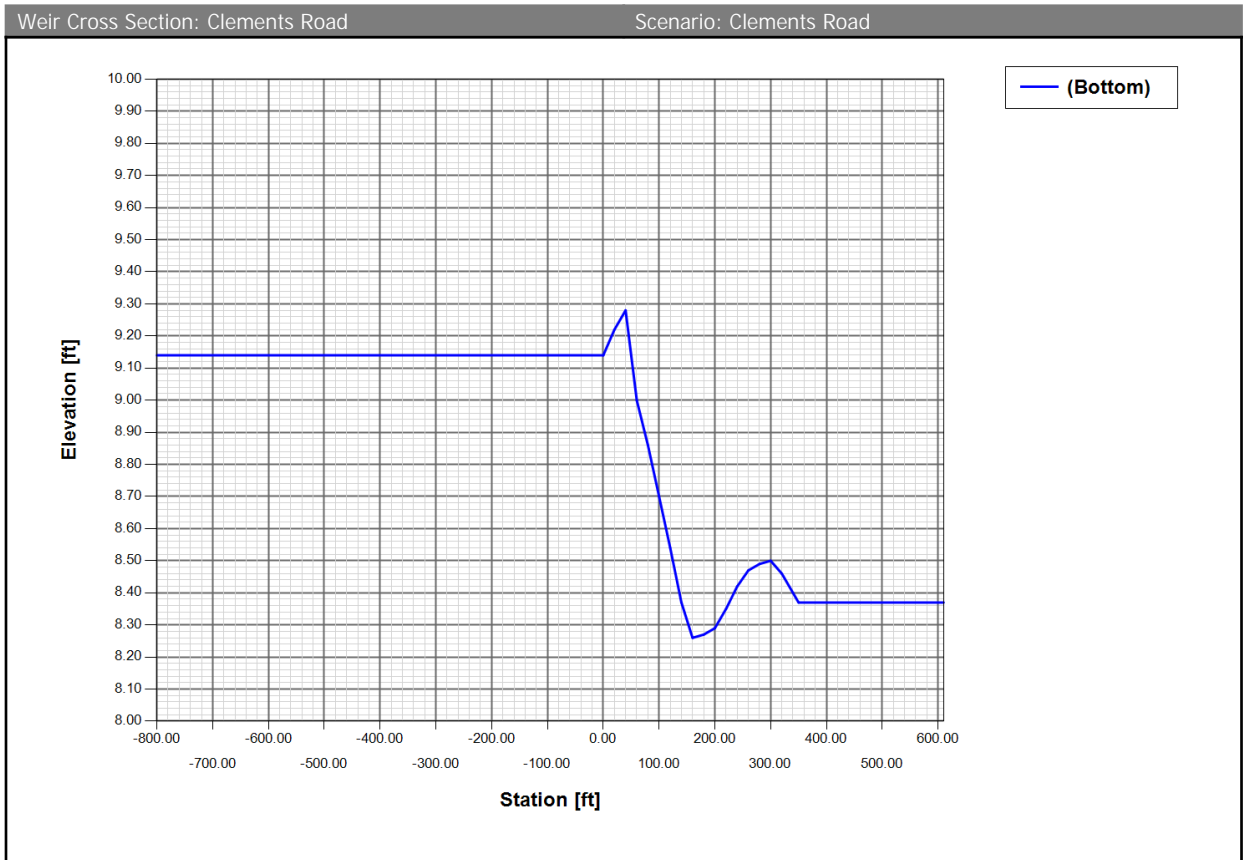
Lid: No

Bottom Point Table

Order	Station [ft]	Elevation [ft]
0	-800.00	9.14
1	0.00	9.14
2	20.00	9.22
3	40.00	9.28
4	60.00	9.00
5	80.00	8.86
6	100.00	8.70
7	120.00	8.54
8	140.00	8.37
9	160.00	8.26
10	180.00	8.27
11	200.00	8.29
12	220.00	8.35
13	240.00	8.42
14	260.00	8.47
15	280.00	8.49
16	300.00	8.50
17	320.00	8.46
18	340.00	8.40
19	350.00	8.37
20	610.00	8.37

Comment: Data based on survey file (SURVRD01-21113 ETM-SS10.dgn).

Clements Road slopes from south to north near the existing driveways, but transitions as it extends south, sloping north to south for the majority of the surveyed extents.



Weir Cross Section: North Bank - Unpermitted Pond

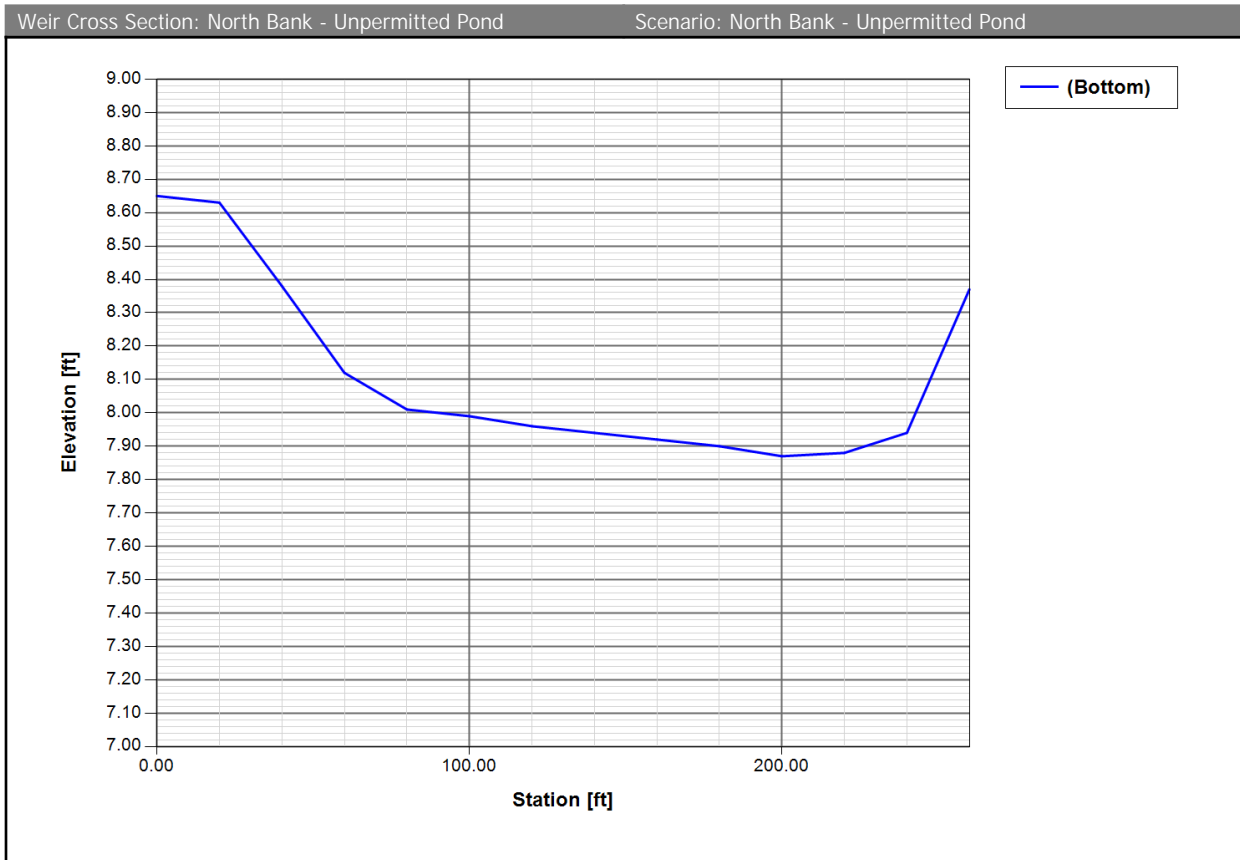
Scenario: Existing

Lid: No

Bottom Point Table

Order	Station [ft]	Elevation [ft]
0	0.00	8.65
1	20.00	8.63
2	40.00	8.38
3	60.00	8.12
4	80.00	8.01
5	100.00	7.99
6	120.00	7.96
7	140.00	7.94
8	160.00	7.92
9	180.00	7.90
10	200.00	7.87
11	220.00	7.88
12	240.00	7.94
13	260.00	8.37

Comment: Data based on survey file (SURVRD01-21113 ETM-SS10.dgn).



Weir Cross Section: South Bank - Unpermitted Pond

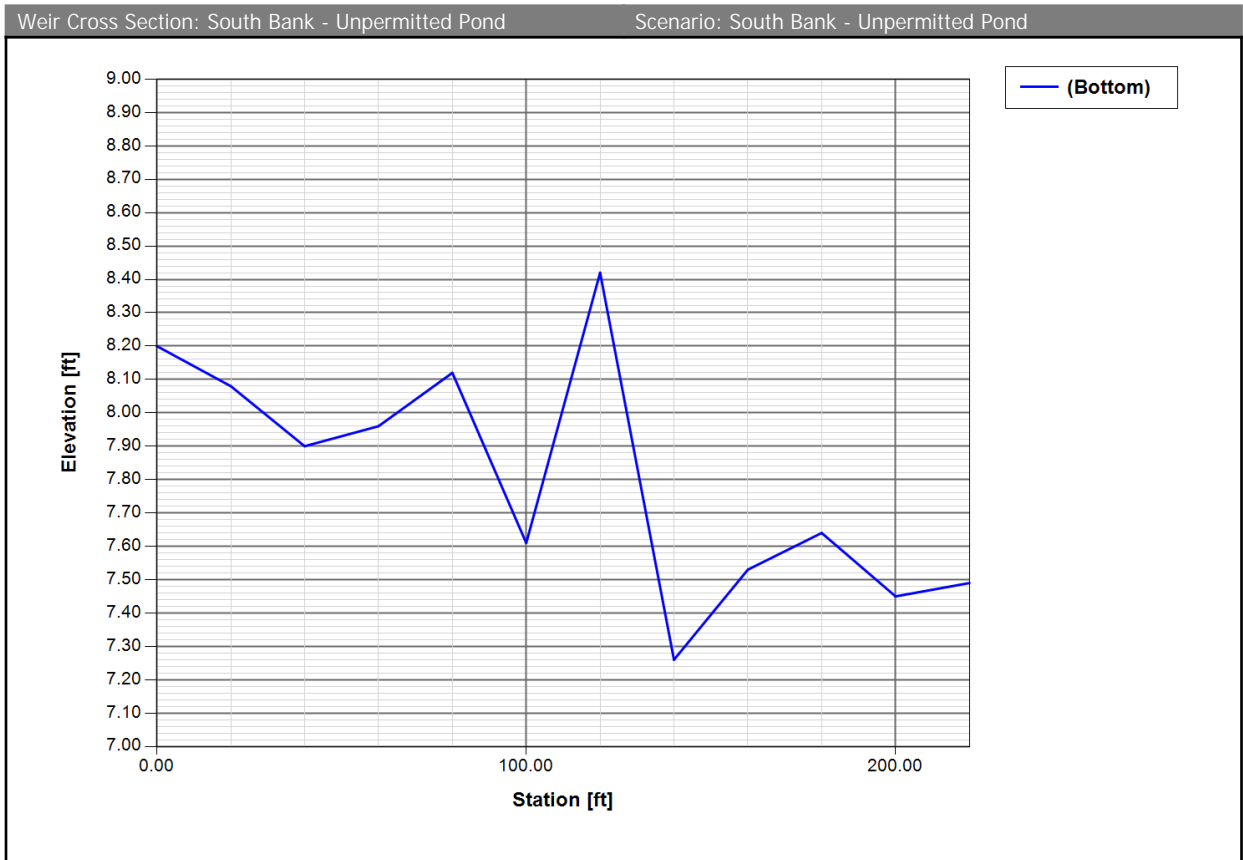
Scenario: Existing

Lid: No

Bottom Point Table

Order	Station [ft]	Elevation [ft]
0	0.00	8.20
1	20.00	8.08
2	40.00	7.90
3	60.00	7.96
4	80.00	8.12
5	100.00	7.61
6	120.00	8.42
7	140.00	7.26
8	160.00	7.53
9	180.00	7.64
10	200.00	7.45
11	220.00	7.49

Comment: Data based on survey file (SURVRD01-21113 ETM-SS10.dgn).



Simulation: 10YR-24HR

Scenario: Existing
 Run Date/Time: 5/26/2021 12:57:08 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	80.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.0100
Max Calculation Time:		5.1210

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	11.0000	1.0000
0	0	0	16.0000	5.0000
0	0	0	24.0000	20.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:

Tolerances & Options

Time Marching: FIREBALL

IA Recovery Time: 24.0000 hr

dZ Tolerance: 0.0001 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic

Smp/Man Basin Rain Global
Opt:
Rainfall Name: ~FLMOD
Rainfall Amount: 7.44 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Simulation: 25YR-24HR

Scenario: Existing
 Run Date/Time: 5/26/2021 12:57:15 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	80.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.0100
Max Calculation Time:		5.1210

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	11.0000	1.0000
0	0	0	16.0000	5.0000
0	0	0	24.0000	20.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:

Tolerances & Options

Time Marching: FIREBALL

IA Recovery Time: 24.0000 hr

dZ Tolerance: 0.0001 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic

Smp/Man Basin Rain Global
Opt:
Rainfall Name: ~FLMOD
Rainfall Amount: 8.64 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Simulation: MEAN

Scenario: Existing
 Run Date/Time: 5/26/2021 12:57:21 PM
 Program Version: ICPR4 4.07.08

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	80.0000

	Hydrology [sec]	Surface Hydraulics [sec]
Min Calculation Time:	60.0000	0.0100
Max Calculation Time:		5.1210

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	5.0000
0	0	0	11.0000	1.0000
0	0	0	16.0000	5.0000
0	0	0	24.0000	20.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:

Unit Hydrograph
Folder:

Lookup Tables

Boundary Stage Set:
 Extern Hydrograph Set:
 Curve Number Set:

Green-Ampt Set:
 Vertical Layers Set:
 Impervious Set:

Tolerances & Options

Time Marching: FIREBALL

IA Recovery Time: 24.0000 hr

dZ Tolerance: 0.0001 ft
Max dZ: 1.0000 ft
Link Optimizer Tol: 0.0000 ft
Edge Length Option: Automatic

Smp/Man Basin Rain Global
Opt:
Rainfall Name: ~FLMOD
Rainfall Amount: 5.10 in
Storm Duration: 24.0000 hr
Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2
(1D):
Energy Switch (1D): Energy

Comment:

Scenario	Sim	Basin Name	Node Name	Maximum Flow Rate [cfs]	Time to Maximum Flow Rate [hrs]
Existing	10YR-24HR	North Wetland Basin	North Wetland Node	26.75	14.3667
Existing	10YR-24HR	South Roadside Ditch Basin	South Roadside Ditch Node	5.00	12.0500
Existing	10YR-24HR	South Wetland Basin	South Wetland Node	15.83	15.6500
Existing	10YR-24HR	Unpermitted Pond Basin	Unpermitted Pond Node	15.87	12.0167
Existing	25YR-24HR	North Wetland Basin	North Wetland Node	32.97	14.3500
Existing	25YR-24HR	South Roadside Ditch Basin	South Roadside Ditch Node	6.28	12.0500
Existing	25YR-24HR	South Wetland Basin	South Wetland Node	19.57	15.6167
Existing	25YR-24HR	Unpermitted Pond Basin	Unpermitted Pond Node	18.53	12.0167
Existing	MEAN	North Wetland Basin	North Wetland Node	15.05	14.4333
Existing	MEAN	South Roadside Ditch Basin	South Roadside Ditch Node	2.63	12.0667
Existing	MEAN	South Wetland Basin	South Wetland Node	8.83	15.7667
Existing	MEAN	Unpermitted Pond Basin	Unpermitted Pond Node	10.66	12.0167

Scenario	Sim	Node Name	Warning Stage [ft]	Maximum Stage [ft]	Time to Maximum Stage [hrs]	Maximum Total Outflow Rate [cfs]	Time to Maximum Total Outflow Rate [hrs]	Min/Max Change in Stage [ft]	Maximum Surface Area [ft2]
Existing	10YR-24HR	bndy-3	8.00	7.00	25.0005	0.00	0.0000	0.0001	0
Existing	10YR-24HR	North Wetland Node	8.27	8.34	25.9648	6.28	25.9648	0.0001	732554
Existing	10YR-24HR	Pond 12	10.00	7.90	0.0000	15.48	12.4900	-0.0001	94743
Existing	10YR-24HR	Pond 15	8.87	6.37	0.0000	7.18	12.3100	-0.0001	13068
Existing	10YR-24HR	South Roadside Ditch Node	7.87	7.98	25.9861	6.28	25.9861	0.0001	9925
Existing	10YR-24HR	South Wetland Node	6.87	7.04	14.7740	21.88	14.7740	0.0001	218538
Existing	10YR-24HR	Unpermitted Pond Node	7.26	7.54	26.2421	6.26	26.2421	0.0001	63467
Existing	25YR-24HR	bndy-3	8.00	7.00	25.0012	0.00	0.0000	0.0001	0
Existing	25YR-24HR	North Wetland Node	8.27	8.39	22.5522	11.89	22.5522	0.0001	762868
Existing	25YR-24HR	Pond 12	10.00	7.90	0.0000	15.48	12.4900	-0.0001	94743
Existing	25YR-24HR	Pond 15	8.87	6.37	0.0000	7.18	12.3100	-0.0001	13068
Existing	25YR-24HR	South Roadside Ditch Node	7.87	8.01	22.5493	12.04	22.5493	0.0001	9925
Existing	25YR-24HR	South Wetland Node	6.87	7.06	14.9792	25.64	14.9792	0.0001	227775
Existing	25YR-24HR	Unpermitted Pond Node	7.26	7.61	22.6254	12.37	22.6254	0.0001	63467
Existing	MEAN	bndy-3	8.00	7.00	25.0001	0.00	0.0000	0.0001	0
Existing	MEAN	North Wetland Node	8.27	8.01	29.2867	1.63	29.2184	0.0001	518593
Existing	MEAN	Pond 12	10.00	7.90	0.0000	15.48	12.4900	-0.0001	94743
Existing	MEAN	Pond 15	8.87	6.37	0.0000	7.18	12.3100	-0.0001	13068
Existing	MEAN	South Roadside Ditch Node	7.87	7.93	29.3919	1.63	29.3933	0.0001	9907
Existing	MEAN	South Wetland Node	6.87	7.00	14.4404	15.91	14.4404	0.0001	202333
Existing	MEAN	Unpermitted Pond Node	7.26	7.42	33.2845	1.45	33.2845	0.0001	63467

Scenario	Sim	Link Name	From Node Name	To Node Name	Maximum Flow Rate [cfs]	Maximum US Velocity [fps]	Maximum DS Velocity [fps]	Maximum Avg Velocity [fps]
Existing	10YR-24HR	18" CMP	North Wetland Node	South Roadside Ditch Node	3.90	2.33	-3.40	2.66
Existing	10YR-24HR	6" CPP	Unpermitted Pond Node	South Wetland Node	0.53	2.68	3.19	2.91
Existing	10YR-24HR	Clements Road	North Wetland Node	South Roadside Ditch Node	2.38	0.66	0.66	0.66
Existing	10YR-24HR	North Berm of Unpermitted Pond	South Roadside Ditch Node	Unpermitted Pond Node	6.28	0.76	0.76	0.76
Existing	10YR-24HR	Pond12 Time-Discharge	Pond 12	South Wetland Node	15.48	0.00	0.00	0.00
Existing	10YR-24HR	Pond15 Time-Discharge	Pond 15	South Wetland Node	7.18	0.00	0.00	0.00
Existing	10YR-24HR	South Berm of Unpermitted Pond	Unpermitted Pond Node	South Wetland Node	5.73	1.02	1.02	1.02
Existing	10YR-24HR	w-off-3	South Wetland Node	bdny-3	21.88	1.08	1.08	1.08
Existing	25YR-24HR	18" CMP	North Wetland Node	South Roadside Ditch Node	4.09	2.39	-3.50	2.71
Existing	25YR-24HR	6" CPP	Unpermitted Pond Node	South Wetland Node	0.57	2.88	3.18	2.99
Existing	25YR-24HR	Clements Road	North Wetland Node	South Roadside Ditch Node	7.79	0.78	0.78	0.78
Existing	25YR-24HR	North Berm of Unpermitted Pond	South Roadside Ditch Node	Unpermitted Pond Node	12.04	0.88	0.88	0.88
Existing	25YR-24HR	Pond12 Time-Discharge	Pond 12	South Wetland Node	15.48	0.00	0.00	0.00
Existing	25YR-24HR	Pond15 Time-Discharge	Pond 15	South Wetland Node	7.18	0.00	0.00	0.00
Existing	25YR-24HR	South Berm of Unpermitted Pond	Unpermitted Pond Node	South Wetland Node	11.80	1.15	1.15	1.15
Existing	25YR-24HR	w-off-3	South Wetland Node	bdny-3	25.64	1.13	1.13	1.13
Existing	MEAN	18" CMP	North Wetland Node	South Roadside Ditch Node	1.63	1.28	-2.49	-1.71
Existing	MEAN	6" CPP	Unpermitted Pond Node	South Wetland Node	0.46	2.35	2.79	2.57
Existing	MEAN	Clements Road	North Wetland Node	South Roadside Ditch Node	0.00	0.00	0.00	0.00
Existing	MEAN	North Berm of Unpermitted Pond	South Roadside Ditch Node	Unpermitted Pond Node	1.63	0.55	0.55	0.55
Existing	MEAN	Pond12 Time-Discharge	Pond 12	South Wetland Node	15.48	0.00	0.00	0.00
Existing	MEAN	Pond15 Time-Discharge	Pond 15	South Wetland Node	7.18	0.00	0.00	0.00
Existing	MEAN	South Berm of Unpermitted Pond	Unpermitted Pond Node	South Wetland Node	0.99	0.84	0.84	0.84
Existing	MEAN	w-off-3	South Wetland Node	bdny-3	15.80	0.97	0.97	0.97



**Nassau County
Board of County Commissioners
Nassau County, Florida**

Clements Road

DRAINAGE REPORT (DRAFT)

Appendix D – Woodbridge PUD Phase 3 Information



Engineers/Planners and Consultants

DRAINAGE REPORT

FOR

Woodbridge PUD

Revised for Phase 3

BY



May 20, 2013

Revised Jan 8, 2015

Revised October 2, 2016

CHAPTER 1

1.0 PROJECT DESCRIPTION

This drainage report is for Woodbridge PUD (all Phases) a residential subdivision located in Nassau County, Florida between Clements Road and Nassauville Road (CR 107). Phase 1 consisted of 102 lots and has been previously permitted (40-089-95962-1). Phase 2 consisted of 44 lots and was previously permitted (95962-4). This is a modification of 95962-4. The drainage system for all phases has been included in this report so that the project may be evaluated as a whole. **For all areas associated with Phase 3, the design data has been updated from NGVD 39 datum to NAVD 88 datum.** The offsite flows from the upstream subdivisions has been better modeled, based upon updated information.

CHAPTER 2

2.0 EXISTING CONDITIONS

The project site is currently partially developed. Ponds 1 thru 6 have been constructed, and are operating as designed. The site is located on the west side of Clements Road, south of A1A. The site is timbered and currently drains towards onsite wetlands.

CHAPTER 3

3.0 DESIGN CONDITIONS:

The proposed wet detention ponds will be grouped into four hydraulically connected systems, which will share common outfall points. The orifice elevation at the outfall points have been set to the existing level of the receiving wetland. This has been done in order to assure that the wetland system adjacent to the pond will not be drawn down. In order to accurately take the tailwater condition into account, this analysis has modeled the receiving wetlands as nodes.

Ponds 1-6 are constructed. Ponds 6-19 have been designed to accommodate 50% additional treatment volume and 50% additional permanent pool volume per new SJRWMD requirements. Also, the offsite peak project flows for the 25 yr storm were +/- 75 cfs. We have taken that amount into account and modeled our system accordingly. Our analysis accounts for a peak flow of 90 cfs (from off-1).

CHAPTER 4

4.0 DRAINAGE ANALYSIS:

The drainage analysis was completed by using ad-ICPR. The following is a summary of the results of the ICPR analysis:

<u>Summary of Design (Pond 1):</u>	<u>(Existing)</u>	<u>Post-Development</u>
Drainage Area		9.58 Ac.
Design High Water (25 yr)		10.98 ft.
Design High Water (10 yr)		10.75 ft.
<u>Summary of Design (Pond 2):</u>	<u>(Existing)</u>	<u>Post-Development</u>
Drainage Area		17.82 Ac.

Design High Water (25 yr)	10.89 ft.
Design High Water (10 yr)	10.71 ft.

<u>Summary of Design (Combined Ponds 1 & 2):</u>	<u>(Existing)</u>	<u>Post-Development</u>
Drainage Area		27.40 Ac.
Treatment Volume Required		2.28 Ac.-ft.
Treatment Volume Provided		2.39 Ac.-ft.

<u>Summary of Design (Pond 3):</u>	<u>(Existing)</u>	<u>Post-Development</u>
Drainage Area		7.84 Ac.
Design High Water (25 yr)		11.10 ft.
Design High Water (10 yr)		10.79 ft.

<u>Summary of Design (Pond 4):</u>	<u>(Existing)</u>	<u>Post-Development</u>
Drainage Area		7.19 Ac.
Design High Water (25 yr)		10.82 ft.
Design High Water (10 yr)		10.67 ft.

<u>Summary of Design (Pond 5):</u>	<u>(Existing)</u>	<u>Post-Development</u>
Drainage Area		7.58 Ac.
Design High Water (25 yr)		10.94 ft.
Design High Water (10 yr)		10.72 ft.

<u>Summary of Design (Combined Ponds 3-5):</u>	<u>Post-Development</u>
Drainage Area	22.61 Ac.
Treatment Volume Required	1.88 Ac.-ft.
Treatment Volume Provided	1.96 Ac.-ft.

No changes have been made to Ponds 1-5

<u>Summary of Design (Combined Discharge- BDY-1):</u>	<u>Pre-Development</u>	<u>Post-Development</u>
Mean Peak Discharge	6.25 cfs.	0 cfs.
25 Year Peak Discharge	20.12 cfs.	6.27 cfs

Summary of Design (Pond 6):**(Existing)(Updated to NAVD)****Post-Development**

Drainage Area	7.46 Ac.
Design High Water (25 yr)	9.73 ft.
Design High Water (10 yr)	9.59 ft.
Treatment Volume Required	0.93 Ac.-ft.
Treatment Volume Provided	1.14 Ac.-ft.

Summary of Design (Pond 7):**(Updated to NAVD)****Post-Development**

Drainage Area	6.95 Ac.
Design High Water (25 yr)	9.70 ft.
Design High Water (10 yr)	9.42 ft.

Summary of Design (Pond 8):**(Updated to NAVD)****Post-Development**

Drainage Area	6.14 Ac.
Design High Water (25 yr)	9.70 ft.
Design High Water (10 yr)	9.42 ft.

Summary of Design (Pond 9):**(Updated to NAVD)****Post-Development**

Drainage Area	7.07 Ac.
Design High Water (25 yr)	9.45 ft.
Design High Water (10 yr)	9.31 ft.

Summary of Design (Combined Ponds 7-9):**(Updated to NAVD)****Post-Development**

Drainage Area	20.16 Ac.
Treatment Volume Required	2.52 Ac.-ft.
Treatment Volume Provided	2.66 Ac.-ft.

Summary of Design (Pond 10):**(Updated to NAVD)****Post-Development**

Drainage Area	7.90 Ac.
Design High Water (25 yr)	9.82 ft.
Design High Water (10 yr)	9.59 ft.

Treatment Volume Required	0.99 Ac.-ft.
Treatment Volume Provided	1.02 Ac.-ft.

<u>Summary of Design (Pond 11):</u>	<u>(Updated to NAVD)</u>	<u>Post-Development</u>
Drainage Area		7.55 Ac.
Design High Water (25 yr)		9.91 ft.
Design High Water (10 yr)		9.74 ft.
Treatment Volume Required		0.94 Ac.-ft.
Treatment Volume Provided		0.99 Ac.-ft.

<u>Summary of Design (Pond 13):</u>	<u>(Updated to NAVD)</u>	<u>Post-Development</u>
Drainage Area		8.31 Ac.
Design High Water (25 yr)		10.87 ft.
Design High Water (10 yr)		10.64 ft.
Treatment Volume Required		1.04 Ac.-ft.
Treatment Volume Provided		1.12 Ac.-ft.

<u>Summary of Design (Pond 14):</u>	<u>(Updated to NAVD)</u>	<u>Post-Development</u>
Drainage Area		6.97 Ac.
Design High Water (25 yr)		10.32 ft.
Design High Water (10 yr)		10.13 ft.
Treatment Volume Required		0.87 Ac.-ft.
Treatment Volume Provided		0.87 Ac.-ft.

<u>Summary of Design (Combined Discharge- Bndy-2):</u>	<u>Pre-Development</u>	<u>Post-Development</u>
<i>Mean Peak Discharge</i>	<i>19.37 cfs.</i>	<i>4.40 cfs.</i>
<i>25 Year Peak Discharge</i>	<i>168.70 cfs.</i>	<i>50.35 cfs</i>

<u>Summary of Design (Pond 12):</u>	<u>(Updated to NAVD)</u>	<u>Post-Development</u>
Drainage Area		13.18 Ac.
Design High Water (25 yr)		9.33 ft.
Design High Water (10 yr)		9.14 ft.
Treatment Volume Required		1.65 Ac.-ft.
Treatment Volume Provided		1.79 Ac.-ft.

Summary of Design (Pond 15):**(Updated to NAVD)****Post-Development**

Drainage Area	3.56 Ac.
Design High Water (25 yr)	8.40 ft.
Design High Water (10 yr)	8.18 ft.
Treatment Volume Required	0.44 Ac.-ft.
Treatment Volume Provided	0.46 Ac.-ft.

Summary of Design (Pond 16):**(Updated to NAVD)****Post-Development**

Drainage Area	3.77 Ac.
Design High Water (25 yr)	9.22 ft.
Design High Water (10 yr)	9.10 ft.
Treatment Volume Required	0.47 Ac.-ft.
Treatment Volume Provided	0.48 Ac.-ft.

Summary of Design (Combined Discharge- Bndy-3):**Pre-Development****Post-Development**

Mean Peak Discharge	1.74 cfs.	0.76 cfs.
25 Year Peak Discharge	73.99 cfs.	9.25 cfs

Summary of Design (Pond 17):**No Changes****Post-Development**

Drainage Area	15.80 Ac.
Design High Water (25 yr)	8.45 ft.
Design High Water (10 yr)	8.03 ft.

Summary of Design (Pond 18):**No Changes****Post-Development**

Drainage Area	20.57 Ac.
Design High Water (25 yr)	8.33 ft.
Design High Water (10 yr)	7.99 ft.

Summary of Design (Combined Ponds 17 & 18):**No Changes****Post-Development**

Drainage Area	36.37 Ac.
Treatment Volume Required	4.55 Ac.-ft.
Treatment Volume Provided	4.70 Ac.-ft.

Summary of Design (Pond 19):**No Changes****Post-Development**

Drainage Area	6.25 Ac.
Design High Water (25 yr)	7.80 ft.
Design High Water (10 yr)	7.64 ft.
Treatment Volume Required	0.78 Ac.-ft.
Treatment Volume Provided	0.83 Ac.-ft.

Summary of Design (Combined Discharge- Bndy 4):**Pre-Development****Post-Development**

Mean Peak Discharge	7.56 cfs.	1.68 cfs.
25 Year Peak Discharge	66.49 cfs.	27.64 cfs.

Time of Concentration Calculations

<u>Drainage Area</u>	<u>Flow length</u>	<u>Time of Concentration</u>
S-1	393' @ 0.5'/sec, 460' @ 1.0'/sec	20.76 min
S-2	216' @ 0.5'/sec, 441' @ 1.0'/sec	14.55 min
S-11	154' @ 0.5'/sec, 335' @ 1.0'/sec	10.71 min
S-61	127' @ 0.5'/sec, 454' @ 1.0'/sec	11.80 min
S-71	615' @ 0.5'/sec	20.50 min
S-74	359' @ 0.5'/sec	12.00 min

Note: Times of concentration for drainage areas not listed above were calculated to be less than 10 minutes. For these areas, a minimum time of concentration of 10 minutes was used. The 0.5'/sec represents flow over land, and the 1.0'/sec represents gutter flow at an average slope of 0.35%. These calculations are in accordance with the F.H.A. standard lot grading plans shown on the engineering drawings.

BASIN CALCULATIONS

Woodbridge Post Developed

Basin Calculations

Pond 12

Composite Cn

Total Drainage Area =	13.18	Ac.	
Impervious Area =	5.01	Ac.	45% (not including pond area)
Pond Area =	2.17	Ac.	
Pervious Area =	6.00	Ac.	
Impervious Cn =	98.0		
Pond Cn =	100.0		
Pervious Cn =	50.0		
Composite Cn =	76.5		

Time of Concentration, Tc

Minimum Time of Concentration =	10	min.
Length of Overland Flow @ .5ft/sec. =	100	ft.
Length of Pipe Flow @ 3 ft/sec. =	200	ft.
Tc =	10	min.

Equivalent Runoff Coefficient, Ct

Soil Storage, S = 1000/Cn -10 =	3.08	in.
Precipitation Depth, Pt =	7.68	(Zone 4)
Ct = 1 - S/Pt * (1.2 - S/(Pt + .8S)) =	0.64	

Pond 12 Information

El. (ft.)		Area (Ac.)	Volume (Ac.-ft.)
10.00	TOB	2.49	32.46
8.70	Weir	2.29	29.35
7.90	NWL	2.17	27.57
0.00		1.47	13.20
-12.00	Bottom	0.73	

Treatment Volume Required, TVR (Direct Discharge to protected waterbody)

TVR = 1" * (1/12")*Total Drainage Area (+ 50%) =	1.65	Ac.-ft.
or		
TVR = 2.5" * (1/12")*Total Impervious Drainage Area (+ 50%) =	1.57	Ac.-ft.
TVR =	1.65	Ac.-ft.

Treatment Volume Provided, TVP

TVP = Vol @ Weir - Vol @ NWL =	1.79	Ac.-ft.	ok
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Permanent Pool Volume Required, PPV (Direct Discharge to protected waterbody)

Drainage Area, Da =	13.18	Ac.	
Ct =	0.64		
Wet Season Rainfall Depth, R =	28	in.	
Residence Time, RT =	28	days	OK
Length of Wet Season, WS =	153	days	
PPV Required = Da*Ct*R*RT/(WS*12) =	3.61	Ac.-ft.	

Permanent Pool Volume Provided, PPV

PPV Provided = Vol @ NWL =	27.57	Ac.-ft.	OK
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Sizing Bleed-Down Orifice for Residency Time

Formulas:

$$Q = 0.6 \cdot A \cdot (2 \cdot 32.2 \cdot h)^{1/2}$$

$$A = D^2 \cdot \pi / 4$$

$$t = TV / (2 \cdot Q \cdot 3600)$$

$$h = (h_1 + h_2) / 2$$

Where

Q = Rate of Discharge (cfs)

A = Orifice Area (ft²)

D = Orifice Diameter (ft)

π = 3.14159

h = Depth of Water Above the Flowline of the Orifice (ft)

t = Recovery Time (hrs)

TV = Treatment Volume Required (ft³)

h₁ = elevation @ TV - NWL Elevation

h₂ = elevation when 1/2 TV has been released - NWL Elevation

Treatment Volume (Ac.-ft.)	1.65	
Weir Elevation (ft.)	8.70	
NWL Elevation (ft.)	7.90	
Orifice Diameter (in.)	4.5	
Orifice Cross-Sectional Area (in.)	15.90	OK

Calculated Values:

h (ft)	0.55
A (ft ²)	0.11
Q (cfs)	0.39

t 25.24

t Should be between 24 and 30 hrs. TRUE

Woodbridge Post Developed

Basin Calculations

Pond 15

Composite Cn	Total Drainage Area =	3.56 Ac.	
	Impervious Area =	1.35 Ac.	42% (not including pond area)
	Pond Area =	0.30 Ac.	
	Pervious Area =	1.90 Ac.	
	Impervious Cn =	98.0	
	Pond Cn =	100.0	
	Pervious Cn =	50.0	
	Composite Cn =	72.5	

Time of Concentration, Tc

Minimum Time of Concentration =	10 min.
Length of Overland Flow @ .5ft/sec. =	100 ft.
Length of Pipe Flow @ 3 ft/sec. =	200 ft.
Tc =	10 min.

Equivalent Runoff Coefficient, Ct

Soil Storage, S = 1000/Cn -10 =	3.80 in.
Precipitation Depth, Pt =	7.68 (Zone 4)
Ct = 1 - S/Pt * (1.2 - S/(Pt + .8S)) =	0.58

Pond 15 Information

El. (ft.)		Area (Ac.)	Volume (Ac.-ft.)
8.87	TOB	0.43	2.14
7.72	Weir	0.37	1.69
6.37	NWL	0.30	1.24
1.87		0.11	0.30
-3.13	Bottom	0.01	

Treatment Volume Required, TVR (Direct Discharge to protected waterbody)

TVR = 1" * (1/12")*Total Drainage Area (+ 50%) =	0.44 Ac.-ft.
or	
TVR = 2.5" * (1/12")*Total Impervious Drainage Area (+ 50%) =	0.42 Ac.-ft.
TVR =	0.44 Ac.-ft.

Treatment Volume Provided, TVP

TVP = Vol @ Weir - Vol @ NWL =	0.46 Ac.-ft.	ok
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Permanent Pool Volume Required, PPV (Direct Discharge to protected waterbody)

Drainage Area, Da =	3.5559 Ac.	
Ct =	0.58	
Wet Season Rainfall Depth, R =	28 in.	
Residence Time, RT =	28 days	OK
Length of Wet Season, WS =	153 days	
PPV Required = Da*Ct*R*RT/(WS*12) =	0.88 Ac.-ft.	

Permanent Pool Volume Provided, PPV

PPV Provided = Vol @ NWL =	1.24 Ac.-ft.	OK
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Sizing Bleed-Down Orifice for Residency Time

Formulas:

$$Q = 0.6 \cdot A \cdot (2 \cdot 32.2 \cdot h)^{1/2}$$

$$A = D^2 \cdot \pi / 4$$

$$t = TV / (2 \cdot Q \cdot 3600)$$

$$h = (h_1 + h_2) / 2$$

Where

Q = Rate of Discharge (cfs)

A = Orifice Area (ft²)

D = Orifice Diameter (ft)

π = 3.14159

h = Depth of Water Above the Flowline of the Orifice (ft)

t = Recovery Time (hrs)

TV = Treatment Volume Required (ft³)

h₁ = elevation @ TV - NWL Elevation

h₂ = elevation when 1/2 TV has been released - NWL Elevation

Treatment Volume (Ac.-ft.)	0.44
Weir Elevation (ft.)	7.72
NWL Elevation (ft.)	6.37
Orifice Diameter (in.)	2.77
Orifice Cross-Sectional Area (in.)	6.03

OK

Calculated Values:

h (ft)	0.98
A (ft ²)	0.04
Q (cfs)	0.20

t 13.47

t Should be between 24 and 30 hrs. FALSE

Woodbridge Post Developed

Basin Calculations

Pond 16

Composite Cn	Total Drainage Area =	3.77 Ac.	54% (not including pond area)
	Impervious Area =	1.43 Ac.	
	Pond Area =	1.11 Ac.	
	Pervious Area =	1.23 Ac.	
	Impervious Cn =	98.0	
	Pond Cn =	100.0	
	Pervious Cn =	50.0	
	Composite Cn =	83.0	

Time of Concentration, Tc

Minimum Time of Concentration =	10 min.
Length of Overland Flow @ .5ft/sec. =	100 ft.
Length of Pipe Flow @ 3 ft/sec. =	200 ft.
Tc =	10 min.

Equivalent Runoff Coefficient, Ct

Soil Storage, S = 1000/Cn -10 =	2.05 in.
Precipitation Depth, Pt =	7.68 (Zone 4)
Ct = 1 - S/Pt * (1.2 - S/(Pt + .8S)) =	0.74

Pond 16 Information

El. (ft.)		Area (Ac.)	Volume (Ac.-ft.)
10.87	TOB	1.37	9.58
8.79	Weir	1.16	6.96
8.37	NWL	1.11	6.48
3.87		0.69	2.42
-1.13	Bottom	0.28	

Treatment Volume Required, TVR (Direct Discharge to protected waterbody)

TVR = 1" * (1'/12")*Total Drainage Area (+ 50%) =	0.47 Ac.-ft.
or	
TVR = 2.5" * (1'/12")*Total Impervious Drainage Area (+ 50%) =	0.45 Ac.-ft.
TVR =	0.47 Ac.-ft.

Treatment Volume Provided, TVP

TVP = Vol @ Weir - Vol @ NWL =	0.48 Ac.-ft.	ok
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Permanent Pool Volume Required, PPV (Direct Discharge to protected waterbody)

Drainage Area, Da =	3.7748 Ac.	
Ct =	0.74	
Wet Season Rainfall Depth, R =	28 in.	
Residence Time, RT =	28 days	OK
Length of Wet Season, WS =	153 days	
PPV Required = Da*Ct*R*RT/(WS*12) =	1.19 Ac.-ft.	

Permanent Pool Volume Provided, PPV

PPV Provided = Vol @ NWL =	6.48 Ac.-ft.	OK
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Sizing Bleed-Down Orifice for Residency Time

Formulas:

$$Q = .6 * A (2 * 32.2 * h)^{1/2}$$

$$A = D^2 * \pi / 4$$

$$t = TV / (2 * Q * 3600)$$

$$h = (h_1 + h_2) / 2$$

Where

Q = Rate of Discharge (cfs)

A = Orifice Area (ft²)

D = Orifice Diameter (ft)

$\pi = 3.14159$

h = Depth of Water Above the Flowline of the Orifice (ft)

t = Recovery Time (hrs)

TV = Treatment Volume Required (ft³)

h₁ = elevation @ TV - NWL Elevation

h₂ = elevation when 1/2 TV has been released - NWL Elevation

Treatment Volume (Ac.-ft.)	0.47	
Weir Elevation (ft.)	8.79	
NWL Elevation (ft.)	8.37	
Orifice Diameter (in.)	2.77	
Orifice Cross-Sectional Area (in.)	6.03	OK

Calculated Values:

h (ft)	0.31
A (ft ²)	0.04
Q (cfs)	0.11

t 25.58

t Should be between 24 and 30 hrs. TRUE

ICPR Analysis

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==== Basins =====

Name: b-1	Node: POND1	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: FLMOD	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 13.00	
Area(ac): 9.580	Time Shift(hrs): 0.00	
Curve Number: 76.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-10	Node: pond10	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 7.900	Time Shift(hrs): 0.00	
Curve Number: 73.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-11	Node: pond11	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 7.550	Time Shift(hrs): 0.00	
Curve Number: 78.90	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-12	Node: pond12	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 13.180	Time Shift(hrs): 0.00	
Curve Number: 76.50	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-13	Node: pond13	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 8.310	Time Shift(hrs): 0.00	
Curve Number: 71.70	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-14	Node: pond14	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.970	Time Shift(hrs): 0.00	
Curve Number: 75.70	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-15	Node: pond15	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 3.560	Time Shift(hrs): 0.00	
Curve Number: 72.50	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-16	Node: pond16	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 3.770	Time Shift(hrs): 0.00	
Curve Number: 83.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-17	Node: pond17	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 15.800	Time Shift(hrs): 0.00	
Curve Number: 72.30	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-18	Node: pond18	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 20.570	Time Shift(hrs): 0.00	
Curve Number: 73.50	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-19	Node: pond19	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.250	Time Shift(hrs): 0.00	
Curve Number: 76.70	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-2	Node: pond2	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: FLMOD	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 16.00	
Area(ac): 17.820	Time Shift(hrs): 0.00	
Curve Number: 71.10	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-3	Node: pond3	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: FLMOD	Storm Duration(hrs): 24.00	

Rainfall Amount(in): 0.000	Time of Conc(min): 13.00
Area(ac): 7.840	Time Shift(hrs): 0.00
Curve Number: 71.30	Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00	

Name: b-4	Node: pond4	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: FLMOD	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 15.00	
Area(ac): 7.190	Time Shift(hrs): 0.00	
Curve Number: 74.10	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-5	Node: pond5	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: FLMOD	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 16.00	
Area(ac): 7.580	Time Shift(hrs): 0.00	
Curve Number: 73.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-6	Node: pond6	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 7.460	Time Shift(hrs): 0.00	
Curve Number: 77.40	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-7	Node: pond7	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.950	Time Shift(hrs): 0.00	
Curve Number: 75.80	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-8	Node: pond8	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 6.140	Time Shift(hrs): 0.00	
Curve Number: 72.40	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: b-9	Node: pond9	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh484	Peaking Factor: 484.0	
Rainfall File: Flmod	Storm Duration(hrs): 0.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 7.070	Time Shift(hrs): 0.00	
Curve Number: 73.20	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: off-1	Node: off-1	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	
Rainfall File: Flmod	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 112.340	Time Shift(hrs): 0.00	
Curve Number: 40.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: pre-1	Node: pre-wet-1	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: Flmod	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 62.110	Time Shift(hrs): 0.00	
Curve Number: 50.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: pre-2	Node: pre-wet-2	Status: Onsite
Group: BASE	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: Flmod	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 38.00	
Area(ac): 215.820	Time Shift(hrs): 0.00	
Curve Number: 50.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: pre-3	Node: pre-wet-3	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: Flmod	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 67.700	Time Shift(hrs): 0.00	
Curve Number: 50.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: pre-4	Node: pre-bndy4	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: Flmod	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 35.030	Time Shift(hrs): 0.00	
Curve Number: 50.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: wet-1	Node: wet-1	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh323	Peaking Factor: 323.0	
Rainfall File: Flmod	Storm Duration(hrs): 24.00	
Rainfall Amount(in): 0.000	Time of Conc(min): 10.00	
Area(ac): 18.880	Time Shift(hrs): 0.00	
Curve Number: 50.00	Max Allowable Q(cfs): 999999.000	
DCIA(%): 0.00		

Name: wet-2	Node: wet-2	Status: Onsite
Group: base	Type: SCS Unit Hydrograph CN	
Unit Hydrograph: Uh256	Peaking Factor: 256.0	

Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 31.170 Time Shift(hrs): 0.00
Curve Number: 50.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: wet-3 Node: wet-3 Status: Onsite
Group: base Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 25.090 Time Shift(hrs): 0.00
Curve Number: 50.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: wet-4 Node: wet-4 Status: Onsite
Group: base Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 11.260 Time Shift(hrs): 0.00
Curve Number: 50.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: wet-5 Node: wet-5 Status: Onsite
Group: base Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 12.440 Time Shift(hrs): 0.00
Curve Number: 50.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: wet-6 Node: wet-6 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh256 Peaking Factor: 256.0
Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 2.780 Time Shift(hrs): 0.00
Curve Number: 50.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

==== Nodes =====

Name: bndy-1 Base Flow(cfs): 0.000 Init Stage(ft): 9.000
Group: base Warn Stage(ft): 10.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	9.000
24.00	9.300
50.00	9.300

Name: bndy-2 Base Flow(cfs): 0.000 Init Stage(ft): 7.400
Group: base Warn Stage(ft): 9.000
Type: Time/Stage

Time(hrs)	Stage(ft)
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0.00 7.400
25.00 8.000
50.00 8.000

Name: **bndy-3** Base Flow(cfs): 0.000 Init Stage(ft): 6.000
Group: base Warn Stage(ft): 8.000
Type: Time/Stage

Time(hrs) Stage(ft)

0.00 6.000
25.00 7.000
50.00 7.000

Name: bndy-4 Base Flow(cfs): 0.000 Init Stage(ft): 5.000
Group: base Warn Stage(ft): 7.000
Type: Time/Stage

Time(hrs) Stage(ft)

0.00 5.000
50.00 5.000

Name: MH-133 Base Flow(cfs): 0.000 Init Stage(ft): 4.870
Group: BASE Warn Stage(ft): 10.870
Type: Stage/Area

Stage(ft) Area(ac)

4.870 0.0004
10.870 0.0004

Name: off-1 Base Flow(cfs): 0.000 Init Stage(ft): 9.500
Group: base Warn Stage(ft): 12.000
Type: Stage/Area

Stage(ft) Area(ac)

9.500 0.0000
10.000 2.5000
11.000 2.5000
12.000 25.0000

Name: pond1 Base Flow(cfs): 0.000 Init Stage(ft): 9.200
Group: base Warn Stage(ft): 12.000
Type: Stage/Area

Stage(ft) Area(ac)

0.000 0.1900
7.000 1.1100
8.000 1.2800
9.000 1.4500
10.000 1.6200
11.000 1.8000
12.000 1.9800

Name: pond10 Base Flow(cfs): 0.000 Init Stage(ft): 7.870
Group: base Warn Stage(ft): 10.870
Type: Stage/Area

Stage(ft) Area(ac)

-1.130 0.0000
-0.130 0.0000

0.870	0.1500
1.870	0.2000
2.870	0.2700
3.870	0.3600
4.870	0.4500
5.870	0.5500
6.870	0.6500
7.870	0.7500
8.870	0.8500
9.870	0.9500
10.870	1.0600

Name: pond11	Base Flow(cfs): 0.000	Init Stage(ft): 8.700
Group: base		Warn Stage(ft): 11.000
Type: Stage/Area		

Stage(ft)	Area(ac)
-12.000	0.4900
-10.000	0.5600
-8.000	0.6400
-6.000	0.7200
-4.000	0.8000
-2.000	0.8900
0.000	0.9900
2.000	1.0900
4.000	1.1900
6.000	1.3000
7.000	1.4100
8.000	1.5200
9.000	1.6400
10.000	1.7500
11.000	1.8700

Name: pond12 Base Flow(cfs): 0.000 Init Stage(ft): 7.900
Group: base Warn Stage(ft): 10.000
Type: Stage/Area

Stage(ft)	Area(ac)
-12.000	0.7300
-10.000	0.8400
-8.000	0.9600
-6.000	1.0800
-4.000	1.2000
-2.000	1.3300
0.000	1.4700
2.000	1.6100
4.000	1.7500
6.000	1.8900
7.000	2.0400
8.000	2.1900
9.000	2.3400
10.000	2.4900

Name: pond13 Base Flow(cfs): 0.000 Init Stage(ft): 8.500
Group: base Warn Stage(ft): 11.000
Type: Stage/Area

Stage(ft)	Area(ac)
1.000	0.0500
2.000	0.0900
3.000	0.1400
4.000	0.2100
5.000	0.2900
6.000	0.3700
7.000	0.4500
8.000	0.5300
9.000	0.6200
10.000	0.7100
11.000	0.8000

Name: pond14	Base Flow(cfs): 0.000	Init Stage(ft): 8.870
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Group: base
Type: Stage/Area

Warn Stage(ft): 11.870

Stage(ft)	Area(ac)
-0.130	0.2900
0.870	0.3600
1.870	0.4300
2.870	0.5100
3.870	0.5900
4.870	0.6700
5.870	0.7600
6.870	0.8500
7.870	0.9500
8.870	1.0400
9.870	1.1400
10.870	1.2400
11.870	1.3500

Name: pond15 Base Flow(cfs): 0.000 Init Stage(ft): 6.370
Group: base Warn Stage(ft): 8.870
Type: Stage/Area

Stage(ft)	Area(ac)
-3.130	0.0100
-2.130	0.0200
-1.130	0.0400
-0.130	0.0600
0.870	0.0800
1.870	0.1100
2.870	0.1500
3.870	0.1900
4.870	0.2300
5.870	0.2800
6.870	0.3200
7.870	0.3700
8.870	0.4300

Name: pond16 Base Flow(cfs): 0.000 Init Stage(ft): 8.370
Group: base Warn Stage(ft): 10.870
Type: Stage/Area

Stage(ft)	Area(ac)
-1.130	0.2800
-0.130	0.3600
0.870	0.4300
1.870	0.5200
2.870	0.6000
3.870	0.6900
4.870	0.7800
5.870	0.8700
6.870	0.9700
7.870	1.0600
8.870	1.1600
9.870	1.2700
10.870	1.3700

Name: pond17 Base Flow(cfs): 0.000 Init Stage(ft): 6.000
Group: base Warn Stage(ft): 9.000
Type: Stage/Area

Stage(ft)	Area(ac)
-3.000	0.4800
-2.000	0.5500
-1.000	0.6200
0.000	0.7000
1.000	0.7900
2.000	0.8800
3.000	0.9800
4.000	1.0800

5.000	1.1800
6.000	1.2800
7.000	1.3900
8.000	1.5000
9.000	1.6100

Name: pond18	Base Flow(cfs): 0.000	Init Stage(ft): 6.000
Group: base		Warn Stage(ft): 9.000
Type: Stage/Area		

Stage(ft)	Area(ac)
-3.000	0.9700
-2.000	1.0800
-1.000	1.2000
0.000	1.3300
1.000	1.4600
2.000	1.5900
3.000	1.7300
4.000	1.8700
5.000	2.0200
6.000	2.1600
7.000	2.3100
8.000	2.4600
9.000	2.6100

Name: pond19	Base Flow(cfs): 0.000	Init Stage(ft): 6.500
Group: base		Warn Stage(ft): 9.000
Type: Stage/Area		

Stage(ft)	Area(ac)
-3.000	0.3700
-2.000	0.4300
-1.000	0.4900
0.000	0.5600
1.000	0.6200
2.000	0.7000
3.000	0.7700
4.000	0.8500
5.000	0.9300
6.000	1.0200
7.000	1.1000
8.000	1.1900
9.000	1.2800

Name: pond2	Base Flow(cfs): 0.000	Init Stage(ft): 9.200
Group: base		Warn Stage(ft): 12.000
Type: Stage/Area		

Stage(ft)	Area(ac)
0.000	0.0900
7.000	0.7300
8.000	0.8600
9.000	0.9900
10.000	1.1300
11.000	1.2600
12.000	1.4000

Name: pond3	Base Flow(cfs): 0.000	Init Stage(ft): 9.200
Group: base		Warn Stage(ft): 12.000
Type: Stage/Area		

Stage(ft)	Area(ac)
0.000	0.0400
7.000	0.3400
8.000	0.4000
9.000	0.4700
10.000	0.5400
11.000	0.6100

12.000	0.6800
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```
Name: pond4          Base Flow(cfs): 0.000          Init Stage(ft): 9.200
Group: base          Warn Stage(ft): 12.000
Type: Stage/Area
```

Stage (ft)	Area (ac)
0.000	0.1900
7.000	0.6600
8.000	0.7400
9.000	0.8300
10.000	0.9200
11.000	1.0100
12.000	1.1100

```
Name: pond5          Base Flow(cfs): 0.000          Init Stage(ft): 9.200
Group: base          Warn Stage(ft): 12.000
Type: Stage/Area
```

Stage (ft)	Area (ac)
0.000	0.0900
7.000	0.5500
8.000	0.6300
9.000	0.7100
10.000	0.8000
11.000	0.8900
12.000	0.9800

```

Name: pond6           Base Flow(cfs): 0.000           Init Stage(ft): 8.870
Group: base           Warn Stage(ft): 10.870
Type: Stage/Area

```

Stage (ft)	Area (ac)
-1.130	0.4400
-0.130	0.5300
0.870	0.6200
1.870	0.7100
2.870	0.8100
3.870	0.9100
4.870	1.0200
5.870	1.1300
6.870	1.2400
7.870	1.3500
8.870	1.4600
9.870	1.5800
10.870	1.7000

```

Name: pond7           Base Flow(cfs): 0.000           Init Stage(ft): 7.870
Group: base           Warn Stage(ft): 10.870
Type: Stage/Area

```

Stage (ft)	Area (ac)
-1.130	0.3000
-0.130	0.3600
0.870	0.4200
1.870	0.5000
2.870	0.5700
3.870	0.6600
4.870	0.7500
5.870	0.8500
6.870	0.9500
7.870	1.0500
8.870	1.1600
9.870	1.2700
10.870	1.3800

```
Name: pond8           Base Flow(cfs): 0.000           Init Stage(ft): 7.870
```


Group: base
Type: Stage/Area

Warn Stage(ft): 10.870

Stage(ft)	Area(ac)
-1.130	0.0000
-0.130	0.0000
0.870	0.1700
1.870	0.2100
2.870	0.2500
3.870	0.3000
4.870	0.3500
5.870	0.4000
6.870	0.4500
7.870	0.5100
8.870	0.5600
9.870	0.6200
10.870	0.6900

Name: pond9 Base Flow(cfs): 0.000 Init Stage(ft): 7.870
Group: base Warn Stage(ft): 10.870
Type: Stage/Area

Stage(ft)	Area(ac)
-1.130	0.0000
-0.130	0.0000
0.870	0.1000
1.870	0.1700
2.870	0.2400
3.870	0.3300
4.870	0.4200
5.870	0.5100
6.870	0.6100
7.870	0.7100
8.870	0.8100
9.870	0.9100
10.870	1.0200

Name: pre-bndy1 Base Flow(cfs): 0.000 Init Stage(ft): 9.000
Group: base Warn Stage(ft): 10.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	9.000
24.00	9.300
50.00	9.300

Name: pre-bndy2 Base Flow(cfs): 0.000 Init Stage(ft): 7.400
Group: base Warn Stage(ft): 8.500
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	7.400
25.00	8.000
50.00	8.000

Name: pre-bndy3 Base Flow(cfs): 0.000 Init Stage(ft): 6.000
Group: base Warn Stage(ft): 8.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	6.000
25.00	7.000
50.00	7.000

Stage(ft)	Area(ac)
6.870	0.1700
7.870	7.7200
8.870	14.2700
9.870	25.0000

```

Name: wet-4          Base Flow(cfs): 0.000      Init Stage(ft): 6.870
Group: base          Warn Stage(ft): 7.870
Type: Stage/Area

```

Stage(ft)	Area(ac)
6.870	0.5300
7.870	7.7200

```

Name: wet-5          Base Flow(cfs): 0.000      Init Stage(ft): 5.870
Group: base          Warn Stage(ft): 7.870
Type: Stage/Area

```

Stage(ft)	Area(ac)
5.870	0.7800
6.870	2.5700
7.870	6.8500

```

Name: wet-6          Base Flow(cfs): 0.000      Init Stage(ft): 5.000
Group: base          Warn Stage(ft): 7.000
Type: Stage/Area

```

Stage(ft)	Area(ac)
5.000	0.0000
6.000	0.8300
7.000	2.3300

```

=====
==== Pipes =====
=====

```

```

Name: p-1          From Node: pond1      Length(ft): 421.00
Group: BASE        To Node: pond2        Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM          DOWNSTREAM
Geometry: Circular Circular
Span(in): 42.00   42.00
Rise(in): 42.00   42.00
Invert(ft): 6.000 5.000
Manning's N: 0.013000 0.013000
Top Clip(in): 0.000 0.000
Bot Clip(in): 0.000 0.000
Entrance Loss Coef: 0.00
Exit Loss Coef: 0.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

```

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

```

Name: p-10         From Node: pond8      Length(ft): 142.00
Group: base        To Node: MH-133      Count: 1
                                     Friction Equation: Average Conveyance
                                     Solution Algorithm: Automatic
                                     Flow: Both
UPSTREAM          DOWNSTREAM
Geometry: Circular Circular
Span(in): 36.00   36.00
Rise(in): 36.00   36.00
Invert(ft): 4.870 4.870
Manning's N: 0.013000 0.013000
Top Clip(in): 0.000 0.000
Entrance Loss Coef: 0.00
Exit Loss Coef: 0.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn

```

Bot Clip(in): 0.000 0.000 Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: p-11	From Node: pond17	Length(ft): 335.00
Group: base	To Node: pond18	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	Flow: Both
Geometry: Circular	Circular	Entrance Loss Coef: 0.00
Span(in): 36.00	36.00	Exit Loss Coef: 0.00
Rise(in): 36.00	36.00	Bend Loss Coef: 0.00
Invert(ft): 2.500	2.500	Outlet Ctrl Spec: Use dc or tw
Manning's N: 0.013000	0.013000	Inlet Ctrl Spec: Use dn
Top Clip(in): 0.000	0.000	Stabilizer Option: None
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: p-12	From Node: wet-4	Length(ft): 60.00
Group: base	To Node: wet-5	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	Flow: Both
Geometry: Circular	Circular	Entrance Loss Coef: 0.00
Span(in): 30.00	30.00	Exit Loss Coef: 0.00
Rise(in): 30.00	30.00	Bend Loss Coef: 0.00
Invert(ft): 6.870	6.870	Outlet Ctrl Spec: Use dc or tw
Manning's N: 0.013000	0.013000	Inlet Ctrl Spec: Use dn
Top Clip(in): 0.000	0.000	Stabilizer Option: None
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Name: p-13	From Node: wet-6	Length(ft): 60.00
Group: base	To Node: bndy-4	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
UPSTREAM	DOWNSTREAM	Flow: Both
Geometry: Circular	Circular	Entrance Loss Coef: 0.00
Span(in): 30.00	30.00	Exit Loss Coef: 0.00
Rise(in): 30.00	30.00	Bend Loss Coef: 0.00
Invert(ft): 5.500	5.500	Outlet Ctrl Spec: Use dc or tw
Manning's N: 0.013000	0.013000	Inlet Ctrl Spec: Use dn
Top Clip(in): 0.000	0.000	Stabilizer Option: None
Bot Clip(in): 0.000	0.000	

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Name: P-14	From Node: MH-133	Length(ft): 312.00
Group: BASE	To Node: pond9	Count: 1

	UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
	Geometry: Circular	Circular	Solution Algorithm: Automatic
	Span(in): 36.00	36.00	Flow: Both
	Rise(in): 36.00	36.00	Entrance Loss Coef: 0.00
	Invert(ft): 4.870	4.870	Exit Loss Coef: 0.00
	Manning's N: 0.013000	0.013000	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 dn
			Stabilizer Option: None

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

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: p-2	From Node: pond3	Length(ft): 500.00
Group: BASE	To Node: pond4	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
		Entrance Loss Coef: 0.00
		Exit Loss Coef: 0.00
		Bend Loss Coef: 0.00
		Outlet Ctrl Spec: Use dc or tw
		Inlet Ctrl Spec: Use dn
		Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
	Geometry: Circular	Circular
	Span(in): 36.00	36.00
	Rise(in): 36.00	36.00
	Invert(ft): 6.330	6.190
	Manning's N: 0.013000	0.013000
	Top Clip(in): 0.000	0.000
	Bot Clip(in): 0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: p-3	From Node: pond5	Length(ft): 132.00
Group: BASE	To Node: pond4	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
		Entrance Loss Coef: 0.00
		Exit Loss Coef: 0.00
		Bend Loss Coef: 0.00
		Outlet Ctrl Spec: Use dc or tw
		Inlet Ctrl Spec: Use dn
		Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
	Geometry: Circular	Circular
	Span(in): 36.00	36.00
	Rise(in): 36.00	36.00
	Invert(ft): 6.340	6.310
	Manning's N: 0.013000	0.013000
	Top Clip(in): 0.000	0.000
	Bot Clip(in): 0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: p-4	From Node: wet-1	Length(ft): 20.00
Group: base	To Node: bndy-1	Count: 1
		Friction Equation: Average Conveyance
		Solution Algorithm: Automatic
		Flow: Both
		Entrance Loss Coef: 0.00
		Exit Loss Coef: 0.00
		Bend Loss Coef: 0.00
		Outlet Ctrl Spec: Use dc or tw
		Inlet Ctrl Spec: Use dn
		Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
	Geometry: Circular	Circular
	Span(in): 10.00	10.00
	Rise(in): 10.00	10.00
	Invert(ft): 9.460	9.460
	Manning's N: 0.015000	0.015000
	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: p-5                      From Node: wet-1          Length(ft): 20.00
Group: base                    To Node: bndy-1          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: Both
                                Entrance Loss Coef: 0.00
                                Exit Loss Coef: 0.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw
                                Inlet Ctrl Spec: Use dn
                                Stabilizer Option: None

UPSTREAM    DOWNSTREAM
Geometry: Circular
Span(in): 18.00    18.00
Rise(in): 18.00    18.00
Invert(ft): 8.830  8.830
Manning's N: 0.015000  0.015000
Top Clip(in): 0.000  0.000
Bot Clip(in): 6.000  6.000
```

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

```
-----
Name: p-6                      From Node: wet-1          Length(ft): 20.00
Group: base                    To Node: bndy-1          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: None
                                Entrance Loss Coef: 0.00
                                Exit Loss Coef: 0.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw
                                Inlet Ctrl Spec: Use dn
                                Stabilizer Option: None

UPSTREAM    DOWNSTREAM
Geometry: Circular
Span(in): 24.00    24.00
Rise(in): 24.00    24.00
Invert(ft): 7.500  7.500
Manning's N: 0.015000  0.015000
Top Clip(in): 0.000  0.000
Bot Clip(in): 18.000  18.000
```

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

```
-----
Name: p-7                      From Node: off-1          Length(ft): 60.00
Group: base                    To Node: wet-2          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: Both
                                Entrance Loss Coef: 0.00
                                Exit Loss Coef: 0.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw
                                Inlet Ctrl Spec: Use dn
                                Stabilizer Option: None

UPSTREAM    DOWNSTREAM
Geometry: Circular
Span(in): 30.00    30.00
Rise(in): 30.00    30.00
Invert(ft): 9.670  9.500
Manning's N: 0.013000  0.013000
Top Clip(in): 0.000  0.000
Bot Clip(in): 0.000  0.000
```

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

```
-----
Name: p-8                      From Node: wet-2          Length(ft): 60.00
Group: base                    To Node: wet-3          Count: 1
                                Friction Equation: Average Conveyance
                                Solution Algorithm: Automatic
                                Flow: Both
                                Entrance Loss Coef: 0.00
                                Exit Loss Coef: 0.00
                                Bend Loss Coef: 0.00
                                Outlet Ctrl Spec: Use dc or tw

UPSTREAM    DOWNSTREAM
Geometry: Circular
Span(in): 36.00    36.00
Rise(in): 36.00    36.00
Invert(ft): 7.170  7.170
Manning's N: 0.013000  0.013000
```

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

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Name: p-9	From Node: pond7	Length(ft): 213.00
Group: base	To Node: MH-133	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 36.00	36.00	Flow: Both
Rise(in): 36.00	36.00	Entrance Loss Coef: 0.00
Invert(ft): 4.870	4.870	Exit Loss Coef: 0.00
Manning's N: 0.013000	0.013000	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 dn
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: pre-p-4	From Node: pre-wet-1	Length(ft): 20.00
Group: base	To Node: pre-bndyl	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 10.00	10.00	Flow: Both
Rise(in): 10.00	10.00	Entrance Loss Coef: 0.00
Invert(ft): 9.460	9.460	Exit Loss Coef: 0.00
Manning's N: 0.015000	0.015000	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 dn
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Name: pre-p-5	From Node: pre-wet-1	Length(ft): 20.00
Group: base	To Node: pre-bndyl	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 18.00	18.00	Flow: Both
Rise(in): 18.00	18.00	Entrance Loss Coef: 0.00
Invert(ft): 8.830	8.830	Exit Loss Coef: 0.00
Manning's N: 0.015000	0.015000	Bend Loss Coef: 0.00
Top Clip(in): 0.000	0.000	Outlet Ctrl Spec: Use dc or tw
Bot Clip(in): 6.000	6.000	Inlet Ctrl Spec: Use dn
		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Name: pre-p-6	From Node: pre-wet-1	Length(ft): 20.00
---------------	----------------------	-------------------

Group: base	To Node: pre-bndyl	Count: 1
		Friction Equation: Average Conveyance
UPSTREAM	DOWNSTREAM	Solution Algorithm: Automatic
Geometry: Circular	Circular	Flow: Both
Span(in): 24.00	24.00	Entrance Loss Coef: 0.00
Rise(in): 24.00	24.00	Exit Loss Coef: 0.00
Invert(ft): 7.500	7.500	Bend Loss Coef: 0.00
Manning's N: 0.015000	0.015000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dn
Bot Clip(in): 6.000	6.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

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==== Drop Structures =====

=====

Name: DS-16	From Node: pond16	Length(ft): 30.00
Group: BASE	To Node: wet-4	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Automatic
Geometry: Circular	Circular	Solution Algorithm: Most Restrictive
Span(in): 30.00	30.00	Flow: Both
Rise(in): 30.00	30.00	Entrance Loss Coef: 0.000
Invert(ft): 7.870	7.670	Exit Loss Coef: 0.500
Manning's N: 0.013000	0.013000	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	Solution Incs: 10

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

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

*** Weir 1 of 1 for Drop Structure DS-16 ***

Count: 1	Bottom Clip(in): 0.000	TABLE
Type: Horizontal	Top Clip(in): 0.000	
Flow: Both	Weir Disc Coef: 3.200	
Geometry: Rectangular	Orifice Disc Coef: 0.600	
Span(in): 60.00	Invert(ft): 8.790	
Rise(in): 26.00	Control Elev(ft): 8.790	

Name: ds-18	From Node: pond18	Length(ft): 340.00
Group: BASE	To Node: bndy-4	Count: 1
UPSTREAM	DOWNSTREAM	Friction Equation: Average Conveyance
Geometry: Circular	Circular	Solution Algorithm: Automatic
Span(in): 36.00	36.00	Flow: Both
Rise(in): 36.00	36.00	Entrance Loss Coef: 0.000
Invert(ft): 5.000	5.000	Exit Loss Coef: 0.000
Manning's N: 0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000	0.000	Inlet Ctrl Spec: Use dn
Bot Clip(in): 0.000	0.000	Solution Incs: 10

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

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

*** Weir 1 of 1 for Drop Structure ds-18 ***

Count: 1	Bottom Clip(in): 0.000	TABLE
Type: Vertical: Mavis	Top Clip(in): 0.000	
Flow: Both	Weir Disc Coef: 3.200	
Geometry: Rectangular	Orifice Disc Coef: 0.600	

Span(in): 96.00 Invert(ft): 7.300
Rise(in): 24.00 Control Elev(ft): 7.300

=====

=== Weirs ===

=====

Name: pre-w-off-2 From Node: pre-wet-2
Group: base To Node: pre-bndy2
Flow: Both Count: 1
Type: Vertical: Gravel Geometry: Trapezoidal

Bottom Width(ft): 170.00
Left Side Slope(h/v): 10.00
Right Side Slope(h/v): 10.00
Invert(ft): 7.570
Control Elevation(ft): 7.570
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: pre-w-off-3 From Node: pre-wet-3
Group: base To Node: pre-bndy3
Flow: Both Count: 1
Type: Vertical: Gravel Geometry: Trapezoidal

Bottom Width(ft): 120.00
Left Side Slope(h/v): 10.00
Right Side Slope(h/v): 10.00
Invert(ft): 6.870
Control Elevation(ft): 6.870
Struct Opening Dim(ft): 9999.00

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

TABLE

Name: w-1 From Node: pond2
Group: BASE To Node: wet-1
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 25.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 10.100
Control Elevation(ft): 10.100
Struct Opening Dim(ft): 9999.00

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

TABLE

Name: w-10 From Node: pond10
Group: base To Node: wet-3
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 8.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 9.120
Control Elevation(ft): 9.120
Struct Opening Dim(ft): 9999.00

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

TABLE

Name: w-11 From Node: pond11
Group: base To Node: wet-2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 7.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 9.300
Control Elevation(ft): 9.300
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-12 From Node: pond12
Group: base To Node: wet-4
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 12.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 8.700
Control Elevation(ft): 8.700
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-13 From Node: pond13
Group: BASE To Node: wet-2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 10.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 10.200
Control Elevation(ft): 10.200
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-14 From Node: pond14
Group: base To Node: wet-3
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 7.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 9.670
Control Elevation(ft): 9.670
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-15 From Node: pond15
Group: base To Node: wet-5
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 4.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 7.720
Control Elevation(ft): 7.720
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-19 From Node: pond19
Group: BASE To Node: wet-6
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 8.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 7.250
Control Elevation(ft): 7.250
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: w-4 From Node: pond4
Group: BASE To Node: wet-1
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 25.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 10.100
Control Elevation(ft): 10.100
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-6 From Node: pond6
Group: base To Node: wet-2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 7.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 8.870
Control Elevation(ft): 8.870
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-9 From Node: pond9
Group: base To Node: wet-2
Flow: Both Count: 1
Type: Vertical: Mavis Geometry: Trapezoidal

Bottom Width(ft): 30.00
Left Side Slope(h/v): 1.00
Right Side Slope(h/v): 1.00
Invert(ft): 8.970
Control Elevation(ft): 8.970
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

Name: w-off-2 From Node: wet-3
Group: base To Node: bndy-2
Flow: Both Count: 1
Type: Vertical: Gravel Geometry: Trapezoidal

Bottom Width(ft): 170.00
Left Side Slope(h/v): 10.00
Right Side Slope(h/v): 10.00
Invert(ft): 7.870
Control Elevation(ft): 7.870
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: w-off-3 From Node: wet-5
Group: base To Node: bndy-3
Flow: Both Count: 1
Type: Vertical: Gravel Geometry: Trapezoidal

Bottom Width(ft): 120.00
Left Side Slope(h/v): 10.00
Right Side Slope(h/v): 10.00
Invert(ft): 6.870
Control Elevation(ft): 6.870
Struct Opening Dim(ft): 9999.00

TABLE

Bottom Clip(ft): 0.000
Top Clip(ft): 0.000
Weir Discharge Coef: 2.640
Orifice Discharge Coef: 0.600

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

Name: 10YR
Filename: N:\Projects\WB3\drainage\10YR.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FLMOD
Rainfall Amount(in): 7.44

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 25YR
Filename: N:\Projects\WB3\drainage\25YR.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FLMOD
Rainfall Amount(in): 8.64

Time(hrs)	Print Inc(min)
30.000	5.00

Name: 5YR
Filename: N:\Projects\WB3\drainage\5YR.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FLMOD
Rainfall Amount(in): 6.43

Time(hrs)	Print Inc(min)
30.000	5.00

Name: MEAN
Filename: N:\Projects\WB3\drainage\MEAN.R32

Override Defaults: Yes
Storm Duration(hrs): 24.00
Rainfall File: FLMOD
Rainfall Amount(in): 4.50

Time(hrs)	Print Inc(min)
30.000	5.00

==== Routing Simulations =====

Name: 10YR Hydrology Sim: 10YR
Filename: N:\Projects\WB3\drainage\10YR.I32

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

Max Delta Z(ft): 1.00	Delta Z Factor: 0.05000
Time Step Optimizer: 0.000	
Start Time(hrs): 0.000	End Time(hrs): 30.00
Min Calc Time(sec): 0.2500	Max Calc Time(sec): 300.0000
Boundary Stages:	Boundary Flows:

10 year - 24 hour storm

Time(hrs)	Print Inc(min)
11.000	5.000
16.000	1.000
24.000	5.000
30.000	20.000

Group	Run
BASE	Yes

Name: 25YR Hydrology Sim: 25YR
Filename: N:\Projects\WB3\drainage\25YR.I32

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

Max Delta Z(ft): 1.00	Delta Z Factor: 0.05000
Time Step Optimizer: 0.000	
Start Time(hrs): 0.000	End Time(hrs): 30.00
Min Calc Time(sec): 0.2500	Max Calc Time(sec): 300.0000
Boundary Stages:	Boundary Flows:

25 year - 24 hour storm

Time(hrs)	Print Inc(min)
11.000	5.000
16.000	1.000
24.000	5.000
30.000	20.000

Group	Run

BASE Yes

Name: 5YR Hydrology Sim: 5YR
Filename: N:\Projects\WB3\drainage\5YR.I32

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

Max Delta Z(ft): 1.00 Delta Z Factor: 0.05000
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 300.0000
Boundary Stages: Boundary Flows:

5 year - 24 hour storm

Time(hrs)	Print Inc(min)
11.000	5.000
16.000	1.000
24.000	5.000
30.000	20.000

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

Name: MEAN Hydrology Sim: MEAN
Filename: N:\Projects\WB3\drainage\MEAN.I32

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

Max Delta Z(ft): 1.00 Delta Z Factor: 0.05000
Time Step Optimizer: 0.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.2500 Max Calc Time(sec): 300.0000
Boundary Stages: Boundary Flows:

2.3 year - 24 hour storm

Time(hrs)	Print Inc(min)
11.000	5.000
16.000	1.000
24.000	5.000
30.000	20.000

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

Basin Name: b-1
Group Name: BASE
Simulation: 10YR
Node Name: POND1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 9.580
Vol of Unit Hyd (in): 1.001
Curve Number: 76.000
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 31.663
Runoff Volume (in): 4.652
Runoff Volume (ft3): 161761.608

Basin Name: b-10
Group Name: base
Simulation: 10YR
Node Name: pond10
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.900
Vol of Unit Hyd (in): 1.001
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 30.487
Runoff Volume (in): 4.311
Runoff Volume (ft3): 123637.424

Basin Name: b-11
Group Name: base
Simulation: 10YR
Node Name: pond11
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite

Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.550
Vol of Unit Hyd (in): 1.000
Curve Number: 78.900
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 33.021
Runoff Volume (in): 4.971
Runoff Volume (ft3): 136232.025

Basin Name: b-12
Group Name: base
Simulation: 10YR
Node Name: pond12
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 13.180
Vol of Unit Hyd (in): 1.000
Curve Number: 76.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 54.965
Runoff Volume (in): 4.701
Runoff Volume (ft3): 224904.953

Basin Name: b-13
Group Name: base
Simulation: 10YR
Node Name: pond13
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 8.310
Vol of Unit Hyd (in): 1.000
Curve Number: 71.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 31.078
Runoff Volume (in): 4.168
Runoff Volume (ft3): 125730.402

Basin Name: b-14
Group Name: base
Simulation: 10YR
Node Name: pond14
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.970
Vol of Unit Hyd (in): 1.000
Curve Number: 75.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 28.581
Runoff Volume (in): 4.611
Runoff Volume (ft3): 116673.138

Basin Name: b-15
Group Name: base
Simulation: 10YR
Node Name: pond15
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.560
Vol of Unit Hyd (in): 1.000
Curve Number: 72.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 13.576
Runoff Volume (in): 4.256
Runoff Volume (ft3): 55001.552

Basin Name: b-16
Group Name: base
Simulation: 10YR
Node Name: pond16
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.770
Vol of Unit Hyd (in): 1.000
Curve Number: 83.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 17.705
Runoff Volume (in): 5.437
Runoff Volume (ft3): 74405.633

Basin Name: b-17
Group Name: base
Simulation: 10YR
Node Name: pond17
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 15.800
Vol of Unit Hyd (in): 1.000
Curve Number: 72.300
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 59.963
Runoff Volume (in): 4.234
Runoff Volume (ft3): 242843.036

Basin Name: b-18
Group Name: base
Simulation: 10YR
Node Name: pond18
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 20.570
Vol of Unit Hyd (in): 1.000
Curve Number: 73.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 80.316
Runoff Volume (in): 4.367
Runoff Volume (ft3): 326057.806

Basin Name: b-19
Group Name: base
Simulation: 10YR
Node Name: pond19
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Time Shift (hrs): 0.00
Area (ac): 6.250
Vol of Unit Hyd (in): 1.000
Curve Number: 76.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 26.173
Runoff Volume (in): 4.723
Runoff Volume (ft3): 107159.059

Comp Time Inc (min): 2.00
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 15.00
Time Shift (hrs): 0.00
Area (ac): 7.190
Vol of Unit Hyd (in): 1.000
Curve Number: 74.100
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 21.535
Runoff Volume (in): 4.441
Runoff Volume (ft3): 115910.115

Basin Name: b-2
Group Name: BASE
Simulation: 10YR
Node Name: pond2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 17.820
Vol of Unit Hyd (in): 1.001
Curve Number: 71.100
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 48.046
Runoff Volume (in): 4.109
Runoff Volume (ft3): 265821.958

Basin Name: b-5
Group Name: BASE
Simulation: 10YR
Node Name: pond5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 7.580
Vol of Unit Hyd (in): 1.000
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 21.505
Runoff Volume (in): 4.319
Runoff Volume (ft3): 118838.532

Basin Name: b-3
Group Name: BASE
Simulation: 10YR
Node Name: pond3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 7.840
Vol of Unit Hyd (in): 1.000
Curve Number: 71.300
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 23.076
Runoff Volume (in): 4.130
Runoff Volume (ft3): 117535.100

Basin Name: b-6
Group Name: base
Simulation: 10YR
Node Name: pond6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.460
Vol of Unit Hyd (in): 1.001
Curve Number: 77.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 31.687
Runoff Volume (in): 4.802
Runoff Volume (ft3): 130032.258

Basin Name: b-4
Group Name: BASE
Simulation: 10YR
Node Name: pond4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.00

Basin Name: b-7
Group Name: base
Simulation: 10YR

Node Name: pond7
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.950
Vol of Unit Hyd (in): 1.000
Curve Number: 75.800
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 28.560
Runoff Volume (in): 4.623
Runoff Volume (ft3): 116620.143

Basin Name: b-8
Group Name: base
Simulation: 10YR
Node Name: pond8
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.140
Vol of Unit Hyd (in): 1.000
Curve Number: 72.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 23.358
Runoff Volume (in): 4.245
Runoff Volume (ft3): 94616.389

Basin Name: b-9
Group Name: base
Simulation: 10YR
Node Name: pond9
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.070
Vol of Unit Hyd (in): 1.000
Curve Number: 73.200
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 27.413
Runoff Volume (in): 4.333
Runoff Volume (ft3): 111215.274

Basin Name: off-1
Group Name: base
Simulation: 10YR
Node Name: off-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 112.340
Vol of Unit Hyd (in): 1.000
Curve Number: 40.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 50.341
Runoff Volume (in): 1.014
Runoff Volume (ft3): 413389.456

Basin Name: pre-1
Group Name: BASE
Simulation: 10YR
Node Name: pre-wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 62.110
Vol of Unit Hyd (in): 1.001
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 83.951
Runoff Volume (in): 1.917
Runoff Volume (ft3): 432315.301

Basin Name: pre-2
Group Name: BASE
Simulation: 10YR
Node Name: pre-wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 5.07
Comp Time Inc (min): 5.00
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 38.00
Time Shift (hrs): 0.00
Area (ac): 215.820
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.42
Flow Max (cfs): 154.149
Runoff Volume (in): 1.917
Runoff Volume (ft3): 1502073.884

Time Shift (hrs): 0.00
Area (ac): 18.880
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Basin Name: pre-3
Group Name: base
Simulation: 10YR
Node Name: pre-wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 67.700
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 91.506
Runoff Volume (in): 1.917
Runoff Volume (ft3): 471224.374

Basin Name: pre-4
Group Name: base
Simulation: 10YR
Node Name: pre-bndy4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 35.030
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 47.348
Runoff Volume (in): 1.917
Runoff Volume (ft3): 243825.551

Basin Name: wet-1
Group Name: base
Simulation: 10YR
Node Name: wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Time Max (hrs): 12.07
Flow Max (cfs): 25.519
Runoff Volume (in): 1.917
Runoff Volume (ft3): 131413.828

Basin Name: wet-2
Group Name: base
Simulation: 10YR
Node Name: wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 31.170
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 37.124
Runoff Volume (in): 1.916
Runoff Volume (ft3): 216792.606

Basin Name: wet-3
Group Name: base
Simulation: 10YR
Node Name: wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 25.090
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 29.883
Runoff Volume (in): 1.916
Runoff Volume (ft3): 174505.181

Basin Name: wet-4
Group Name: base
Simulation: 10YR
Node Name: wet-4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33

Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 11.260
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 13.411
Runoff Volume (in): 1.916
Runoff Volume (ft3): 78315.199

Node Name: POND1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 9.580
Vol of Unit Hyd (in): 1.001
Curve Number: 76.000
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 38.914
Runoff Volume (in): 5.744
Runoff Volume (ft3): 199759.129

Basin Name: wet-5
Group Name: base
Simulation: 10YR
Node Name: wet-5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 12.440
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 14.816
Runoff Volume (in): 1.916
Runoff Volume (ft3): 86522.298

Basin Name: b-10
Group Name: base
Simulation: 25YR
Node Name: pond10
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.900
Vol of Unit Hyd (in): 1.001
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 37.736
Runoff Volume (in): 5.374
Runoff Volume (ft3): 154106.128

Basin Name: wet-6
Group Name: BASE
Simulation: 10YR
Node Name: wet-6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 7.440
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 2.780
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 3.311
Runoff Volume (in): 1.916
Runoff Volume (ft3): 19335.369

Basin Name: b-11
Group Name: base
Simulation: 25YR
Node Name: pond11
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.550
Vol of Unit Hyd (in): 1.000
Curve Number: 78.900
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 40.027
Runoff Volume (in): 6.086
Runoff Volume (ft3): 166801.173

Basin Name: b-1
Group Name: BASE
Simulation: 25YR

Basin Name: b-12
Group Name: base
Simulation: 25YR
Node Name: pond12
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 13.180
Vol of Unit Hyd (in): 1.000
Curve Number: 76.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 67.170
Runoff Volume (in): 5.796
Runoff Volume (ft3): 277314.482

Time Max (hrs): 12.02
Flow Max (cfs): 35.027
Runoff Volume (in): 5.700
Runoff Volume (ft3): 144208.539

Basin Name: b-13
Group Name: base
Simulation: 25YR
Node Name: pond13
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 8.310
Vol of Unit Hyd (in): 1.000
Curve Number: 71.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 38.662
Runoff Volume (in): 5.217
Runoff Volume (ft3): 157375.958

Basin Name: b-15
Group Name: base
Simulation: 25YR
Node Name: pond15
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.560
Vol of Unit Hyd (in): 1.000
Curve Number: 72.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 16.836
Runoff Volume (in): 5.314
Runoff Volume (ft3): 68666.080

Basin Name: b-14
Group Name: base
Simulation: 25YR
Node Name: pond14
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.970
Vol of Unit Hyd (in): 1.000
Curve Number: 75.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 16.836
Runoff Volume (in): 5.314
Runoff Volume (ft3): 68666.080

Basin Name: b-16
Group Name: base
Simulation: 25YR
Node Name: pond16
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.770
Vol of Unit Hyd (in): 1.000
Curve Number: 83.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 21.192
Runoff Volume (in): 6.582
Runoff Volume (ft3): 90068.532

Time Max (hrs): 12.02
Flow Max (cfs): 21.192
Runoff Volume (in): 6.582
Runoff Volume (ft3): 90068.532

Basin Name: b-17
Group Name: base
Simulation: 25YR
Node Name: pond17
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Time Shift (hrs): 0.00
Area (ac): 15.800
Vol of Unit Hyd (in): 1.000
Curve Number: 72.300
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 74.421
Runoff Volume (in): 5.289
Runoff Volume (ft3): 303370.886

Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 17.820
Vol of Unit Hyd (in): 1.001
Curve Number: 71.100
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 60.336
Runoff Volume (in): 5.154
Runoff Volume (ft3): 333387.721

Basin Name: b-18
Group Name: base
Simulation: 25YR
Node Name: pond18
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 20.570
Vol of Unit Hyd (in): 1.000
Curve Number: 73.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 99.224
Runoff Volume (in): 5.434
Runoff Volume (ft3): 405764.637

Basin Name: b-3
Group Name: BASE
Simulation: 25YR
Node Name: pond3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 7.840
Vol of Unit Hyd (in): 1.000
Curve Number: 71.300
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 28.891
Runoff Volume (in): 5.176
Runoff Volume (ft3): 147314.248

Basin Name: b-19
Group Name: base
Simulation: 25YR
Node Name: pond19
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.250
Vol of Unit Hyd (in): 1.000
Curve Number: 76.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 31.962
Runoff Volume (in): 5.820
Runoff Volume (ft3): 132051.430

Basin Name: b-4
Group Name: BASE
Simulation: 25YR
Node Name: pond4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.00
Comp Time Inc (min): 2.00
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 15.00
Time Shift (hrs): 0.00
Area (ac): 7.190
Vol of Unit Hyd (in): 1.000
Curve Number: 74.100
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 26.721
Runoff Volume (in): 5.516
Runoff Volume (ft3): 143973.122

Basin Name: b-2
Group Name: BASE
Simulation: 25YR
Node Name: pond2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13

Basin Name: b-5
Group Name: BASE
Simulation: 25YR

Node Name: pond5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 7.580
Vol of Unit Hyd (in): 1.000
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 26.790
Runoff Volume (in): 5.383
Runoff Volume (ft3): 148124.617

Basin Name: b-6
Group Name: base
Simulation: 25YR
Node Name: pond6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.460
Vol of Unit Hyd (in): 1.001
Curve Number: 77.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 38.604
Runoff Volume (in): 5.905
Runoff Volume (ft3): 159906.029

Basin Name: b-7
Group Name: base
Simulation: 25YR
Node Name: pond7
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.950
Vol of Unit Hyd (in): 1.000
Curve Number: 75.800
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 34.988
Runoff Volume (in): 5.712
Runoff Volume (ft3): 144099.350

Basin Name: b-8
Group Name: base
Simulation: 25YR
Node Name: pond8
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.140
Vol of Unit Hyd (in): 1.000
Curve Number: 72.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 28.979
Runoff Volume (in): 5.302
Runoff Volume (ft3): 118160.958

Basin Name: b-9
Group Name: base
Simulation: 25YR
Node Name: pond9
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.070
Vol of Unit Hyd (in): 1.000
Curve Number: 73.200
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 33.905
Runoff Volume (in): 5.398
Runoff Volume (ft3): 138534.335

Basin Name: off-1
Group Name: base
Simulation: 25YR
Node Name: off-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 112.340
Vol of Unit Hyd (in): 1.000
Curve Number: 40.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 90.120
Runoff Volume (in): 1.541
Runoff Volume (ft3): 628259.513

Time Shift (hrs): 0.00
Area (ac): 67.700
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Basin Name: pre-1
Group Name: BASE
Simulation: 25YR
Node Name: pre-wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 62.110
Vol of Unit Hyd (in): 1.001
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.04
Flow Max (cfs): 121.204
Runoff Volume (in): 2.651
Runoff Volume (ft3): 597631.368

Time Max (hrs): 12.04
Flow Max (cfs): 132.112
Runoff Volume (in): 2.651
Runoff Volume (ft3): 651419.153

Basin Name: pre-4
Group Name: base
Simulation: 25YR
Node Name: pre-bndy4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 35.030
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.04
Flow Max (cfs): 68.359
Runoff Volume (in): 2.651
Runoff Volume (ft3): 337063.706

Basin Name: pre-2
Group Name: BASE
Simulation: 25YR
Node Name: pre-wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 5.07
Comp Time Inc (min): 5.00
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 38.00
Time Shift (hrs): 0.00
Area (ac): 215.820
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.42
Flow Max (cfs): 224.495
Runoff Volume (in): 2.650
Runoff Volume (ft3): 2076460.284

Basin Name: wet-1
Group Name: base
Simulation: 25YR
Node Name: wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 18.880
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.04
Flow Max (cfs): 36.843
Runoff Volume (in): 2.651
Runoff Volume (ft3): 181666.080

Basin Name: pre-3
Group Name: base
Simulation: 25YR
Node Name: pre-wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Basin Name: wet-2
Group Name: base
Simulation: 25YR
Node Name: wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33

Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 31.170
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 54.049
Runoff Volume (in): 2.649
Runoff Volume (ft3): 299693.444

Node Name: wet-5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 12.440
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 21.571
Runoff Volume (in): 2.649
Runoff Volume (ft3): 119608.163

Basin Name: wet-3
Group Name: base
Simulation: 25YR
Node Name: wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 25.090
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 43.506
Runoff Volume (in): 2.649
Runoff Volume (ft3): 241235.435

Basin Name: wet-6
Group Name: BASE
Simulation: 25YR
Node Name: wet-6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 2.780
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 4.821
Runoff Volume (in): 2.649
Runoff Volume (ft3): 26729.155

Basin Name: wet-4
Group Name: base
Simulation: 25YR
Node Name: wet-4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 8.640
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 11.260
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 19.525
Runoff Volume (in): 2.649
Runoff Volume (ft3): 108262.694

Basin Name: b-1
Group Name: BASE
Simulation: 5YR
Node Name: POND1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 9.580
Vol of Unit Hyd (in): 1.001
Curve Number: 76.000
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 25.623
Runoff Volume (in): 3.754
Runoff Volume (ft3): 130557.357

Basin Name: wet-5
Group Name: base
Simulation: 25YR

Basin Name: b-10
Group Name: base
Simulation: 5YR
Node Name: pond10
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.900
Vol of Unit Hyd (in): 1.001
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 24.470
Runoff Volume (in): 3.444
Runoff Volume (ft3): 98765.136

Basin Name: b-11
Group Name: base
Simulation: 5YR
Node Name: pond11
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.550
Vol of Unit Hyd (in): 1.000
Curve Number: 78.900
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 27.138
Runoff Volume (in): 4.050
Runoff Volume (ft3): 110996.752

Basin Name: b-12
Group Name: base
Simulation: 5YR
Node Name: pond12
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 13.180
Vol of Unit Hyd (in): 1.000
Curve Number: 76.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 44.760
Runoff Volume (in): 3.800
Runoff Volume (ft3): 181824.554

Basin Name: b-13
Group Name: base
Simulation: 5YR
Node Name: pond13
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 8.310
Vol of Unit Hyd (in): 1.000
Curve Number: 71.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 24.802
Runoff Volume (in): 3.314
Runoff Volume (ft3): 99969.304

Basin Name: b-14
Group Name: base
Simulation: 5YR
Node Name: pond14
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.970
Vol of Unit Hyd (in): 1.000
Curve Number: 75.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 23.201
Runoff Volume (in): 3.718
Runoff Volume (ft3): 94073.308

Basin Name: b-15
Group Name: base
Simulation: 5YR
Node Name: pond15
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Time Shift (hrs): 0.00
Area (ac): 3.560
Vol of Unit Hyd (in): 1.000
Curve Number: 72.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 10.873
Runoff Volume (in): 3.394
Runoff Volume (ft3): 43858.684

Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 20.570
Vol of Unit Hyd (in): 1.000
Curve Number: 73.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 64.604
Runoff Volume (in): 3.494
Runoff Volume (ft3): 260923.596

Basin Name: b-16
Group Name: base
Simulation: 5YR
Node Name: pond16
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.770
Vol of Unit Hyd (in): 1.000
Curve Number: 83.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 14.762
Runoff Volume (in): 4.486
Runoff Volume (ft3): 61392.667

Basin Name: b-19
Group Name: base
Simulation: 5YR
Node Name: pond19
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.250
Vol of Unit Hyd (in): 1.000
Curve Number: 76.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 21.330
Runoff Volume (in): 3.821
Runoff Volume (ft3): 86690.054

Basin Name: b-17
Group Name: base
Simulation: 5YR
Node Name: pond17
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 15.800
Vol of Unit Hyd (in): 1.000
Curve Number: 72.300
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 47.981
Runoff Volume (in): 3.374
Runoff Volume (ft3): 193506.147

Basin Name: b-2
Group Name: BASE
Simulation: 5YR
Node Name: pond2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 17.820
Vol of Unit Hyd (in): 1.001
Curve Number: 71.100
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 37.941
Runoff Volume (in): 3.260
Runoff Volume (ft3): 210892.864

Basin Name: b-18
Group Name: base
Simulation: 5YR
Node Name: pond18
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33

Basin Name: b-3
Group Name: BASE
Simulation: 5YR

Node Name: pond3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 7.840
Vol of Unit Hyd (in): 1.000
Curve Number: 71.300
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 18.285
Runoff Volume (in): 3.279
Runoff Volume (ft3): 93314.950

Basin Name: b-4
Group Name: BASE
Simulation: 5YR
Node Name: pond4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.00
Comp Time Inc (min): 2.00
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 15.00
Time Shift (hrs): 0.00
Area (ac): 7.190
Vol of Unit Hyd (in): 1.000
Curve Number: 74.100
DCIA (%): 0.000

Time Max (hrs): 12.10
Flow Max (cfs): 17.264
Runoff Volume (in): 3.561
Runoff Volume (ft3): 92949.673

Basin Name: b-5
Group Name: BASE
Simulation: 5YR
Node Name: pond5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 7.580
Vol of Unit Hyd (in): 1.000
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 17.138
Runoff Volume (in): 3.450
Runoff Volume (ft3): 94931.643

Basin Name: b-6
Group Name: base
Simulation: 5YR
Node Name: pond6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.460
Vol of Unit Hyd (in): 1.001
Curve Number: 77.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 25.895
Runoff Volume (in): 3.894
Runoff Volume (ft3): 105435.670

Basin Name: b-7
Group Name: base
Simulation: 5YR
Node Name: pond7
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.950
Vol of Unit Hyd (in): 1.000
Curve Number: 75.800
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 23.193
Runoff Volume (in): 3.728
Runoff Volume (ft3): 94062.126

Basin Name: b-8
Group Name: base
Simulation: 5YR
Node Name: pond8
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.140
Vol of Unit Hyd (in): 1.000
Curve Number: 72.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 18.699
Runoff Volume (in): 3.384
Runoff Volume (ft3): 75420.849

Time Shift (hrs): 0.00
Area (ac): 62.110
Vol of Unit Hyd (in): 1.001
Curve Number: 50.000
DCIA (%): 0.000

Basin Name: b-9
Group Name: base
Simulation: 5YR
Node Name: pond9
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.070
Vol of Unit Hyd (in): 1.000
Curve Number: 73.200
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 22.022
Runoff Volume (in): 3.464
Runoff Volume (ft3): 88904.781

Time Max (hrs): 12.07
Flow Max (cfs): 55.592
Runoff Volume (in): 1.361
Runoff Volume (ft3): 306754.324

Basin Name: pre-2
Group Name: BASE
Simulation: 5YR
Node Name: pre-wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 5.07
Comp Time Inc (min): 5.00
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 38.00
Time Shift (hrs): 0.00
Area (ac): 215.820
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.50
Flow Max (cfs): 101.645
Runoff Volume (in): 1.360
Runoff Volume (ft3): 1065815.209

Basin Name: off-1
Group Name: base
Simulation: 5YR
Node Name: off-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 112.340
Vol of Unit Hyd (in): 1.000
Curve Number: 40.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 26.759
Runoff Volume (in): 0.638
Runoff Volume (ft3): 260226.485

Basin Name: pre-3
Group Name: base
Simulation: 5YR
Node Name: pre-wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 67.700
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 60.595
Runoff Volume (in): 1.361
Runoff Volume (ft3): 334362.707

Basin Name: pre-1
Group Name: BASE
Simulation: 5YR
Node Name: pre-wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Basin Name: pre-4
Group Name: base
Simulation: 5YR
Node Name: pre-bndy4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33

Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 35.030
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 31.354
Runoff Volume (in): 1.361
Runoff Volume (ft3): 173009.241

Node Name: wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 25.090
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 19.523
Runoff Volume (in): 1.360
Runoff Volume (ft3): 123822.170

Basin Name: wet-1
Group Name: base
Simulation: 5YR
Node Name: wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 18.880
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 16.899
Runoff Volume (in): 1.361
Runoff Volume (ft3): 93246.203

Basin Name: wet-4
Group Name: base
Simulation: 5YR
Node Name: wet-4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 11.260
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 8.762
Runoff Volume (in): 1.360
Runoff Volume (ft3): 55569.455

Basin Name: wet-2
Group Name: base
Simulation: 5YR
Node Name: wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 31.170
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 24.254
Runoff Volume (in): 1.360
Runoff Volume (ft3): 153827.702

Basin Name: wet-5
Group Name: base
Simulation: 5YR
Node Name: wet-5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 12.440
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 9.680
Runoff Volume (in): 1.360
Runoff Volume (ft3): 61392.897

Basin Name: wet-3
Group Name: base
Simulation: 5YR

Basin Name: wet-6
Group Name: BASE
Simulation: 5YR
Node Name: wet-6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 6.430
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 2.780
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.07
Flow Max (cfs): 2.163
Runoff Volume (in): 1.360
Runoff Volume (ft3): 13719.635

Basin Name: b-1
Group Name: BASE
Simulation: MEAN
Node Name: POND1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 9.580
Vol of Unit Hyd (in): 1.001
Curve Number: 76.000
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 14.454
Runoff Volume (in): 2.130
Runoff Volume (ft3): 74068.338

Basin Name: b-10
Group Name: base
Simulation: MEAN
Node Name: pond10
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.900
Vol of Unit Hyd (in): 1.001
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 13.437
Runoff Volume (in): 1.893
Runoff Volume (ft3): 54289.471

Basin Name: b-11
Group Name: base
Simulation: MEAN
Node Name: pond11
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.550
Vol of Unit Hyd (in): 1.000
Curve Number: 78.900
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 16.070
Runoff Volume (in): 2.365
Runoff Volume (ft3): 64812.743

Basin Name: b-12
Group Name: base
Simulation: MEAN
Node Name: pond12
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 13.180
Vol of Unit Hyd (in): 1.000
Curve Number: 76.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 25.746
Runoff Volume (in): 2.167
Runoff Volume (ft3): 103682.846

Basin Name: b-13
Group Name: base
Simulation: MEAN
Node Name: pond13
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Time Shift (hrs): 0.00
Area (ac): 8.310
Vol of Unit Hyd (in): 1.000
Curve Number: 71.700
DCIA (%): 0.000

Time Max (hrs): 12.04
Flow Max (cfs): 13.373
Runoff Volume (in): 1.796
Runoff Volume (ft3): 54165.273

Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.770
Vol of Unit Hyd (in): 1.000
Curve Number: 83.000
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 9.150
Runoff Volume (in): 2.722
Runoff Volume (ft3): 37249.808

Basin Name: b-14
Group Name: base
Simulation: MEAN
Node Name: pond14
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.970
Vol of Unit Hyd (in): 1.000
Curve Number: 75.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 13.210
Runoff Volume (in): 2.103
Runoff Volume (ft3): 53208.591

Basin Name: b-17
Group Name: base
Simulation: MEAN
Node Name: pond17
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 15.800
Vol of Unit Hyd (in): 1.000
Curve Number: 72.300
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 26.086
Runoff Volume (in): 1.840
Runoff Volume (ft3): 105550.994

Basin Name: b-15
Group Name: base
Simulation: MEAN
Node Name: pond15
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 3.560
Vol of Unit Hyd (in): 1.000
Curve Number: 72.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 5.928
Runoff Volume (in): 1.855
Runoff Volume (ft3): 23976.432

Basin Name: b-18
Group Name: base
Simulation: MEAN
Node Name: pond18
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 20.570
Vol of Unit Hyd (in): 1.000
Curve Number: 73.500
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 35.724
Runoff Volume (in): 1.931
Runoff Volume (ft3): 144204.850

Basin Name: b-16
Group Name: base
Simulation: MEAN
Node Name: pond16
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33

Basin Name: b-19
Group Name: base
Simulation: MEAN

Node Name: pond19
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.250
Vol of Unit Hyd (in): 1.000
Curve Number: 76.700
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 12.300
Runoff Volume (in): 2.183
Runoff Volume (ft3): 49533.564

Basin Name: b-2
Group Name: BASE
Simulation: MEAN
Node Name: pond2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 17.820
Vol of Unit Hyd (in): 1.001
Curve Number: 71.100
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 19.758
Runoff Volume (in): 1.754
Runoff Volume (ft3): 113490.004

Basin Name: b-3
Group Name: BASE
Simulation: MEAN
Node Name: pond3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.73
Comp Time Inc (min): 1.73
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 13.00
Time Shift (hrs): 0.00
Area (ac): 7.840
Vol of Unit Hyd (in): 1.000
Curve Number: 71.300
DCIA (%): 0.000

Time Max (hrs): 12.08
Flow Max (cfs): 9.630
Runoff Volume (in): 1.768
Runoff Volume (ft3): 50328.711

Basin Name: b-4
Group Name: BASE
Simulation: MEAN
Node Name: pond4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.00
Comp Time Inc (min): 2.00
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 15.00
Time Shift (hrs): 0.00
Area (ac): 7.190
Vol of Unit Hyd (in): 1.000
Curve Number: 74.100
DCIA (%): 0.000

Time Max (hrs): 12.10
Flow Max (cfs): 9.474
Runoff Volume (in): 1.981
Runoff Volume (ft3): 51701.586

Basin Name: b-5
Group Name: BASE
Simulation: MEAN
Node Name: pond5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 2.13
Comp Time Inc (min): 2.13
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 16.00
Time Shift (hrs): 0.00
Area (ac): 7.580
Vol of Unit Hyd (in): 1.000
Curve Number: 73.000
DCIA (%): 0.000

Time Max (hrs): 12.09
Flow Max (cfs): 9.200
Runoff Volume (in): 1.896
Runoff Volume (ft3): 52182.267

Basin Name: b-6
Group Name: base
Simulation: MEAN
Node Name: pond6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 7.460
Vol of Unit Hyd (in): 1.001
Curve Number: 77.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 15.061
Runoff Volume (in): 2.240
Runoff Volume (ft3): 60667.617

Time Shift (hrs): 0.00
Area (ac): 7.070
Vol of Unit Hyd (in): 1.000
Curve Number: 73.200
DCIA (%): 0.000

Basin Name: b-7
Group Name: base
Simulation: MEAN
Node Name: pond7
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.950
Vol of Unit Hyd (in): 1.000
Curve Number: 75.800
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 13.223
Runoff Volume (in): 2.111
Runoff Volume (ft3): 53256.875

Basin Name: b-8
Group Name: base
Simulation: MEAN
Node Name: pond8
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 6.140
Vol of Unit Hyd (in): 1.000
Curve Number: 72.400
DCIA (%): 0.000

Time Max (hrs): 12.02
Flow Max (cfs): 10.181
Runoff Volume (in): 1.848
Runoff Volume (ft3): 41185.114

Basin Name: b-9
Group Name: base
Simulation: MEAN
Node Name: pond9
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh484
Peaking Fator: 484.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00

Time Max (hrs): 12.02
Flow Max (cfs): 12.127
Runoff Volume (in): 1.908
Runoff Volume (ft3): 48975.879

Basin Name: off-1
Group Name: base
Simulation: MEAN
Node Name: off-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 112.340
Vol of Unit Hyd (in): 1.000
Curve Number: 40.000
DCIA (%): 0.000

Time Max (hrs): 13.56
Flow Max (cfs): 1.750
Runoff Volume (in): 0.136
Runoff Volume (ft3): 55588.006

Basin Name: pre-1
Group Name: BASE
Simulation: MEAN
Node Name: pre-wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 62.110
Vol of Unit Hyd (in): 1.001
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 13.614
Runoff Volume (in): 0.500
Runoff Volume (ft3): 112776.221

Basin Name: pre-2
Group Name: BASE
Simulation: MEAN
Node Name: pre-wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 5.07

Comp Time Inc (min): 5.00
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 38.00
Time Shift (hrs): 0.00
Area (ac): 215.820
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.58
Flow Max (cfs): 26.945
Runoff Volume (in): 0.500
Runoff Volume (ft3): 391841.830

Node Name: wet-1
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 18.880
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 4.138
Runoff Volume (in): 0.500
Runoff Volume (ft3): 34281.356

Basin Name: pre-3
Group Name: base
Simulation: MEAN
Node Name: pre-wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 67.700
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 14.839
Runoff Volume (in): 0.500
Runoff Volume (ft3): 122926.262

Basin Name: wet-2
Group Name: base
Simulation: MEAN
Node Name: wet-2
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 31.170
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 6.230
Runoff Volume (in): 0.500
Runoff Volume (ft3): 56553.748

Basin Name: pre-4
Group Name: base
Simulation: MEAN
Node Name: pre-bndy4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh323
Peaking Fator: 323.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 35.030
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 7.678
Runoff Volume (in): 0.500
Runoff Volume (ft3): 63605.716

Basin Name: wet-3
Group Name: base
Simulation: MEAN
Node Name: wet-3
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 25.090
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 5.015
Runoff Volume (in): 0.500
Runoff Volume (ft3): 45522.411

Basin Name: wet-1
Group Name: base
Simulation: MEAN

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Basin Name: wet-4
Group Name: base
Simulation: MEAN
Node Name: wet-4
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 11.260
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 2.251
Runoff Volume (in): 0.500
Runoff Volume (ft3): 20429.747

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Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 12.440
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 2.486
Runoff Volume (in): 0.500
Runoff Volume (ft3): 22570.697

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Basin Name: wet-5
Group Name: base
Simulation: MEAN
Node Name: wet-5
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00

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Basin Name: wet-6
Group Name: BASE
Simulation: MEAN
Node Name: wet-6
Basin Type: SCS Unit Hydrograph

Unit Hydrograph: Uh256
Peaking Fator: 256.0
Spec Time Inc (min): 1.33
Comp Time Inc (min): 1.33
Rainfall File: FLMOD
Rainfall Amount (in): 4.500
Storm Duration (hrs): 24.00
Status: Onsite
Time of Conc (min): 10.00
Time Shift (hrs): 0.00
Area (ac): 2.780
Vol of Unit Hyd (in): 1.000
Curve Number: 50.000
DCIA (%): 0.000

Time Max (hrs): 12.29
Flow Max (cfs): 0.556
Runoff Volume (in): 0.500
Runoff Volume (ft3): 5043.934

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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
DS-16	BASE	10YR	12.37	5.970	0.014	12.37	9.096	17.78	7.760
ds-18	BASE	10YR	13.07	14.669	0.021	13.07	7.990	0.00	5.000
p-1	BASE	10YR	12.94	11.079	0.200	12.68	10.754	12.59	10.705
p-10	BASE	10YR	0.01	37.954	37.468	12.59	9.419	12.59	9.404
p-11	BASE	10YR	12.87	6.371	0.101	13.05	8.033	13.07	7.990
p-12	BASE	10YR	17.78	3.750	0.002	17.78	7.760	17.78	7.506
p-13	BASE	10YR	14.26	2.794	0.003	14.26	6.280	14.26	6.047
p-14	BASE	10YR	13.46	9.929	-27.918	12.59	9.404	12.46	9.313
p-2	BASE	10YR	12.51	9.541	0.113	12.57	10.793	12.60	10.665
p-3	BASE	10YR	12.68	9.787	-0.208	12.62	10.722	12.60	10.665
p-4	BASE	10YR	24.13	1.023	-0.000	24.13	10.113	24.13	9.909
p-5	BASE	10YR	24.13	3.343	0.001	24.13	10.113	24.13	9.864
p-6	BASE	10YR	0.00	0.000	0.000	0.00	0.000	0.00	0.000
p-7	BASE	10YR	13.91	11.604	0.012	13.91	10.975	13.91	10.642
p-8	BASE	10YR	18.92	15.020	0.033	18.92	8.780	18.92	8.406
p-9	BASE	10YR	0.01	33.266	32.408	12.62	9.424	12.59	9.404
pre-p-4	BASE	10YR	13.05	0.022	0.000	13.05	9.578	13.05	9.523
pre-p-5	BASE	10YR	13.05	0.450	0.001	13.05	9.578	13.05	9.475
pre-p-6	BASE	10YR	13.05	14.937	-7.002	13.05	9.578	24.00	9.300
pre-w-off-2	BASE	10YR	12.91	112.973	3.080	25.06	8.000	25.00	8.000
pre-w-off-3	BASE	10YR	12.50	42.623	0.114	12.50	7.130	25.00	7.000
w-1	BASE	10YR	12.59	31.625	0.051	12.59	10.705	24.13	10.113
w-10	BASE	10YR	12.51	7.020	0.014	12.51	9.586	12.71	8.017
w-11	BASE	10YR	12.62	5.600	0.008	12.62	9.737	18.92	8.780
w-12	BASE	10YR	12.63	9.433	0.015	12.63	9.138	17.78	7.760
w-13	BASE	10YR	12.47	7.853	0.020	12.47	10.636	18.92	8.780
w-14	BASE	10YR	12.54	6.069	0.010	12.54	10.130	12.71	8.017
w-15	BASE	10YR	12.44	3.623	0.008	12.44	8.182	25.05	7.001
w-19	BASE	10YR	12.47	6.405	0.012	12.47	7.637	14.26	6.280
w-4	BASE	10YR	12.60	28.498	0.053	12.60	10.665	24.13	10.113

w-6	BASE	10YR	12.34	12.277	0.014	12.34	9.592	18.92	8.780
w-9	BASE	10YR	12.46	16.065	0.039	12.46	9.313	18.92	8.780
w-off-2	BASE	10YR	12.71	30.886	0.032	12.71	8.017	25.00	8.000
w-off-3	BASE	10YR	15.22	5.713	0.051	25.05	7.001	25.00	7.000
DS-16	BASE	25YR	12.35	7.547	0.016	12.35	9.217	16.72	7.923
ds-18	BASE	25YR	12.74	24.016	0.059	12.74	8.334	0.00	5.000
p-1	BASE	25YR	12.87	15.774	0.595	12.61	10.983	12.47	10.885
p-10	BASE	25YR	0.01	37.954	37.468	12.41	9.702	12.45	9.661
p-11	BASE	25YR	12.62	10.617	0.101	12.71	8.452	12.74	8.334
p-12	BASE	25YR	16.72	5.398	0.004	16.72	7.923	16.72	7.637
p-13	BASE	25YR	13.72	4.512	0.007	13.72	6.469	13.72	6.199
P-14	BASE	25YR	12.60	15.263	-27.918	12.45	9.661	12.33	9.455
p-2	BASE	25YR	12.48	13.822	0.114	12.49	11.095	12.51	10.821
p-3	BASE	25YR	12.60	13.966	-0.209	12.54	10.937	12.51	10.821
p-4	BASE	25YR	23.00	1.579	0.001	23.00	10.316	22.33	10.023
p-5	BASE	25YR	23.00	4.695	0.003	23.00	10.316	23.00	9.990
p-6	BASE	25YR	0.00	0.000	0.000	0.00	0.000	0.00	0.000
p-7	BASE	25YR	13.74	17.443	0.034	13.74	11.315	13.74	10.914
p-8	BASE	25YR	18.81	21.247	-0.033	18.81	9.084	18.81	8.652
p-9	BASE	25YR	0.01	33.266	32.408	12.52	9.703	12.45	9.661
pre-p-4	BASE	25YR	13.07	0.192	0.000	13.07	9.753	13.07	9.649
pre-p-5	BASE	25YR	13.07	1.190	0.002	13.07	9.753	13.07	9.604
pre-p-6	BASE	25YR	13.07	18.733	-7.002	13.07	9.753	24.00	9.300
pre-w-off-2	BASE	25YR	12.84	168.704	5.285	12.84	8.022	25.00	8.000
pre-w-off-3	BASE	25YR	12.39	73.992	0.248	12.39	7.243	25.00	7.000
w-1	BASE	25YR	12.47	47.072	0.105	12.47	10.885	23.00	10.316
w-10	BASE	25YR	12.37	13.112	0.041	12.37	9.816	12.60	8.073
w-11	BASE	25YR	12.48	9.306	0.021	12.48	9.906	18.81	9.084
w-12	BASE	25YR	12.46	16.629	0.042	12.46	9.333	16.72	7.923
w-13	BASE	25YR	12.34	15.402	0.059	12.34	10.874	18.81	9.084
w-14	BASE	25YR	12.40	10.510	0.027	12.40	10.324	12.60	8.073
w-15	BASE	25YR	12.34	6.697	0.023	12.34	8.399	25.10	7.001
w-19	BASE	25YR	12.37	11.035	0.030	12.37	7.801	13.72	6.469
w-4	BASE	25YR	12.51	41.337	0.097	12.51	10.821	23.00	10.316
w-6	BASE	25YR	12.32	16.011	0.023	12.32	9.725	18.81	9.084
w-9	BASE	25YR	12.33	27.129	0.093	12.33	9.455	18.81	9.084
w-off-2	BASE	25YR	12.60	50.345	0.077	12.60	8.073	25.00	8.000
w-off-3	BASE	25YR	13.61	9.251	0.051	25.10	7.001	25.00	7.000
DS-16	BASE	5YR	12.40	4.402	0.008	12.40	9.001	19.66	7.614
ds-18	BASE	5YR	14.13	7.632	0.005	14.13	7.746	0.00	5.000
p-1	BASE	5YR	13.11	7.092	0.175	12.81	10.559	12.75	10.539
p-10	BASE	5YR	0.01	37.954	37.468	12.88	9.211	12.88	9.207
p-11	BASE	5YR	12.09	4.970	0.101	14.12	7.758	14.13	7.746
p-12	BASE	5YR	19.66	2.517	0.001	19.66	7.614	19.66	7.389
p-13	BASE	5YR	15.29	1.615	0.001	15.29	6.112	15.29	5.914
P-14	BASE	5YR	10.64	6.425	-27.918	12.88	9.207	12.91	9.180
p-2	BASE	5YR	12.60	5.862	0.112	12.70	10.560	12.73	10.514
p-3	BASE	5YR	12.79	6.287	-0.209	12.74	10.537	12.73	10.514
p-4	BASE	5YR	24.61	0.468	0.000	24.61	9.901	24.61	9.759
p-5	BASE	5YR	24.61	1.995	0.001	24.61	9.901	24.61	9.713
p-6	BASE	5YR	0.00	0.000	0.000	0.00	0.000	0.00	0.000
p-7	BASE	5YR	15.53	5.733	0.004	15.53	10.568	15.53	10.292
p-8	BASE	5YR	20.17	10.263	0.033	20.17	8.511	20.17	8.185
p-9	BASE	5YR	0.01	33.266	32.408	12.89	9.213	12.88	9.207
pre-p-4	BASE	5YR	0.00	0.000	0.000	12.94	9.428	24.00	9.300
pre-p-5	BASE	5YR	12.94	0.075	0.000	12.94	9.428	12.94	9.374
pre-p-6	BASE	5YR	12.91	12.422	-7.002	12.94	9.428	24.00	9.300
pre-w-off-2	BASE	5YR	12.98	73.216	1.238	25.06	8.000	25.00	8.000
pre-w-off-3	BASE	5YR	12.70	19.638	0.051	12.70	7.026	25.00	7.000
w-1	BASE	5YR	12.75	19.479	0.021	12.75	10.539	24.61	9.901
w-10	BASE	5YR	12.87	3.028	0.004	12.87	9.389	25.16	8.002
w-11	BASE	5YR	12.91	3.017	0.003	12.91	9.592	20.17	8.511
w-12	BASE	5YR	13.07	4.610	0.005	13.07	8.973	19.66	7.614
w-13	BASE	5YR	12.91	2.965	0.004	12.91	10.430	20.17	8.511
w-14	BASE	5YR	12.80	3.041	0.003	12.80	9.964	25.16	8.002
w-15	BASE	5YR	12.75	1.546	0.002	12.75	7.988	25.05	7.000
w-19	BASE	5YR	12.68	3.194	0.004	12.68	7.496	15.29	6.112
w-4	BASE	5YR	12.73	17.787	0.019	12.73	10.514	24.61	9.901
w-6	BASE	5YR	12.36	9.310	0.010	12.36	9.476	20.17	8.511
w-9	BASE	5YR	12.91	7.661	0.011	12.91	9.180	20.17	8.511
w-off-2	BASE	5YR	12.90	17.323	0.016	25.16	8.002	25.00	8.000
w-off-3	BASE	5YR	17.63	3.687	0.050	25.05	7.000	25.00	7.000
DS-16	BASE	MEAN	13.66	0.679	0.000	13.66	8.850	24.47	7.297
ds-18	BASE	MEAN	23.62	1.368	0.000	23.62	7.442	0.00	5.000
p-1	BASE	MEAN	15.27	1.107	0.176	14.90	10.225	14.89	10.224
p-10	BASE	MEAN	0.01	37.954	37.468	22.51	9.031	22.52	9.050
p-11	BASE	MEAN	12.08	2.733	0.101	23.62	7.442	23.62	7.442
p-12	BASE	MEAN	24.47	0.695	0.000	24.47	7.297	24.47	7.140
p-13	BASE	MEAN	24.11	0.316	-0.000	24.11	5.807	24.11	5.681
P-14	BASE	MEAN	11.97	6.762	-27.918	22.52	9.050	22.51	9.023
p-2	BASE	MEAN	12.09	2.832	0.112	14.71	10.214	14.72	10.213
p-3	BASE	MEAN	14.74	0.858	-0.220	14.72	10.214	14.72	10.213
p-4	BASE	MEAN	0.00	0.000	0.000	30.00	9.255	24.00	9.300
p-5	BASE	MEAN	0.00	0.000	0.000	30.00	9.255	24.00	9.300

p-6	BASE	MEAN	0.00	0.000	0.000	0.00	0.000	0.00	0.000
p-7	BASE	MEAN	23.79	0.933	-0.001	23.79	10.043	23.79	9.813
p-8	BASE	MEAN	21.19	3.113	0.033	25.41	8.015	25.09	8.000
p-9	BASE	MEAN	0.01	33.266	32.408	22.52	9.031	22.52	9.050
pre-p-4	BASE	MEAN	0.00	0.000	0.000	24.12	9.300	24.00	9.300
pre-p-5	BASE	MEAN	0.00	0.000	0.000	24.12	9.300	24.00	9.300
pre-p-6	BASE	MEAN	12.67	6.245	-7.002	24.12	9.300	24.00	9.300
pre-w-off-2	BASE	MEAN	12.97	19.366	0.390	25.07	8.000	25.00	8.000
pre-w-off-3	BASE	MEAN	19.65	1.736	0.051	25.25	7.000	25.00	7.000
w-1	BASE	MEAN	14.89	2.898	0.001	14.89	10.224	30.00	9.255
w-10	BASE	MEAN	20.20	0.379	0.000	20.20	9.188	25.09	8.000
w-11	BASE	MEAN	17.64	0.545	0.000	17.64	9.395	25.41	8.015
w-12	BASE	MEAN	20.05	0.742	0.000	20.05	8.782	24.47	7.297
w-13	BASE	MEAN	22.63	0.354	-0.000	22.63	10.256	25.41	8.015
w-14	BASE	MEAN	18.60	0.452	0.000	18.60	9.754	25.09	8.000
w-15	BASE	MEAN	20.09	0.182	0.000	20.09	7.786	25.06	7.000
w-19	BASE	MEAN	17.65	0.429	0.000	17.65	7.315	24.11	5.807
w-4	BASE	MEAN	14.72	2.518	0.001	14.72	10.213	30.00	9.255
w-6	BASE	MEAN	12.43	4.313	0.004	12.43	9.239	25.41	8.015
w-9	BASE	MEAN	22.51	0.964	0.000	22.51	9.023	25.41	8.015
w-off-2	BASE	MEAN	20.82	4.397	0.053	25.09	8.000	25.00	8.000
w-off-3	BASE	MEAN	25.06	0.760	0.063	25.06	7.000	25.00	7.000

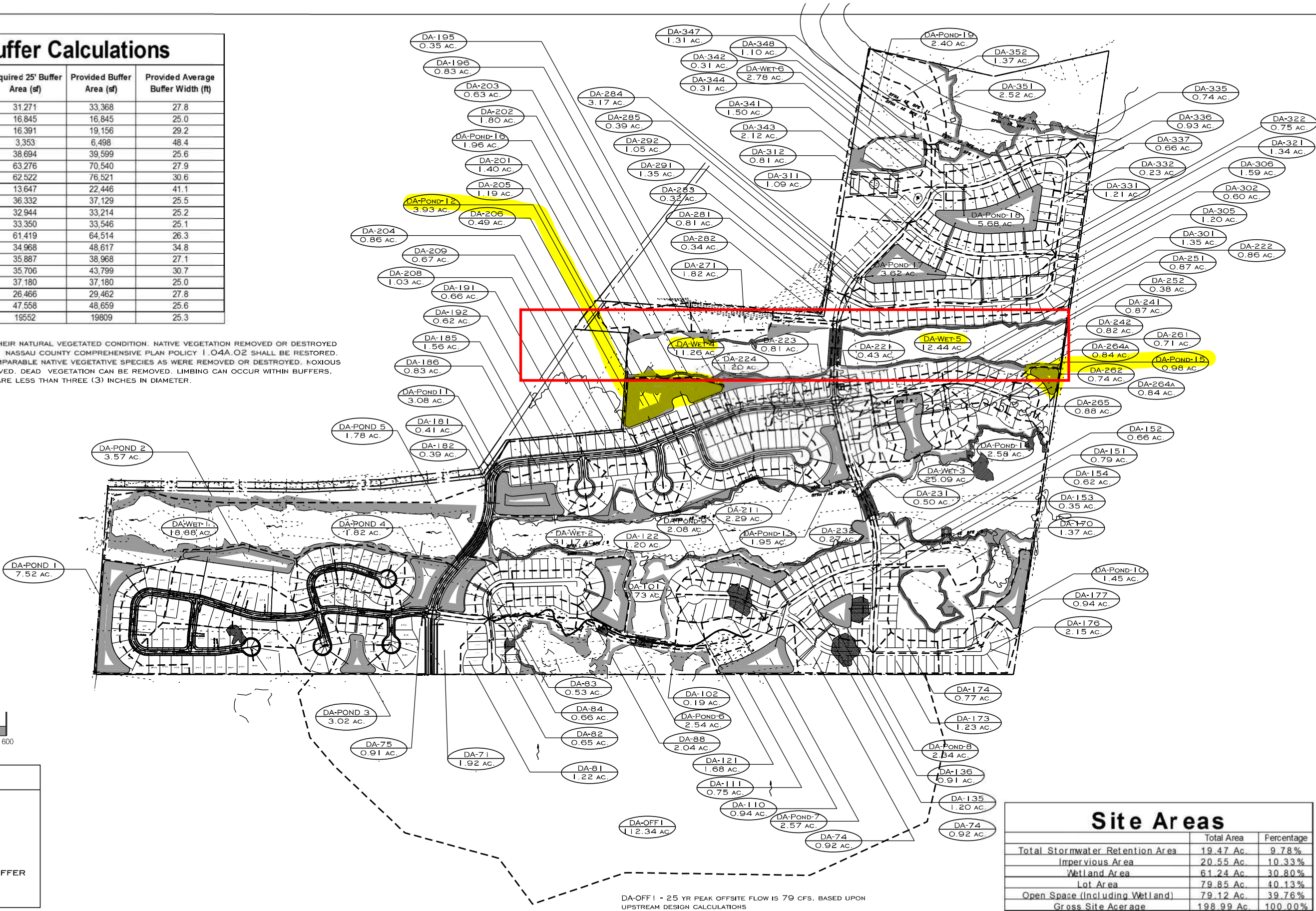
Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
bndy-1	BASE	10YR	24.00	9.300	10.000	0.0000	21	24.13	4.366	0.00	0.000
bndy-2	BASE	10YR	25.00	8.000	9.000	0.0000	0	12.71	30.886	0.00	0.000
bndy-3	BASE	10YR	25.00	7.000	8.000	0.0000	0	15.22	5.713	0.00	0.000
bndy-4	BASE	10YR	0.00	5.000	7.000	0.0000	4	13.27	16.832	0.00	0.000
MH-133	BASE	10YR	12.59	9.404	10.870	0.0499	163	0.01	71.177	13.46	9.929
off-1	BASE	10YR	13.91	10.975	12.000	0.0009	108975	12.25	50.020	13.91	11.604
pond1	BASE	10YR	12.68	10.754	12.000	0.0011	76515	12.08	31.413	12.94	11.079
pond10	BASE	10YR	12.51	9.586	10.870	0.0014	40143	12.00	30.093	12.51	7.020
pond11	BASE	10YR	12.62	9.737	11.000	0.0008	74969	12.00	32.732	12.62	5.600
pond12	BASE	10YR	12.63	9.138	10.000	0.0009	102829	12.00	54.396	12.63	9.433
pond13	BASE	10YR	12.47	10.636	11.000	0.0017	33419	12.00	30.644	12.47	7.853
pond14	BASE	10YR	12.54	10.130	11.870	0.0010	50792	12.00	28.269	12.54	6.069
pond15	BASE	10YR	12.44	8.182	8.870	0.0015	16933	12.00	13.395	12.44	3.623
pond16	BASE	10YR	12.37	9.096	10.870	0.0005	51614	12.00	17.596	12.37	5.970
pond17	BASE	10YR	13.05	8.033	9.000	0.0015	65522	12.00	59.154	12.87	6.371
pond18	BASE	10YR	13.07	7.990	9.000	0.0014	107117	12.00	84.942	13.07	14.669
pond19	BASE	10YR	12.47	7.637	9.000	0.0009	50414	12.00	25.905	12.47	6.405
pond2	BASE	10YR	12.59	10.705	12.000	0.0011	53250	12.33	38.000	12.59	31.625
pond3	BASE	10YR	12.57	10.793	12.000	0.0011	25978	12.08	22.910	12.51	9.541
pond4	BASE	10YR	12.60	10.665	12.000	0.0011	42728	12.34	31.423	12.60	28.498
pond5	BASE	10YR	12.62	10.722	12.000	0.0011	37688	12.08	21.437	12.68	9.787
pond6	BASE	10YR	12.34	9.592	10.870	0.0006	67374	12.00	31.379	12.34	12.277
pond7	BASE	10YR	12.62	9.424	10.870	0.0012	53200	12.00	28.250	0.01	33.266
pond8	BASE	10YR	12.59	9.419	10.870	0.0014	25838	12.00	23.045	0.01	37.954
pond9	BASE	10YR	12.46	9.313	10.870	0.0013	37237	11.98	32.613	12.46	16.065
pre-bndy1	BASE	10YR	24.00	9.300	10.000	0.0000	13	13.05	15.409	0.00	0.000
pre-bndy2	BASE	10YR	25.00	8.000	8.500	0.0000	0	12.91	112.973	0.00	0.000
pre-bndy3	BASE	10YR	25.00	7.000	8.000	0.0000	0	12.50	42.623	0.00	0.000
pre-bndy4	BASE	10YR	0.00	5.000	7.000	0.0000	0	12.08	46.288	0.00	0.000
pre-wet-1	BASE	10YR	13.05	9.578	10.000	0.0005	414557	12.08	82.072	13.05	15.409
pre-wet-2	BASE	10YR	25.06	8.000	8.870	0.0004	791084	12.42	154.145	12.91	112.973
pre-wet-3	BASE	10YR	12.50	7.130	7.870	0.0013	264744	12.08	89.458	12.50	42.623
wet-1	BASE	10YR	24.13	10.113	10.000	0.0010	580810	12.52	70.657	24.13	4.366
wet-2	BASE	10YR	18.92	8.780	9.000	0.0004	720346	12.35	71.884	18.92	15.020
wet-3	BASE	10YR	12.71	8.017	9.000	0.0001	378321	12.33	39.583	12.71	30.886
wet-4	BASE	10YR	17.78	7.760	7.870	0.0004	301980	12.33	24.311	17.78	3.750
wet-5	BASE	10YR	25.05	7.001	7.870	0.0005	136360	12.25	15.863	15.22	5.713
wet-6	BASE	10YR	14.26	6.280	7.000	0.0008	54500	12.38	8.652	14.26	2.794
bndy-1	BASE	25YR	24.00	9.300	10.000	0.0000	16	23.00	6.273	0.00	0.000
bndy-2	BASE	25YR	25.00	8.000	9.000	0.0000	0	12.60	50.345	0.00	0.000
bndy-3	BASE	25YR	25.00	7.000	8.000	0.0000	0	13.61	9.251	0.00	0.000
bndy-4	BASE	25YR	0.00	5.000	7.000	0.0000	4	13.00	27.642	0.00	0.000
MH-133	BASE	25YR	12.45	9.661	10.870	0.0499	163	0.01	71.177	12.60	15.263
off-1	BASE	25YR	13.74	11.315	12.000	0.0023	417377	12.08	90.069	13.74	17.443
pond1	BASE	25YR	12.61	10.983	12.000	0.0018	78314	12.08	38.594	12.87	15.774
pond10	BASE	25YR	12.37	9.816	10.870	0.0019	41147	12.00	37.327	12.37	13.112
pond11	BASE	25YR	12.48	9.906	11.000	0.0011	75778	12.00	39.739	12.48	9.306
pond12	BASE	25YR	12.46	9.333	10.000	0.0014	104107	12.00	66.592	12.46	16.629
pond13	BASE	25YR	12.34	10.874	11.000	0.0023	34356	12.00	38.210	12.34	15.402
pond14	BASE	25YR	12.40	10.324	11.870	0.0014	51638	12.00	34.708	12.40	10.510
pond15	BASE	25YR	12.34	8.399	8.870	0.0019	17499	12.00	16.648	12.34	6.697
pond16	BASE	25YR	12.35	9.217	10.870	0.0006	52192	12.00	21.086	12.35	7.547
pond17	BASE	25YR	12.71	8.452	9.000	0.0025	67533	12.00	73.580	12.62	10.617
pond18	BASE	25YR	12.74	8.334	9.000	0.0023	109364	12.00	105.054	12.74	24.016
pond19	BASE	25YR	12.37	7.801	9.000	0.0012	51055	12.00	31.691	12.37	11.035
pond2	BASE	25YR	12.47	10.885	12.000	0.0016	54273	12.23	54.079	12.47	47.072
pond3	BASE	25YR	12.49	11.095	12.000	0.0021	26898	12.08	28.672	12.48	13.822
pond4	BASE	25YR	12.51	10.821	12.000	0.0016	43342	12.33	44.322	12.51	41.337
pond5	BASE	25YR	12.54	10.937	12.000	0.0017	38533	12.08	26.716	12.60	13.966
pond6	BASE	25YR	12.32	9.725	10.870	0.0009	68064	12.00	38.292	12.32	16.011
pond7	BASE	25YR	12.52	9.703	10.870	0.0019	54537	12.00	34.672	0.01	33.266
pond8	BASE	25YR	12.41	9.702	10.870	0.0018	26580	12.00	28.654	0.01	37.954
pond9	BASE	25YR	12.33	9.455	10.870	0.0014	37857	12.05	38.613	12.33	27.129

pre-bndy1	BASE	25YR	24.00	9.300	10.000	0.0000	13	13.07	20.115	0.00	0.000
pre-bndy2	BASE	25YR	25.00	8.000	8.500	0.0000	0	12.84	168.704	0.00	0.000
pre-bndy3	BASE	25YR	25.00	7.000	8.000	0.0000	0	12.39	73.992	0.00	0.000
pre-bndy4	BASE	25YR	0.00	5.000	7.000	0.0000	0	12.08	66.489	0.00	0.000
pre-wet-1	BASE	25YR	13.07	9.753	10.000	0.0008	472681	12.08	117.889	13.07	20.115
pre-wet-2	BASE	25YR	12.84	8.022	8.870	0.0007	805678	12.42	224.493	12.84	168.704
pre-wet-3	BASE	25YR	12.39	7.243	7.870	0.0015	321472	12.08	128.499	12.39	73.992
wet-1	BASE	25YR	23.00	10.316	10.000	0.0017	628095	12.38	106.843	23.00	6.273
wet-2	BASE	25YR	18.81	9.084	9.000	0.0009	826417	12.32	119.086	18.81	21.247
wet-3	BASE	25YR	12.60	8.073	9.000	0.0003	394378	12.26	63.489	12.60	50.345
wet-4	BASE	25YR	16.72	7.923	7.870	0.0007	352911	12.31	38.238	16.72	5.398
wet-5	BASE	25YR	25.10	7.001	7.870	0.0010	136444	12.13	25.523	13.61	9.251
wet-6	BASE	25YR	13.72	6.469	7.000	0.0014	66877	12.33	14.628	13.72	4.512
bndy-1	BASE	5YR	24.00	9.300	10.000	0.0000	23	24.61	2.462	0.00	0.000
bndy-2	BASE	5YR	25.00	8.000	9.000	0.0000	0	12.90	17.323	0.00	0.000
bndy-3	BASE	5YR	25.00	7.000	8.000	0.0000	0	17.63	3.687	0.00	0.000
bndy-4	BASE	5YR	0.00	5.000	7.000	0.0000	4	14.51	9.088	0.00	0.000
MH-133	BASE	5YR	12.88	9.207	10.870	0.0500	163	0.01	71.177	10.64	6.425
off-1	BASE	5YR	15.53	10.568	12.000	0.0006	108971	12.33	26.213	15.53	5.733
pond1	BASE	5YR	12.81	10.559	12.000	0.0008	74990	12.08	25.431	13.11	7.092
pond10	BASE	5YR	12.87	9.389	10.870	0.0011	39288	12.00	24.096	12.87	3.028
pond11	BASE	5YR	12.91	9.592	11.000	0.0006	74276	12.00	26.856	12.91	3.017
pond12	BASE	5YR	13.07	8.973	10.000	0.0008	101756	12.00	44.210	13.07	4.610
pond13	BASE	5YR	12.91	10.430	11.000	0.0014	32613	12.00	24.393	12.91	2.965
pond14	BASE	5YR	12.80	9.964	11.870	0.0008	50067	12.00	22.900	12.80	3.041
pond15	BASE	5YR	12.75	7.988	8.870	0.0012	16426	12.00	10.702	12.75	1.546
pond16	BASE	5YR	12.40	9.001	10.870	0.0005	51159	12.00	14.653	12.40	4.402
pond17	BASE	5YR	14.12	7.758	9.000	0.0012	64204	12.00	47.217	12.09	4.970
pond18	BASE	5YR	14.13	7.746	9.000	0.0012	105525	12.00	68.268	14.13	7.632
pond19	BASE	5YR	12.68	7.496	9.000	0.0007	49859	12.00	21.071	12.68	3.194
pond2	BASE	5YR	12.75	10.539	12.000	0.0009	52313	12.08	28.014	12.75	19.479
pond3	BASE	5YR	12.70	10.560	12.000	0.0009	25268	12.08	18.164	12.60	5.862
pond4	BASE	5YR	12.73	10.514	12.000	0.0009	42136	12.08	21.203	12.73	17.787
pond5	BASE	5YR	12.74	10.537	12.000	0.0008	36965	12.08	17.079	12.79	6.287
pond6	BASE	5YR	12.36	9.476	10.870	0.0005	66764	12.00	25.595	12.36	9.310
pond7	BASE	5YR	12.89	9.213	10.870	0.0010	52189	12.00	22.895	0.01	33.266
pond8	BASE	5YR	12.88	9.211	10.870	0.0010	25295	12.00	18.403	0.01	37.954
pond9	BASE	5YR	12.91	9.180	10.870	0.0010	36657	12.00	27.752	12.91	7.661
pre-bndy1	BASE	5YR	24.00	9.300	10.000	0.0000	13	12.91	12.498	0.00	0.000
pre-bndy2	BASE	5YR	25.00	8.000	8.500	0.0000	0	12.98	73.216	0.00	0.000
pre-bndy3	BASE	5YR	25.00	7.000	8.000	0.0000	0	12.70	19.638	0.00	0.000
pre-bndy4	BASE	5YR	0.00	5.000	7.000	0.0000	0	12.08	30.802	0.00	0.000
pre-wet-1	BASE	5YR	12.94	9.428	10.000	0.0005	364992	12.08	54.614	12.91	12.498
pre-wet-2	BASE	5YR	25.06	8.000	8.870	0.0003	791061	12.50	101.644	12.98	73.216
pre-wet-3	BASE	5YR	12.70	7.026	7.870	0.0011	212762	12.08	59.530	12.70	19.638
wet-1	BASE	5YR	24.61	9.901	10.000	0.0004	521598	12.65	42.666	24.61	2.462
wet-2	BASE	5YR	20.17	8.511	9.000	0.0001	615687	12.50	36.379	20.17	10.263
wet-3	BASE	5YR	25.16	8.002	9.000	0.0001	374054	12.33	22.149	12.90	17.323
wet-4	BASE	5YR	19.66	7.614	7.870	0.0003	256238	12.35	13.878	19.66	2.517
wet-5	BASE	5YR	25.05	7.000	7.870	0.0003	136328	12.08	9.675	17.63	3.687
wet-6	BASE	5YR	15.29	6.112	7.000	0.0004	43547	12.55	4.344	15.29	1.615
bndy-1	BASE	MEAN	24.00	9.300	10.000	0.0000	1	0.00	0.000	0.00	0.000
bndy-2	BASE	MEAN	25.00	8.000	9.000	0.0000	0	20.82	4.397	0.00	0.000
bndy-3	BASE	MEAN	25.00	7.000	8.000	0.0000	0	25.06	0.760	0.00	0.000
bndy-4	BASE	MEAN	0.00	5.000	7.000	0.0000	4	23.65	1.681	0.00	0.000
MH-133	BASE	MEAN	22.52	9.050	10.870	0.0462	163	0.01	71.177	11.97	6.762
off-1	BASE	MEAN	23.79	10.043	12.000	0.0001	108952	13.50	1.736	23.79	0.933
pond1	BASE	MEAN	14.90	10.225	12.000	0.0003	72367	12.08	14.365	15.27	1.107
pond10	BASE	MEAN	20.20	9.188	10.870	0.0005	38412	12.00	13.129	20.20	0.379
pond11	BASE	MEAN	17.64	9.395	11.000	0.0003	73330	12.00	15.816	17.64	0.545
pond12	BASE	MEAN	20.05	8.782	10.000	0.0003	100503	12.00	25.270	20.05	0.742
pond13	BASE	MEAN	22.63	10.256	11.000	0.0006	31932	12.00	13.036	22.63	0.354
pond14	BASE	MEAN	18.60	9.754	11.870	0.0004	49152	12.00	12.953	18.60	0.452
pond15	BASE	MEAN	20.09	7.786	8.870	0.0006	15934	12.00	5.788	20.09	0.182
pond16	BASE	MEAN	13.66	8.850	10.870	0.0002	50444	12.00	9.044	13.66	0.679
pond17	BASE	MEAN	23.62	7.442	9.000	0.0005	62693	12.00	25.463	12.08	2.733
pond18	BASE	MEAN	23.62	7.442	9.000	0.0005	103536	12.00	37.486	23.62	1.368
pond19	BASE	MEAN	17.65	7.315	9.000	0.0003	49152	12.00	12.075	17.65	0.429
pond2	BASE	MEAN	14.89	10.224	12.000	0.0004	50529	12.08	14.441	14.89	2.898
pond3	BASE	MEAN	14.71	10.214	12.000	0.0004	24213	12.08	9.583	12.09	2.832
pond4	BASE	MEAN	14.72	10.213	12.000	0.0003	40958	12.08	11.494	14.72	2.518
pond5	BASE	MEAN	14.72	10.214	12.000	0.0003	35695	12.08	9.155	14.74	0.858
pond6	BASE	MEAN	12.43	9.239	10.870	0.0003	65526	12.00	14.798	12.43	4.313
pond7	BASE	MEAN	22.52	9.031	10.870	0.0005	51319	12.00	12.967	0.01	33.266
pond8	BASE	MEAN	22.51	9.031	10.870	-0.0006	24824	12.00	9.939	0.01	37.954
pond9	BASE	MEAN	22.51	9.023	10.870	0.0004	35973	11.97	17.988	22.51	0.964
pre-bndy1	BASE	MEAN	24.00	9.300	10.000	0.0000	13	12.67	6.245	0.00	0.000
pre-bndy2	BASE	MEAN	25.00	8.000	8.500	0.0000	0	12.97	19.366	0.00	0.000
pre-bndy3	BASE	MEAN	25.00	7.000	8.000	0.0000	0	19.65	1.736	0.00	0.000
pre-bndy4	BASE	MEAN	0.00	5.000	7.000	0.0000	0	12.25	7.557	0.00	0.000
pre-wet-1	BASE	MEAN	24.12	9.300	10.000	0.0005	322629	12.25	13.399	12.67	6.245
pre-wet-2	BASE	MEAN	25.07	8.000	8.870	0.0001	791021	12.58	26.944	12.97	19.366
pre-wet-3	BASE	MEAN	25.25	7.000	7.870	0.0003	199988	12.25	14.605	19.65	1.736
wet-1	BASE	MEAN	30.00	9.255	10.000	0.0002	307619	14.61	6.208	0.00	0.000
wet-2	BASE	MEAN	25.41	8.015	9.000	0.0000	423453	12.33	10.276	21.19	3.113
wet-3	BASE	MEAN	25.09	8.000	9.000	0.0000	373520	12.33	6.062	20.82	4.397
wet-4	BASE	MEAN	24.47	7.297	7.870	0.0001	156821	12.25	2.203	24.47	0.695
wet-5	BASE	MEAN	25.06	7.000	7.870	0.0001	136262	12.25	2.439	25.06	0.760
wet-6	BASE	MEAN	24.11	5.807	7.000	0.0002	29235	12.25	0.544	24.11	0.316

Wetland Buffer Calculations

Wetland Buffer	Wetland Line Length (ft)	Required 25' Buffer Area (sf)	Provided Buffer Area (sf)	Provided Average Buffer Width (ft)
B-1	1,200	31,271	33,368	27.8
B-2	674	16,845	16,845	25.0
B-3	656	16,391	19,156	29.2
B-4	134	3,353	6,498	48.4
B-5	1,548	38,694	39,599	25.6
B-6	2,531	63,276	70,540	27.9
B-7	2,501	62,522	76,521	30.6
B-8	546	13,647	22,446	41.1
B-9	1,453	36,332	37,129	25.5
B-10	1,318	32,944	33,214	25.2
B-11	1,334	33,350	33,546	25.1
B-12	2,457	61,419	64,514	26.3
B-13	1,399	34,968	48,617	34.8
B-14	1,435	35,887	38,968	27.1
B-15	1,428	35,706	43,799	30.7
B-16	1,487	37,180	37,180	25.0
B-17	1,059	26,466	29,462	27.8
B-18	1,902	47,558	48,659	25.6
B-19	782	19,552	19,809	25.3

NOTES:
UPLAND BUFFERS SHALL BE MAINTAINED IN THEIR NATURAL VEGETATED CONDITION. NATIVE VEGETATION REMOVED OR DESTROYED WITHIN THE UPLAND BUFFER IN VIOLATION OF NASSAU COUNTY COMPREHENSIVE PLAN POLICY 1.04A.02 SHALL BE RESTORED. THEIR AREAS SHALL BE REPLANTED WITH COMPARABLE NATIVE VEGETATIVE SPECIES AS WERE REMOVED OR DESTROYED. NOXIOUS AND EXOTIC PLANT MATERIALS CAN BE REMOVED. DEAD VEGETATION CAN BE REMOVED. LIMBING CAN OCCUR WITHIN BUFFERS, PROVIDED THAT THE LIMBS TO BE REMOVED ARE LESS THAN THREE (3) INCHES IN DIAMETER.



Site Areas

	Total Area	Percentage
Total Stormwater Retention Area	19.47 Ac	9.78%
Impervious Area	20.55 Ac	10.33%
Wetland Area	61.24 Ac	30.80%
Lot Area	79.85 Ac	40.13%
Open Space (Including Wetland)	79.12 Ac	39.76%
Gross Site Acreage	198.99 Ac	100.00%

McCranie & Associates, Inc.

3 South 2nd Street - Fernandina Beach, FL 32034

Land Development - Roadway Design - Permitting
CA # 00008269

DIMENSIONS AND NOTES TAKE PREference.

Woodbridge Nassau, LLC

Woodbridge PUD
Phase 3

MASTER
POST-DEVELOPMENT
DRAINAGE SHEET

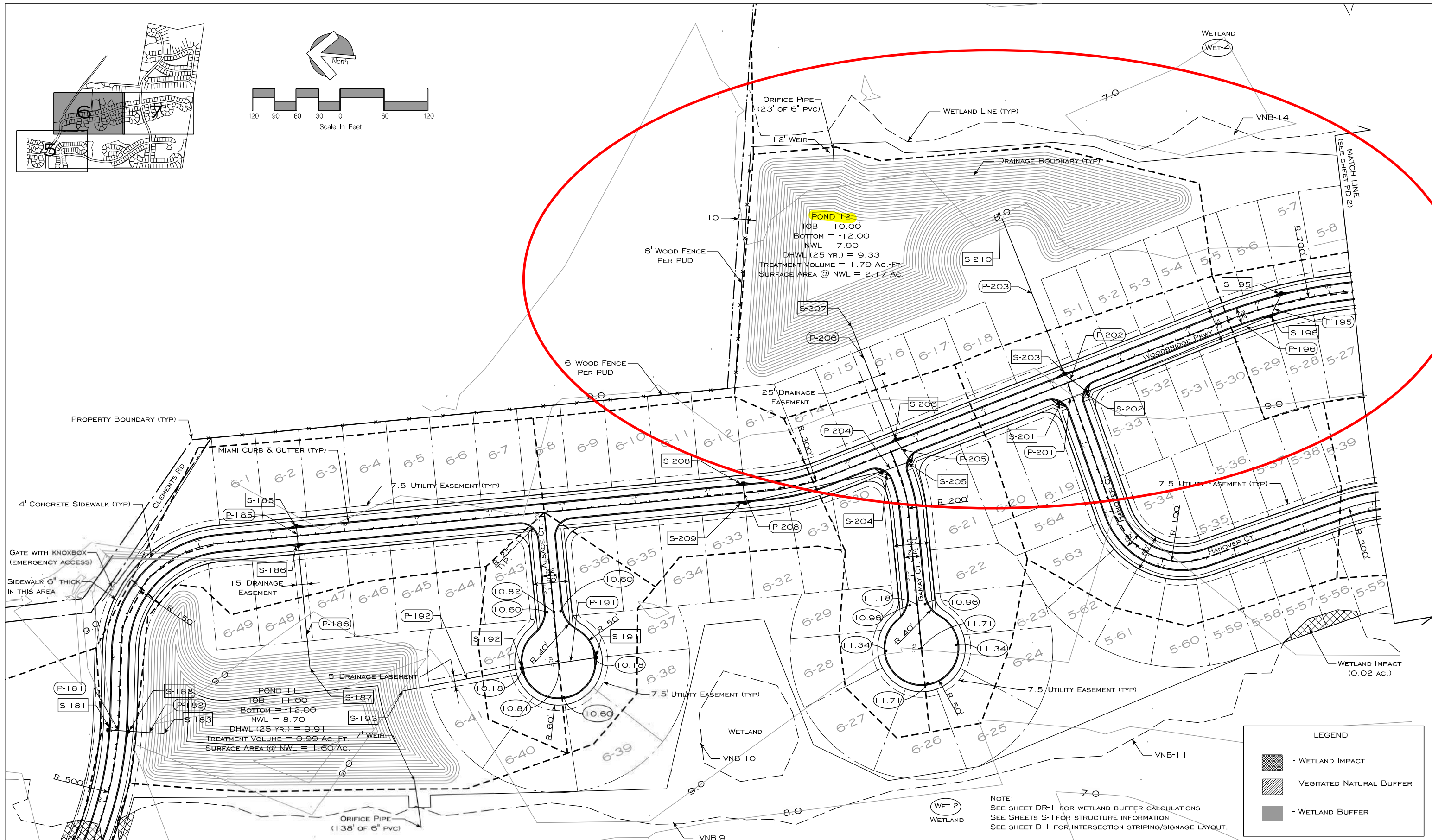
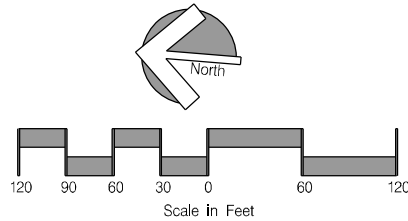
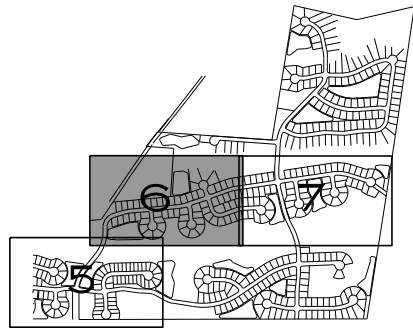
Sheet No.

DR-1
4 of 22

Issue Date
September, 2016

Project No.
06006

Registered Professional



LEGEND

- WETLAND IMPACT

- VEGITATED NATURAL BUFFER

- WETLAND BUFFER

NOTE:
SEE SHEET DR-1 FOR WETLAND BUFFER CALCULATIONS
SEE SHEETS S-1 FOR STRUCTURE INFORMATION
SEE SHEET D-1 FOR INTERSECTION STRIPING/SIGNAGE LAYOUT.

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Project Mgr: D. McCranie
Designed by: D. McCranie
Drawn by: B. Manzie
QA/QC: D. McCranie



McCranie & Associates, Inc.
3 South 2nd Street - Fernandina Beach, FL 32034
Land Development - Roadway Design - Permitting
CA # 00008269
DIMENSIONS AND NOTES TAKE PREFFERENCE.

Woodbridge Nassau, LLC

Woodbridge PUD
Phase 3

PAVING & DRAINAGE SHEET

Sheet No.
PD-2
6 of 22
Issue Date
September, 2016
Project No.
06006
Registered Professional



**Nassau County
Board of County Commissioners
Nassau County, Florida**

Clements Road

DRAINAGE REPORT (DRAFT)

Appendix E – SUPPORTING DOCUMENTS



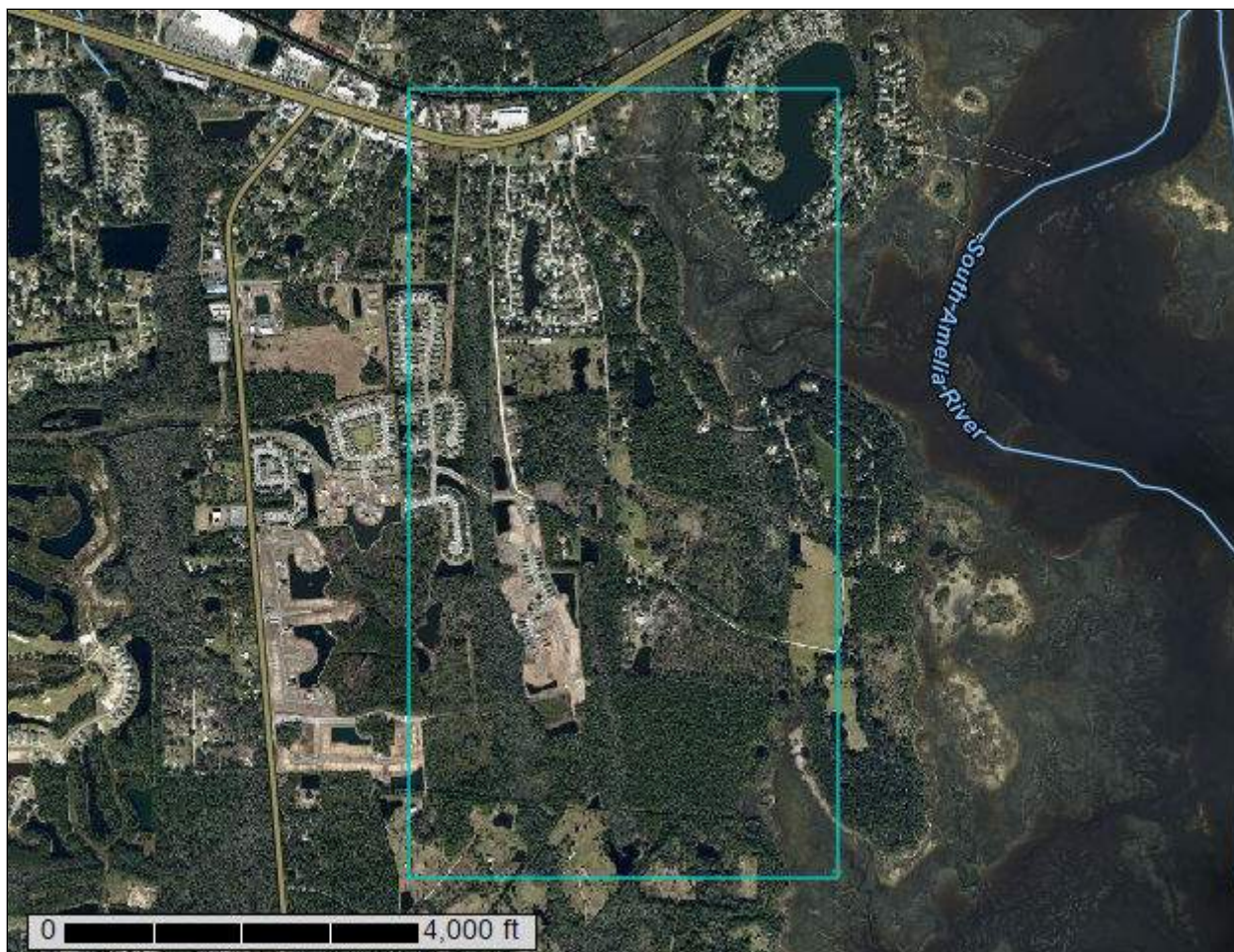
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Nassau County, Florida**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Custom Soil Resource Report

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 1:15,800.

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: Nassau County, Florida

Survey Area Data: Version 20, Jun 11, 2020

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

Date(s) aerial images were photographed: Oct 21, 2018—Jan 6, 2019

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Arents, nearly level	14.9	1.5%
6	Hurricane-Pottsburg fine sands, 0 to 5 percent slopes	18.4	1.8%
9	Leon fine sand, 0 to 2 percent slopes	594.9	59.8%
10	Mandarin fine sand, 0 to 2 percent slopes	20.1	2.0%
14	Rutlege mucky fine sand, frequently flooded	110.6	11.1%
18	Lynn Haven-Wesconnett-Leon complex, depressional	8.7	0.9%
19	Leon fine sand, tidal	12.8	1.3%
24	Kingsferry fine sand	76.2	7.7%
28	Tisonia mucky peat, tidal	109.9	11.1%
99	Water	27.8	2.8%
Totals for Area of Interest		994.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas

are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group (Clements Road)

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

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

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

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

Custom Soil Resource Report

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

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

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

Custom Soil Resource Report

Map—Hydrologic Soil Group (Clements Road)









MAP LEGEND

Area of Interest (AOI)









Area of Interest (AOI)

Soils

Soil Rating Polygons





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

Soil Rating Lines


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

Soil Rating Points






	A
	A/D
	B
	B/D

	C
	C/D
	D
	Not rated or not available


Water Features

	Streams and Canals
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Transportation

	Rails
	Interstate Highways
	US Routes
	Major Roads
	Local Roads

Background

	Aerial Photography
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MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: Nassau County, Florida

Survey Area Data: Version 20, Jun 11, 2020

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

Date(s) aerial images were photographed: Oct 21, 2018—Jan 6, 2019

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.

Table—Hydrologic Soil Group (Clements Road)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2	Arents, nearly level	A	14.9	1.5%
6	Hurricane-Pottsburg fine sands, 0 to 5 percent slopes	A	18.4	1.8%
9	Leon fine sand, 0 to 2 percent slopes	A/D	594.9	59.8%
10	Mandarin fine sand, 0 to 2 percent slopes	A	20.1	2.0%
14	Rutledge mucky fine sand, frequently flooded	A/D	110.6	11.1%
18	Lynn Haven-Wesconnett-Leon complex, depressional	A/D	8.7	0.9%
19	Leon fine sand, tidal	A/D	12.8	1.3%
24	Kingsferry fine sand	B/D	76.2	7.7%
28	Tisonia mucky peat, tidal	A/D	109.9	11.1%
99	Water		27.8	2.8%
Totals for Area of Interest			994.3	100.0%

Rating Options—Hydrologic Soil Group (Clements Road)*Aggregation Method: Dominant Condition*

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is

returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Econlockhatchee River Hydrologic Basin, within the Tomoka River Hydrologic Basin, or within the Spruce Creek Hydrologic Basin; or

- (h) Is wholly or partially located within the Wekiva River Hydrologic Basin's Riparian Habitat Protection Zone as described in Paragraph 40C-41.063(3)(e).

3.2 Design Standards for Flood Protection

3.2.1 Water Quantity *Revised 6/1/18*

- (a) The post-development peak discharge rate must not exceed the pre-development peak rate of discharge for the mean annual 24-hour storm for systems serving both of the following:
 - (1) New construction area greater than 50% impervious (excluding waterbodies)
 - (2) Projects for the construction of new developments that exceed the thresholds in paragraphs 62-330.020(2)(b) or (c), F.A.C.

Note: Both of these conditions must be met before a project is required to comply with the peak discharge criterion. Also, projects which modify existing systems are exempt from this criterion pursuant to condition 2., above. Pervious concrete and turf blocks are not considered impervious surface for this purpose, however, compacted soils and limerock are considered impervious for purposes of this subsection.

- (b) The post-development peak rate of discharge must not exceed the pre-development peak rate of discharge for the 25-year frequency, 24-hour duration storm for all areas of the District except:
 - (1) For those systems which discharge directly into the St. Johns River north of Lake George, the man-made portions of the Intracoastal Waterway, the Intracoastal Waterway north of the Matanzas Inlet, or the Atlantic Ocean.
 - (2) Where separate basin criteria have been adopted (see section 13.0 of this Volume). Projects located in areas for which separate basin criteria have been developed must meet the flood protection design standards specified by the basin criteria.
- (c) The post-development volume of direct runoff must not exceed the pre-development volume of direct runoff for the 25-year

The equation "form" depends on the inlet edge design. Coefficients and inlet edge designs can be found in the reference cited above.

When the FHWA inlet control equations are used, the entrance loss coefficient described in the following section is not applied. That's because inlet losses are included in the empirical FHWA equations.

FHWA Culvert Code	Shape and Material	Inlet Configuration
0	FHWA Inlet Control Option Not Used	
1	Circular Concrete	Square edge w/headwall
2	Circular Concrete	Groove end w/headwall
3	Circular Concrete	Groove end projecting
4	Circular CMP	Headwall
5	Circular CMP	Mitered to slope
6	Circular CMP	Projecting
7	Circular	Beveled ring, 45° bevels
8	Circular	Beveled ring, 33.7° bevels*
9	Rect. Box Concrete	30° to 75° wing wall flares
10	Rect. Box Concrete	90° and 15° wing wall flares
11	Rect. Box Concrete	0° wing wall flares
12	Rect. Box Concrete	45° wing wall flare $d = .043D$
13	Rect. Box Concrete	18° to 33.7° wing wall flare $d = .083D$
14	Rect. Box Concrete	90° headwall w/ 3/4" chamfers
15	Rect. Box Concrete	90° headwall w/ 45° bevels
16	Rect. Box Concrete	90° headwall w/ 33.7° bevels
17	Rect. Box Concrete	3/4" chamfers; 45° skewed headwall
18	Rect. Box Concrete	3/4" chamfers; 30° skewed headwall
19	Rect. Box Concrete	3/4" chamfers; 15° skewed headwall
20	Rect. Box Concrete	45° bevels; 10°-45° skewed headwall
21	Rect. Box 3/4" chamfers, Conc.	45° non-offset wing wall flares
22	Rect. Box 3/4" chamfers, Conc.	18.4° non-offset wing wall flares
23	Rect. Box 3/4" chamfers, Conc.	18.4° non-offset wing wall flares 30° skewed barrel
24	Rect. Box Top Bev. Conc.	45° wing wall flares - offset
25	Rect. Box Top Bev. Conc.	33.7° wing wall flares - offset

Con Span Size	FHWA Culvert Code		
	Extended Wing Wall	Flared Wing Wall	90- Degree Wing Wall
60x13	78	81	84
60x14	78	81	84

Entrance Loss Coefficient [top](#)

Table C.2. Entrance Loss Coefficients.

Outlet Control, Full or Partly Full Entrance Head Loss

$$H_e = K_e \left[\frac{V^2}{2g} \right]$$

Type of Structure and Design of Entrance	Coefficient K_e
• <u>Pipe, Concrete</u>	
Projecting from fill, socket end (groove-end)	0.2
Projecting from fill, sq. cut end	0.5
Headwall or headwall and wingwalls	
Socket end of pipe (groove-end)	0.2
Square-edge	0.5
Rounded (radius = D/12)	0.2
Mitered to conform to fill slope	0.7
*End-Section conforming to fill slope	0.5
Beveled edges, 33.7° or 45° bevels	0.2
Side- or slope-tapered inlet	0.2
• <u>Pipe, or Pipe-Arch, Corrugated Metal</u>	
Projecting from fill (no headwall)	0.9
Headwall or headwall and wingwalls square-edge	0.5
Mitered to conform to fill slope, paved or unpaved slope	0.7
*End-Section conforming to fill slope	0.5
Beveled edges, 33.7° or 45° bevels	0.2
Side- or slope-tapered inlet	0.2
• <u>Box, Reinforced Concrete</u>	
Headwall parallel to embankment (no wingwalls)	
Square-edged on 3 edges	0.5
Rounded on 3 edges to radius of D/12 or B/12	
or beveled edges on 3 sides	0.2
Wingwalls at 30° to 75° to barrel	
Square-edged at crown	0.4
Crown edge rounded to radius of D/12 or beveled top edge	0.2
Wingwall at 10° to 25° to barrel	
Square-edged at crown	0.5
Wingwalls parallel (extension of sides)	
Square-edged at crown	0.7
Side- or slope-tapered inlet	0.2

*Note: "End Sections conforming to fill slope," made of either metal or concrete, are the sections commonly available from manufacturers. From limited hydraulic tests they are equivalent in operation to a headwall in both inlet and outlet control. Some end sections, incorporating a closed taper in their design have a superior hydraulic performance. These latter sections can be designed using the information given for the beveled inlet.

Source: FHWA, "Hydraulic Design of Highway Culverts, Third Edition", April 2012 (Report No. FHWA-HIF-12-026, Hydraulic Design Series No. 5, Table C-2).

If the flow direction reverses during a simulation, then the original downstream end of the link becomes the temporary upstream end of the link and the entrance loss coefficient is applied to the temporary upstream end. In other words, the entrance configuration is assumed to be the same regardless of flow direction.

Exit Loss Coefficient [top](#)

The exit loss coefficient, C_{ext} , can vary from 0 to 1 and, in general, depends on the differences in velocities between the outlet of the pipe and immediately downstream of the outlet. Engineering judgment should be exercised when selecting an exit loss coefficient.

If a pipe is discharging into a pond, lake or reservoir, or perpendicular to a channel, the exit loss coefficient should be set to 1.0. In other words, if the velocity is expected to drop to zero or almost zero after leaving the outlet of the pipe, then the exit loss coefficient should be set to 1.0.

If the exit velocity from the pipe is expected to be unchanged as it leaves the pipe to the next downstream link, then the exit loss should be set to 0.0. In other words, if no appreciable change in velocity is expected after leaving the outlet of the pipe, then the exit loss coefficient should be set to zero. For example, this might be appropriate for a large box culvert that approximates the cross sectional area of a downstream channel section and the culvert is not expected to flow full. In general, this situation is rare with respect to pipes. Typically, the velocities are much higher in pipes than in open channels.

The exit loss coefficient can be set between 0.0 and 1.0 based on the differences in velocities between the pipe outlet and the entrance of the next downstream link. **As the velocity at the next downstream link approaches zero, the exit loss coefficient approaches 1.0.** The exit loss coefficient, C_{ext} , can be determined based on estimated velocities at the pipe outlet (V_{pipe}) and immediately downstream from the pipe ($V_{downstream}$) using the following equation:

$$C_{ext} = (V_{pipe}^2 - V_{downstream}^2) / V_{pipe}^2$$

Or, from the following table:

$(V_{pipe} / V_{downstream})$ or $(A_{downstream} / A_{pipe})$	C_{ext}
1.00	0.000
1.10	0.174
1.25	0.450
1.50	0.556
1.75	0.673
2.00	0.750
3.00	0.889
4.00	0.938
8.00	0.984
infinity	1.000

If the flow direction reverses during a simulation, then the original upstream end of the link becomes the temporary downstream end of the link and the exit loss coefficient is applied to the temporary downstream end. In other words, the exit configuration is assumed to be the same regardless of flow direction.

Bend Loss Coefficient [top](#)

The bend loss for a pipe link is a function of the velocity head at the location of the bend.

Table B-6: Definitions of Four SCS Hydrologic Soil Groups

Hydrologic
Soil Group

Definition

A Low Runoff Potential

Soils having high infiltration rates even when thoroughly wetted, consisting chiefly of deep, well-to-excessively-drained sands or gravels. These soils have a high rate of water transmission.

B Moderately Low Runoff Potential

Soils having moderate infiltration rates when thoroughly wetted and consisting chiefly of moderately deep, to deep, moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission.

C Moderately High Runoff Potential

Soils having slow infiltration rates when thoroughly wetted and consisting chiefly of soils with a layer that impedes downward movement of water, soils with moderate fine to fine texture, or soils with moderate water tables. These soils have a slow rate of water transmission.

D High Runoff Potential

Soils having very slow infiltration rates when thoroughly wetted and consisting chiefly of clay soils with high swelling potential, soils with a permanent high water table, soils with a clay pan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.

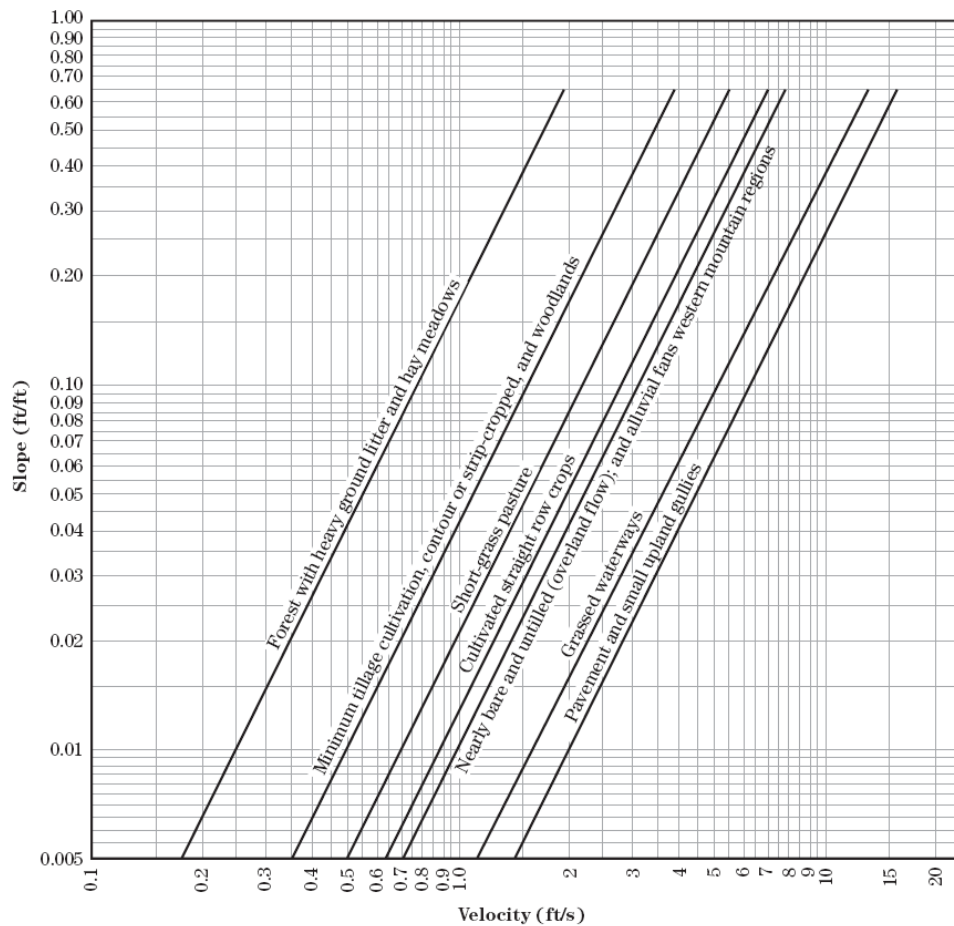
Reference: USDA, SCS, NEH-4 (1972).

Table B-7: SCS Runoff Curve Numbers – Agricultural, Suburban, and Urban Land

Land Use Description	Hydrologic Soil Group			
	A	B	C	D
Cultivated Land ^a :				
Without conservation treatment	72	81	88	91
With conservation treatment	62	71	78	81
Pasture or range land:				
Poor condition	68	79	86	89
Good condition	39	61	74	80
Meadow: good condition	30	58	71	78
Wood or Forest Land:				
Thin stand, poor cover, no mulch	45	66	77	83
Good cover ^b	25	55	70	77
Open Spaces, Lawns, Parks, Golf Courses, Cemeteries:				
Good condition: grass cover on 75% or more of the area	39	61	74	80
Fair condition: grass cover on 50% to 75% of the area	49	69	79	84
Poor condition: grass cover on 50% or less of the area	68	79	86	89
Commercial and Business Areas (85% impervious)	89	92	94	95
Industrial Districts (72% impervious)	81	88	91	93
Residential ^c				
Average lot size Average % Impervious ^d				
1/8 acre or less 65	77	85	90	92
1/4 acre 38	61	75	83	87
1/3 acre 30	57	72	81	86
1/2 acre 25	54	70	80	85
1 acre 20	51	68	79	84
Paved Parking Lots, Roofs, Driveways ^e :	98	98	98	98
Streets and Roads:				
Paved with curbs and storm sewers ^e	98	98	98	98
Gravel	76	85	89	91
Dirt	72	82	87	89
Paved with open ditches	83	89	92	93
Newly graded area (no vegetation established) ^f	77	86	91	94

^a For a more detailed description of agricultural land use curve numbers, refer to Table B-8.^b Good cover is protected from grazing and litter and brush cover soil.^c Curve numbers are computed assuming the runoff from the house and driveway is directed toward the street with a minimum of roof water directed to lawns where additional infiltration could occur, which depends on the depth and degree of the permeability of the underlying strata.^d The remaining pervious areas (lawn) are considered to be in good pasture condition for these curve numbers.^e In some warmer climates of the country, a curve number of 96 may be used.^f Use for temporary conditions during grading and construction.**Note:** These values are for Antecedent Moisture Condition II, and $I_a = 0.2S$.

Reference: USDA, SCS, TR-55 (1984).



Equations and assumptions from Figure B-3

Flow type	Depth (ft)	Manning's <i>n</i>	Velocity equation (ft/s)
Pavement and small upland gullies	0.2	0.025	$V = 20.328(s)^{0.5}$
Grassed waterways	0.4	0.050	$V = 16.135(s)^{0.5}$
Nearly bare and untilled (overland flow); and alluvial fans in western mountain regions	0.2	0.051	$V = 9.965(s)^{0.5}$
Cultivated straight row crops	0.2	0.058	$V = 8.762(s)^{0.5}$
Short-grass pasture	0.2	0.073	$V = 6.962(s)^{0.5}$
Minimum tillage cultivation, contour or strip-cropped, and woodlands	0.2	0.101	$V = 5.032(s)^{0.5}$
Forest with heavy ground litter and hay meadows	0.2	0.202	$V = 2.516(s)^{0.5}$

Ref: Chapter 15, Part 630, National Engineering Handbook, May 2010

Figure B-3: Velocity versus slope for Shallow Concentrated Flow



POINT PRECIPITATION FREQUENCY ESTIMATES

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NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.559 (0.458-0.681)	0.645 (0.527-0.786)	0.781 (0.636-0.955)	0.890 (0.721-1.09)	1.03 (0.806-1.31)	1.14 (0.870-1.47)	1.25 (0.916-1.64)	1.35 (0.948-1.83)	1.48 (0.998-2.06)	1.57 (1.03-2.24)
10-min	0.819 (0.670-0.997)	0.944 (0.772-1.15)	1.14 (0.932-1.40)	1.30 (1.06-1.60)	1.52 (1.18-1.91)	1.67 (1.27-2.15)	1.82 (1.34-2.40)	1.97 (1.39-2.68)	2.16 (1.46-3.02)	2.29 (1.52-3.28)
15-min	0.999 (0.818-1.22)	1.15 (0.942-1.40)	1.40 (1.14-1.71)	1.59 (1.29-1.95)	1.85 (1.44-2.33)	2.04 (1.55-2.62)	2.23 (1.64-2.93)	2.40 (1.69-3.26)	2.63 (1.78-3.69)	2.80 (1.85-4.00)
30-min	1.46 (1.19-1.78)	1.70 (1.39-2.07)	2.08 (1.69-2.54)	2.38 (1.93-2.92)	2.78 (2.16-3.50)	3.07 (2.34-3.93)	3.35 (2.46-4.41)	3.62 (2.55-4.91)	3.96 (2.68-5.54)	4.20 (2.78-6.02)
60-min	1.94 (1.59-2.36)	2.22 (1.82-2.71)	2.70 (2.20-3.30)	3.10 (2.51-3.81)	3.66 (2.87-4.66)	4.11 (3.14-5.31)	4.56 (3.37-6.06)	5.04 (3.56-6.88)	5.67 (3.85-7.99)	6.16 (4.07-8.82)
2-hr	2.42 (2.00-2.92)	2.75 (2.27-3.32)	3.32 (2.73-4.02)	3.82 (3.12-4.65)	4.55 (3.61-5.78)	5.15 (3.98-6.63)	5.78 (4.31-7.65)	6.45 (4.60-8.79)	7.38 (5.06-10.4)	8.12 (5.40-11.6)
3-hr	2.71 (2.25-3.26)	3.05 (2.53-3.67)	3.68 (3.04-4.43)	4.25 (3.49-5.15)	5.13 (4.11-6.54)	5.88 (4.58-7.58)	6.69 (5.03-8.86)	7.58 (5.45-10.3)	8.84 (6.10-12.4)	9.88 (6.59-14.0)
6-hr	3.18 (2.67-3.79)	3.61 (3.02-4.30)	4.41 (3.68-5.27)	5.18 (4.30-6.22)	6.39 (5.19-8.13)	7.45 (5.87-9.57)	8.61 (6.53-11.4)	9.89 (7.17-13.4)	11.7 (8.17-16.4)	13.3 (8.92-18.7)
12-hr	3.63 (3.07-4.28)	4.23 (3.57-5.00)	5.35 (4.50-6.33)	6.40 (5.35-7.62)	8.02 (6.56-10.1)	9.42 (7.48-12.0)	10.9 (8.37-14.3)	12.6 (9.22-17.0)	15.0 (10.5-20.9)	17.0 (11.5-23.8)
24-hr	4.17 (3.56-4.88)	4.91 (4.18-5.74)	6.27 (5.33-7.36)	7.55 (6.37-8.91)	9.53 (7.86-11.9)	11.2 (8.99-14.2)	13.1 (10.1-17.0)	15.1 (11.1-20.3)	18.1 (12.7-24.9)	20.5 (13.9-28.4)
2-day	4.89 (4.21-5.66)	5.64 (4.86-6.54)	7.07 (6.07-8.23)	8.45 (7.21-9.89)	10.6 (8.87-13.2)	12.5 (10.1-15.8)	14.6 (11.4-18.9)	16.9 (12.6-22.6)	20.3 (14.4-27.9)	23.1 (15.8-31.9)
3-day	5.30 (4.60-6.11)	6.13 (5.31-7.07)	7.67 (6.62-8.88)	9.14 (7.84-10.6)	11.4 (9.58-14.1)	13.4 (10.9-16.8)	15.6 (12.2-20.0)	18.0 (13.4-23.8)	21.5 (15.3-29.3)	24.3 (16.7-33.4)
4-day	5.65 (4.92-6.49)	6.52 (5.67-7.50)	8.15 (7.06-9.40)	9.68 (8.33-11.2)	12.0 (10.1-14.8)	14.1 (11.5-17.5)	16.3 (12.8-20.8)	18.7 (14.0-24.7)	22.2 (15.9-30.2)	25.1 (17.3-34.4)
7-day	6.62 (5.81-7.54)	7.52 (6.60-8.59)	9.20 (8.03-10.5)	10.8 (9.34-12.4)	13.2 (11.2-16.1)	15.3 (12.5-18.8)	17.5 (13.8-22.3)	20.0 (15.0-26.2)	23.6 (16.9-31.9)	26.5 (18.4-36.1)
10-day	7.51 (6.63-8.53)	8.44 (7.43-9.58)	10.1 (8.89-11.5)	11.7 (10.2-13.4)	14.1 (12.0-17.1)	16.2 (13.3-19.9)	18.5 (14.6-23.3)	20.9 (15.8-27.3)	24.5 (17.6-32.9)	27.4 (19.1-37.2)
20-day	10.1 (8.98-11.3)	11.2 (9.95-12.6)	13.1 (11.6-14.8)	14.8 (13.0-16.8)	17.3 (14.7-20.5)	19.4 (16.0-23.4)	21.5 (17.1-26.8)	23.9 (18.1-30.7)	27.1 (19.7-36.1)	29.7 (20.8-40.1)
30-day	12.2 (10.9-13.6)	13.5 (12.1-15.2)	15.8 (14.1-17.8)	17.7 (15.7-20.0)	20.5 (17.5-24.0)	22.6 (18.8-27.0)	24.8 (19.8-30.6)	27.1 (20.6-34.5)	30.2 (21.9-39.8)	32.6 (22.9-43.8)
45-day	14.8 (13.4-16.5)	16.6 (15.0-18.5)	19.5 (17.4-21.7)	21.8 (19.4-24.5)	24.9 (21.3-29.0)	27.3 (22.8-32.4)	29.7 (23.7-36.2)	32.0 (24.4-40.5)	35.1 (25.5-45.9)	37.3 (26.4-50.0)
60-day	17.1 (15.5-18.9)	19.3 (17.4-21.4)	22.7 (20.4-25.3)	25.5 (22.8-28.5)	29.1 (24.9-33.6)	31.8 (26.5-37.4)	34.4 (27.5-41.7)	36.9 (28.1-46.3)	40.0 (29.2-52.1)	42.3 (30.0-56.4)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

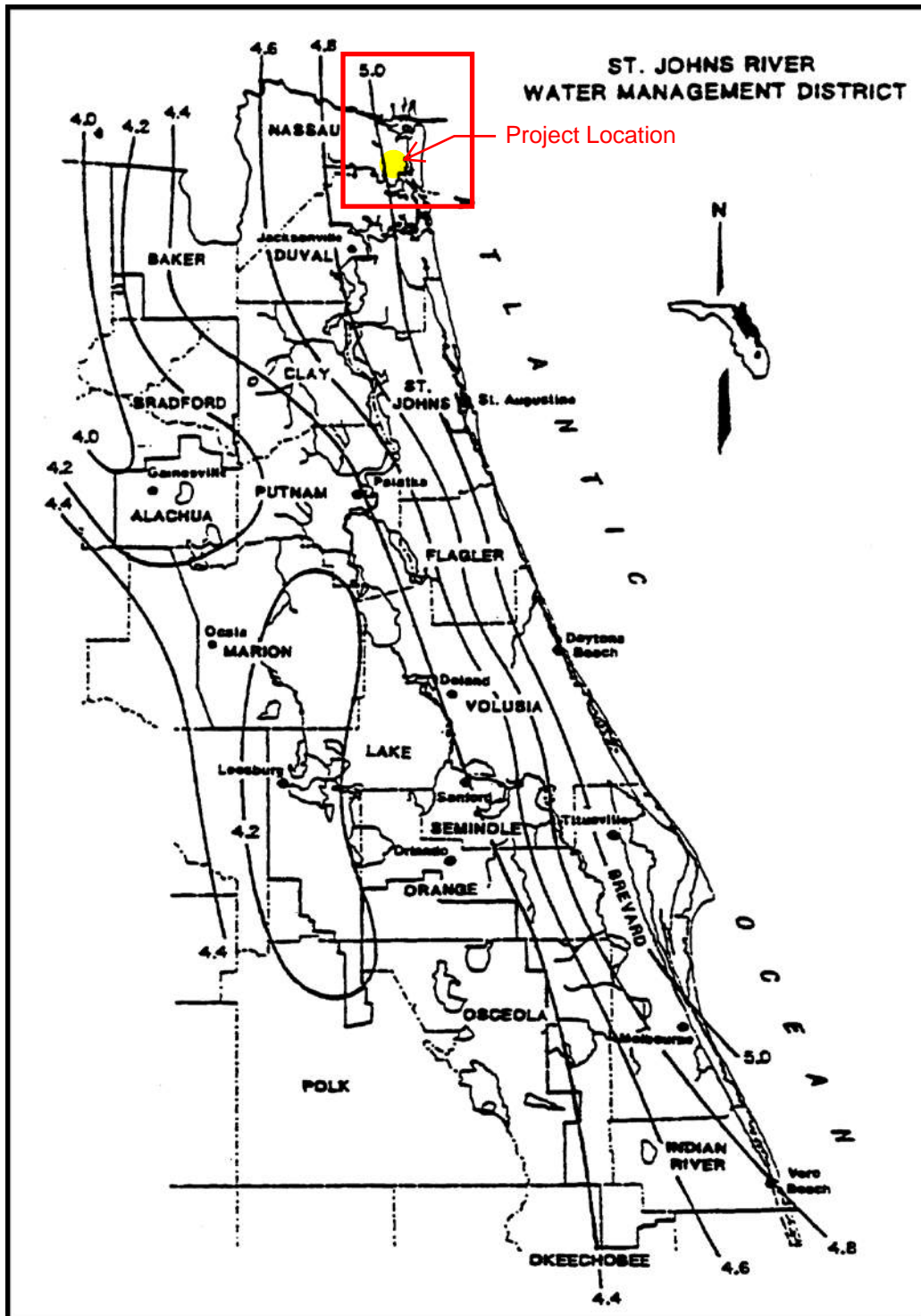


Figure 2.7.1-1 Mean Annual 24-Hour Maximum Rainfall, inches (Source: Rao, 1991)