September 28, 2023
File No. 25222268.00

Ms. Allison Rathsack, Project Manager
Dane County Department of Waste & Renewables
1919 Alliant Energy Center Way
Madison, WI 53713

Subject: Preliminary Reduced WisDOT Pond B Footprint Evaluation
Proposed Dane County Landfill No. 3 – 7101 US Highway 12&18, Madison, WI

Dear Ms. Rathsack:

As requested, SCS Engineers (SCS) conducted a preliminary evaluation of the Wisconsin Department of Transportation (WisDOT) Pond B built as part of the CTH AB Interchange Project and adjacent to the proposed Dane County Landfill No. 3 site (Proposed Landfill). The purpose of the evaluation was to determine if a portion of Pond B could be reduced to improve access to the Proposed Landfill, developed as part of a future Sustainability Campus while still meeting applicable storm water performance standards and not adversely impact upstream and downstream storm water features.

This letter summarizes our approach, key assumptions, and results of the evaluation.

PRELIMINARY POND B FOOTPRINT REDUCTION EVALUATION

Approach

To determine if the footprint of Pond B could be reduced, SCS:

- Started with the storm water model from Tetra Tech, with adjustments made by SCS to correct discrepancies for post-development conditions of the WisDOT Project. The minor adjustments for post-development conditions are described in Attachment 1.
- Modified the drainage area to Pond B for development of the Sustainability Campus assuming:
  - Five acres of pervious area are converted to 5 acres of impervious area. This assumption is intended to reflect an assumed 5 acres of the Sustainability Campus draining to Pond B, provided by Dane County.
  - None of the proposed landfill was yet constructed. This is conservative as a portion of the Proposed Landfill lies within the drainage area to Pond B. As the Proposed Landfill is developed, runoff from the Proposed Landfill will be directed to a new pond and the drainage area to Pond B will be reduced.
- Modified the southeast portion of the footprint of Pond B to provide additional space for access roads into the Sustainability Campus.

- Ran the HydroCAD model to evaluate the performance of Pond B and potential impacts to upstream and downstream features for the storm events that the features were originally designed for. In addition, the performance of Pond B was evaluated for compliance with the City and County performance standards.

- Modified the top of berm height and emergency spillway design on Pond B with the reduced footprint size until the performance standards were met while not causing overtopping of upstream or downstream features.

Key Assumptions

Below are key assumptions for the preliminary evaluation:

- Our evaluation utilized the following storm water models as a basis for the evaluation:

  – Pre-development conditions: SCS used the pre-development storm water model prepared by SEH for the WisDOT Project.

  – Post-development conditions: SCS used the Tetra Tech model developed on behalf of Dane County Waste & Renewables Department, which was based on the SEH post-development storm water model for the WisDOT Project. Tetra Tech made some minor revisions to the SEH model including adjustments to the rainfall depths, storm events evaluated, and acreage changes in subcatchments. SCS made additional adjustments to correct discrepancies for the post-development conditions, as described in Attachment 1.

- The evaluation considers a 5-acre, impervious area from the Sustainability Campus and the existing drainage area within the footprint of the Proposed Landfill flowing into the WisDOT Pond B. This reflects the largest anticipated area drainage to Pond B throughout the construction of the Sustainability Campus. As the Proposed Landfill is developed, less area will contribute storm water to the pond, compared to the existing drainage area prior to the Proposed Landfill development.

- The following proposed modifications can be made to Pond B:

  – Raise the perimeter berm, extending around the entire Pond B, by 1 foot to an elevation of 878.00 feet mean sea level (MSL) from the current elevation of 877.00 feet MSL.

  – Raise the bottom of the emergency spillway by 0.40 foot to an elevation of 876.40 feet MSL from the current elevation of 876.00 feet MSL.

- Other assumptions are included in the storm water calculations write-up included in Attachment 1.

Results

Based on preliminary modeling, Pond B can be reduced and still meet the following performance criteria:

- Upstream and downstream features do not overtop for the storm events that they were originally designed for.
- The discharge rate comparison is met for the required storm events (1-, 2-, 5-, 10-, 100-, and 200-year, 24-hour storms).
- Reduced Pond B can meet the required water quality (total suspended solids and total phosphorus) performance standards.
- Pond B does not overtop the pond crest elevation up to and including the 500-year, 24-hour storm event.

Summarized below are the Pond B modifications that were made to adjust the Pond B geometry, peak elevation, and emergency spillway to achieve the performance criteria:

- The perimeter berm was raised to elevation 878.00 feet MSL.
- The bottom of the emergency spillway was modified to elevation 876.40 feet MSL.
- The footprint of Pond B was modified as shown on Figure 2 in **Attachment 1**, with the surface area of each Pond B contour shown below for the original design and modified design. Plan Sheet 3 in the CUP plan set also shows the original footprint of Pond B, as well as the reduced footprint resulting from this analysis.

Table 1 - WisDOT Pond B
Elevation - Surface Area Comparison

Elevation (ft. MSL)	Original WisDOT Pond B Design Surface Area (acres)	SCS Reduced WisDOT Pond B Design Surface Area (acres)
871.00	3.033	2.930
872.00	3.251	3.134
872.50	5.890	5.890
873.00	6.982	6.100
874.00	7.226	6.376
875.00	7.473	6.599
876.00	7.748	6.861
877.00	7.991	7.228
878.00	N/A	7.451

With the reduced footprint shown on Figure 2 in **Attachment 1** and the Pond B design modifications described in the Key Assumptions section above, the pre- vs. post-development peak discharge rates and water quality standards will continue to be met, as summarized in the storm water calculations package included in **Attachment 1**.

CONCLUSION

Based on the preliminary modeling and assumptions, the Pond B footprint can be reduced as shown on Figure 2 in **Attachment 1** and Plan Sheet 3 of the CUP plan set while maintaining compliance with

applicable storm water regulations. Additional verification of Pond B sizing and performance will be performed as the Sustainability Campus designs progress.

If you have any questions, please contact Betsy at 608.333.5408 or bpowers@scsengineers.com.

Sincerely,

Spencer J. LaBelle
Senior Project Professional
SCS Engineers

Betsy Powers, PE
Vice President
SCS Engineers

Enclosure: Attachment 1 - Storm Water Management Calculations

SJL/AJR/MRH/BLP

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Attachment 1

Storm Water Management Calculations

Storm Water Management Calculations

Purpose:

The purpose of the WisDOT Pond B evaluation is to demonstrate an acceptable design of a reduced WisDOT Pond B footprint using the following performance criteria:

- Upstream and downstream features do not overtop for the storm events that they were original designed for (up to the 100-year, 24-hour storm)
- The discharge rate comparison (pre-development vs post-development) is met for the required storm events (1-, 2-, 5-, 10-, 100-, and 200-year, 24-hour storms) at the Ag Ditch outfall
- The discharge rate comparison (pre-development vs post-development) is met for the 100-year, 24 hour storm event at the Existing Depression #2.
- The WisDOT Pond B does not overtop the pond crest elevation up to and including the 500-year, 24-hour storm event
- Reduce Total Suspended Solids (TSS) by at least 80% and Total Phosphorus (TP) by at least 54%.

The calculations support the capacity check of the Reduced WisDOT Pond B design for a storm water model that reflects the largest anticipated area draining to the pond throughout the construction of the Proposed Landfill and Sustainability Campus, based on a currently assumed 5 acres of Sustainability Campus contributing to the pond as directed by Dane County and the existing drainage area within the footprint of the Proposed Landfill flowing into Pond B. As the Proposed Landfill is developed, less area will contribute storm water to the pond, compared to the existing drainage area prior to the Proposed Landfill development.

The performance criteria must be met for the model scenario to be considered an acceptable design.

Approach:

Hydrograph Generation

HydroCAD was used to model the pre-development condition and post-development model scenarios. The pre-development conditions were modeled by SEH as part of the County Trunk Highway (CTH) AB and US Highway 12/18 interchange project (WisDOT Project).

The post-development model was also prepared by Tetra Tech with adjustments made by SCS Engineers to correct discrepancies.

- In the post-development model, SCS created a new subcatchment for the Sustainability Campus adjusted a subcatchment area (YH2-A), adjusted the WisDOT Pond B outlet structure elevation and pond geometry inputs based on the final WisDOT design plans.
- For both the pre-development and post-development models, SCS updated the rainfall depths to match those specified in the City of Madison ordinance.

The hydrographs for the storm water model were generated using TR-20 methodologies. The models were designed to simulate the surface runoff response of a watershed to a precipitation event. Input parameters for the models include precipitation depth for the design storm events from the City of Madison storm water requirements established in Chapter 37.09(3)(c)(2)(a-h), contributing drainage areas, runoff curve numbers, and time of concentration.

WinSLAMM Analysis

WinSLAMM was used to model the TSS and TP reduction. The Scenario 3 model prepared by Vierbicher, which was based on SEH model, was used with the same modifications noted above to correct discrepancies. Pond B was modified to account for the reduced basin size and proposed changes to the emergency spillway and top of berm elevation.

Reduced WisDOT Pond B Evaluation

The Reduced WisDOT Pond B is the only storm water feature evaluated as part of this calculation. The evaluation considers the performance criteria described above. HydroCAD was used to model the runoff flow through the Reduced WisDOT Pond B (as determined by the Hydrograph Generation model).

Key Assumptions:

- Drainage areas and time of concentration flow paths for the pre-development and post-development conditions are shown in **Figure 1** and **Figure 2**.
- The discharge comparison location for the pre-development vs. post-development model scenarios is the Ag Ditch #4 location in which the initial SEH model utilized.
- An MSE4 rainfall distribution was used based on the City of Madison, Chapter 37.09(3)(c)(2) requirement. A summary of the storm event depths is provided below:

Storm Event	Depth (in)
1-year, 24-hour	2.49
2-year, 24-hour	2.84
5-year, 24-hour	3.45
10-year, 24-hour	4.09
100-year, 24-hour	6.66
200-year, 24-hour	7.53
500-year, 24-hour	8.94

- Runoff curve numbers for subcatchments changed by SCS Engineers were based on tables presented in Urban Hydrology for Small Watersheds, as summarized below.

Cover Type	CN
Urban Industrial Run-off	91 – Urban Industrial, 72% impervious, hydrologic soil group (HSG) C

- Other assumptions are included with the calculations attached to this appendix.

Results:

Hydrograph Generation

The hydrograph modeling results for all modeled storm events are included in the pre-development and post-development model Hydrograph Generation section.

Reduced WisDOT Pond B Evaluation

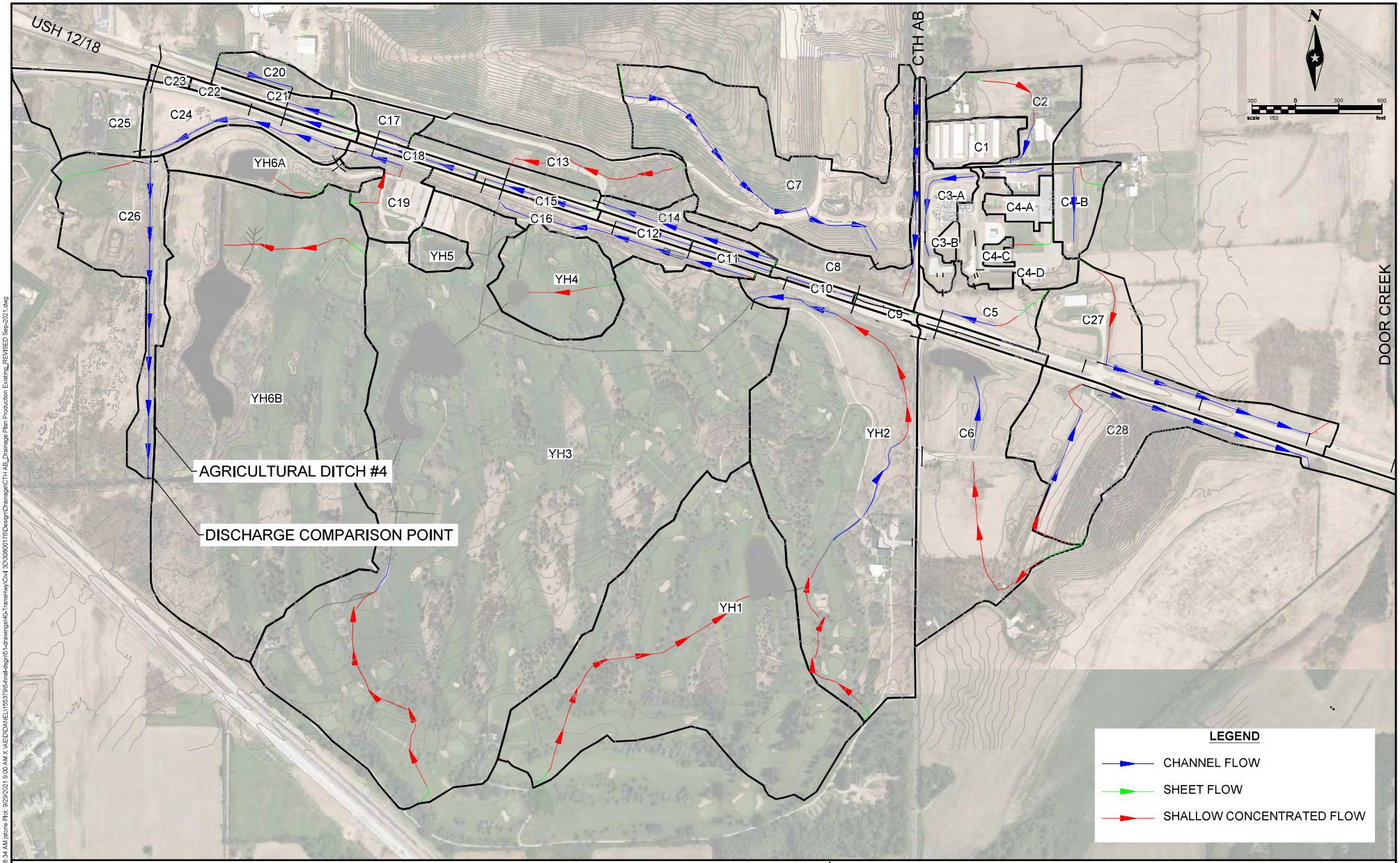
As shown in the attached post-development storm water model, upstream and downstream features do not overtop for the storm events that they were original designed for (up to the 100-year, 24-hour storm). The Reduced WisDOT Pond B has the capacity to meet the discharge comparison requirements summarized below and does not overtop the pond crest elevation up to and including the 500-year, 24-hour storm event. Refer to the Pre-development and Post-development Hydrograph Generation attachments for the detailed ouput.

Storm Water Model Evaluation Summary			
Storm Event	**Pre-Development Conditions Discharge Rate (cfs) to Ag Ditch #4**	**Post-Development Conditions Discharge Rate (cfs) to Ag Ditch #4**	**Reduced WisDOT Pond B Peak Elevation (ft. MSL) Crest = 878.00**
1-year, 24-hour	30.15	25.13	872.60
2-year, 24-hour	41.71	34.29	872.82
5-year, 24-hour	63.97	52.13	873.22
10-year, 24-hour	89.77	73.43	873.63
100-year, 24-hour	210.27	200.42	876.19
200-year, 24-hour	508.42	241.65	876.91
500-year, 24-hour	N/A	N/A	877.52

The pre- and post-development 100-year, 24-hour discharge rate at the Existing Depression #2 and WisDOT Pond B are as follows:

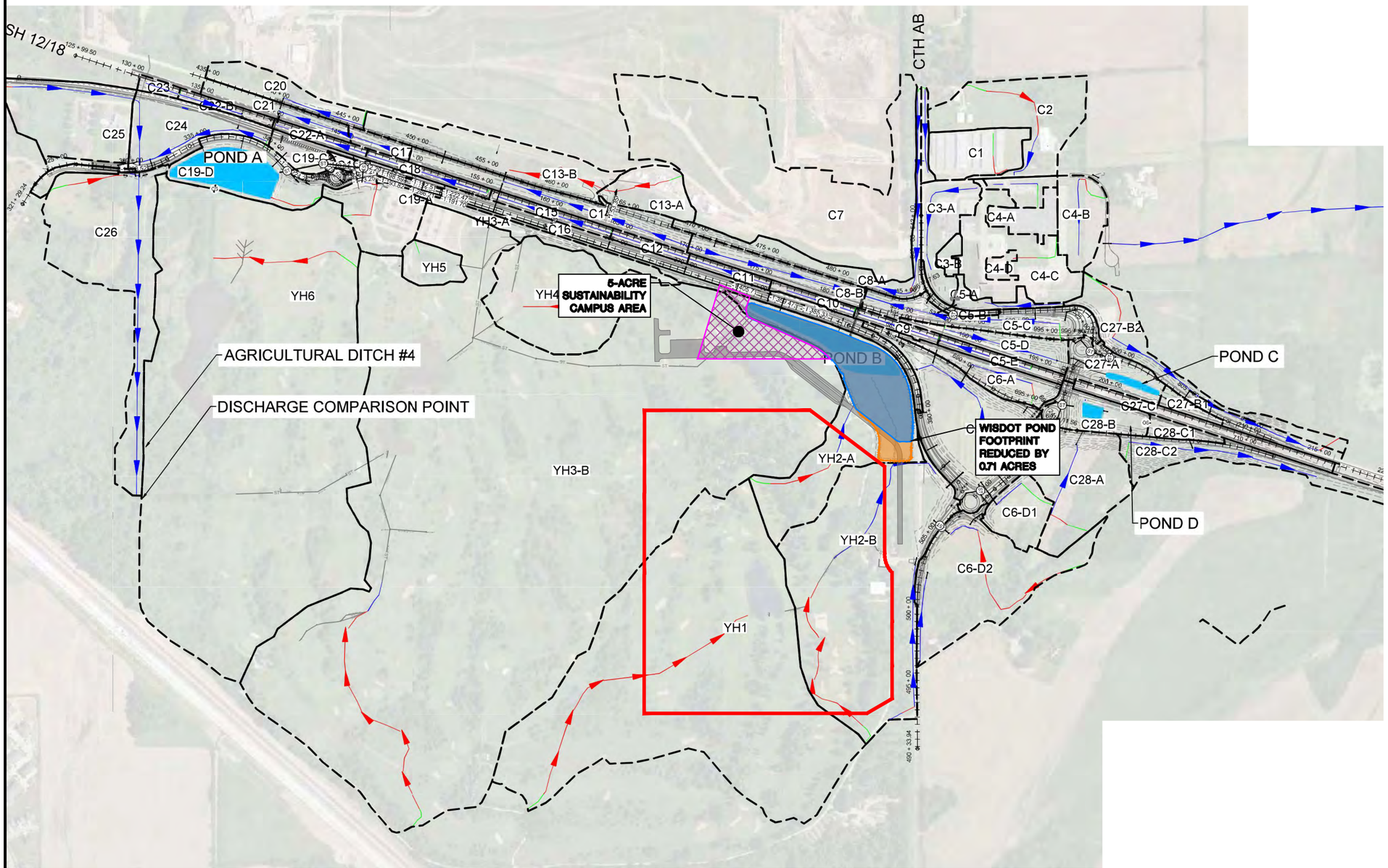
- Pre-development at Existing Depression #2 = 111.96 cfs
- Post-development from Reduced WisDOT Pond B = 66.30 cfs

The Reduced WisDOT Pond B removes 84.3% TSS and 64.6% TP, meeting the minimum standards (refer to the WinSLAMM model attachment for detailed results).



SEH Project	155379	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date	SEH	CTH AB OVERPASS DANE COUNTY, WI	EXISTING DRAINAGE OVERALL	1 of 22
Drawn By	JLS										
Designed By	BJK										
Checked By											

Steve 9/29/2021 8:34 AM jstone Plot: 9/29/2021 9:00 AM X:\AE\D\DANE\155379\5-final-design\51-drawings\40-Transitway\Civil 3D\30890018\Design\Drainage\CTH AB_Drainage Plan Production Existing_REVISED Sep-2021.dwg



LEGEND

- APPROXIMATE ORIGINAL WISDOT POND B FOOTPRINT
- APPROXIMATE REDUCED WISDOT POND B FOOTPRINT
- APPROXIMATE LANDFILL WASTE BOUNDARY
- APPROXIMATE GREENFIELD LANDFILL PERIMETER ROADWAY
- APPROXIMATE SUSTAINABILITY CAMPUS 5–ACRE AREA CONTRIBUTING TO THE WISDOT POND B
- CHANNEL FLOW PATH
- SHEET FLOW PATH
- SHALLOW CONCENTRATED FLOW PATH

NOTES:

1. DRAWING ADAPTED FROM CTH AB OVERPASS PROPOSED DRAINAGE OVERALL FIGURE PREPARED BY SEH, DATED SEPT. 2021.
2. APPROXIMATE LANDFILL FOOTPRINT AND PERIMETER ROADWAY MAY NOT REFLECT FINAL CONDITIONS.

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SCALE: 1" = 750'

PROJECT NO.	25222268.00	DRAWN BY:	SJL
DRAWN:	9/11/2023	CHECKED BY:	BP
REVISED:	9/27/2023	APPROVED BY:	

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718–6751
PHONE: (608) 224–2830

CLIENT: DANE COUNTY DEPT. OF WASTE AND RENEWABLES
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713

SITE: DANE COUNTY LANDFILL SITE NO. 3
US HWY 12/18
MADISON, WISCONSIN

POST–DEVELOPMENT CONDITIONS
REDUCED WISDOT POND B

FIGURE 2

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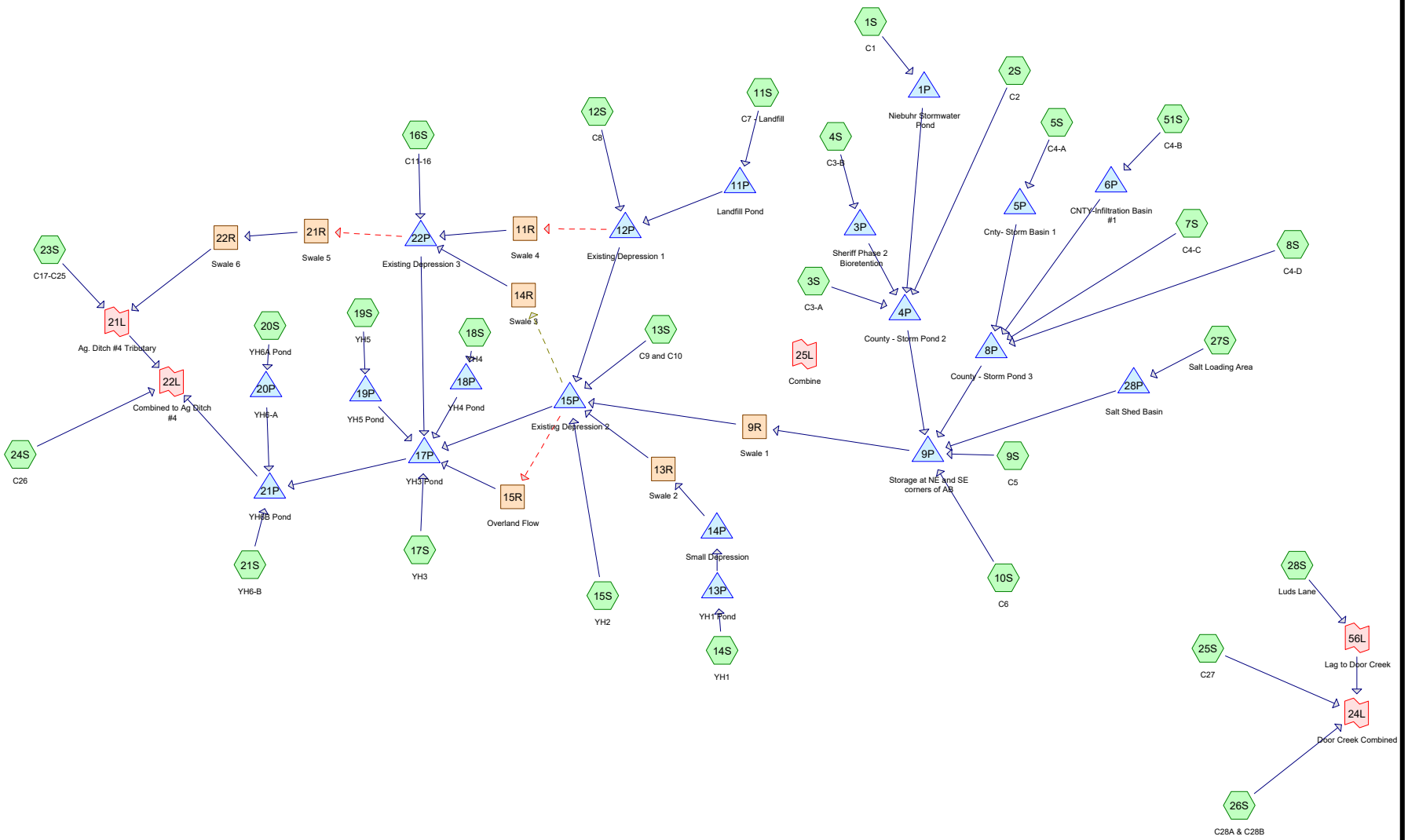
HydroCAD Output Files

- Pre-Development Conditions Model
- Post-Development Conditions Model

HydroCAD Output Files

- Pre-Development Conditions Model



Routing Diagram for 01_Pre-DevelopmentConditions_WisDOT_PondEva

Prepared by SCS Engineers, Printed 9/11/2023

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	MSE 24-hr	4	Default	24.00	1	2.49	2
2	2-yr	MSE 24-hr	4	Default	24.00	1	2.84	2
3	5-yr	MSE 24-hr	4	Default	24.00	1	3.45	2
4	10-yr	MSE 24-hr	4	Default	24.00	1	4.09	2
5	100-yr	MSE 24-hr	4	Default	24.00	1	6.66	2
6	200-yr	MSE 24-hr	4	Default	24.00	1	7.53	2

Summary for Subcatchment 1S: C1

Runoff = 10.37 cfs @ 12.13 hrs, Volume= 0.534 af, Depth= 1.37"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 1.89 cfs @ 12.55 hrs, Volume= 0.286 af, Depth= 0.35"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.6	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 7.53 cfs @ 12.35 hrs, Volume= 0.687 af, Depth= 1.17"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.900	98	
*	3.870	74	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	7.043	85	Weighted Average
	3.870		54.95% Pervious Area
	3.173		45.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.9	68	0.0220	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 2.06 cfs @ 12.13 hrs, Volume= 0.110 af, Depth= 1.77"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.580	98	
*	0.165	74	>75% Grass cover, Good, HSG B
	0.745	93	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 6.36 cfs @ 12.13 hrs, Volume= 0.344 af, Depth= 1.86"
Routed to Pond 5P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7S: C4-C

Runoff = 1.08 cfs @ 12.14 hrs, Volume= 0.055 af, Depth= 0.99"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.230	98	
*	0.440	74	>75% Grass cover, Good, HSG B
	0.670	82	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 19.99 cfs @ 12.13 hrs, Volume= 1.030 af, Depth= 1.37"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	6.030	98	
	2.030	61	>75% Grass cover, Good, HSG B
*	0.640	74	>75% Grass cover, Good, HSG C
	0.300	98	Water Surface, HSG B
	9.000	88	Weighted Average
	2.670		29.67% Pervious Area
	6.330		70.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5

Runoff = 5.70 cfs @ 12.27 hrs, Volume= 0.466 af, Depth= 0.69"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.270	98	
	2.940	61	>75% Grass cover, Good, HSG B
	0.144	74	>75% Grass cover, Good, HSG C
*	2.277	70	Row crops, SR + CR, Good, HSG B
	0.494	86	Fallow, bare soil, HSG B
	8.125	76	Weighted Average
	5.855		72.06% Pervious Area
	2.270		27.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	220	0.0370	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
8.7	80	0.0260	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.5	188	0.0200	1.27		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
2.3	380	0.0090	2.70	59.39	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 30.0 '/' Top.W=40.00' n= 0.035
1.0	193	0.0010	3.23	22.85	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
16.4	1,061	Total			

Summary for Subcatchment 10S: C6

Runoff = 6.71 cfs @ 12.93 hrs, Volume= 1.300 af, Depth= 0.45"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.864	98	
	7.605	61	>75% Grass cover, Good, HSG B
	5.438	74	>75% Grass cover, Good, HSG C
	5.852	58	Woods/grass comb., Good, HSG B
*	9.844	70	Row crops, SR + CR, Good, HSG B
*	3.269	79	Row crops, SR + CR, Good, HSG C
	0.750	98	Water Surface, HSG B
	34.622	70	Weighted Average
	32.008		92.45% Pervious Area
	2.614		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	300	0.1190	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
6.6	395	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.5	218	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	688	0.0067	0.74		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0050	2.65	8.32	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.025
3.7	529	0.0060	2.41	38.62	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 16.0 '/' Top.W=32.00' n= 0.030
56.8	2,204	Total			

Summary for Subcatchment 11S: C7 - Landfill

Runoff = 32.57 cfs @ 12.19 hrs, Volume= 2.095 af, Depth= 0.88"
Routed to Pond 11P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG B
27.730	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.500	80	Weighted Average
28.170		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill's SWMP**

Summary for Subcatchment 12S: C8

Runoff = 5.01 cfs @ 12.19 hrs, Volume= 0.352 af, Depth= 0.49"
Routed to Pond 12P : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.380	98	
	4.420	61	>75% Grass cover, Good, HSG B
	0.200	74	>75% Grass cover, Good, HSG C
	2.540	72	Woods/grass comb., Good, HSG C
	0.150	98	Water Surface, HSG B
	8.690	71	Weighted Average
	7.160		82.39% Pervious Area
	1.530		17.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
1.7	168	0.0530	1.61		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	1,538	Total			

Summary for Subcatchment 13S: C9 and C10

Runoff = 3.87 cfs @ 12.13 hrs, Volume= 0.199 af, Depth= 1.37"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.215	98	
	0.366	61	>75% Grass cover, Good, HSG B
	0.160	74	>75% Grass cover, Good, HSG C
	1.741	88	Weighted Average
	0.526		30.21% Pervious Area
	1.215		69.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 14S: YH1

Runoff = 8.90 cfs @ 12.99 hrs, Volume= 1.949 af, Depth= 0.35"
Routed to Pond 13P : YH1 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 15S: YH2

Runoff = 5.00 cfs @ 12.97 hrs, Volume= 1.243 af, Depth= 0.24"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	4.098	98	
	19.840	61	>75% Grass cover, Good, HSG B
	10.130	74	>75% Grass cover, Good, HSG C
	4.830	58	Woods/grass comb., Good, HSG B
	12.800	48	Brush, Good, HSG B
	10.280	65	Brush, Good, HSG C
	61.978	63	Weighted Average
	57.880		93.39% Pervious Area
	4.098		6.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.8	591	0.0130	2.58	51.61	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
8.3	745	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.9	608	0.0080	2.09	36.53	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 & 5.0 '/' Top.W=25.00' n= 0.050
52.1	3,785	Total			

Summary for Subcatchment 16S: C11-16

Runoff = 9.90 cfs @ 12.27 hrs, Volume= 0.966 af, Depth= 0.38"
Routed to Pond 22P : Existing Depression 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	5.910	98	
	18.130	61	>75% Grass cover, Good, HSG B
	1.510	74	>75% Grass cover, Good, HSG C
	3.010	55	Woods, Good, HSG B
	0.570	70	Woods, Good, HSG C
	1.090	48	Brush, Good, HSG B
	30.220	68	Weighted Average
	24.310		80.44% Pervious Area
	5.910		19.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	23	0.0530	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
2.5	23	0.0920	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.6	64	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	1,807	0.0078	2.73	16.93	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.8 & 7.6 '/' Top.W=12.40' n= 0.030
14.4	1,917	Total			

Summary for Subcatchment 17S: YH3

Runoff = 12.41 cfs @ 12.93 hrs, Volume= 3.192 af, Depth= 0.22"
Routed to Pond 17P : YH3 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.600	98	
	106.380	61	>75% Grass cover, Good, HSG B
	26.310	74	>75% Grass cover, Good, HSG C
	31.110	48	Brush, Good, HSG B
	6.590	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	177.190	62	Weighted Average
	170.390		96.16% Pervious Area
	6.800		3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.5	2,916	Total			

Summary for Subcatchment 18S: YH4

Runoff = 2.09 cfs @ 12.41 hrs, Volume= 0.299 af, Depth= 0.29"
Routed to Pond 18P : YH4 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 19S: YH5

Runoff = 3.15 cfs @ 12.15 hrs, Volume= 0.173 af, Depth= 0.88"
Routed to Pond 19P : YH5 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
7.3	98	Total			

Summary for Subcatchment 20S: YH6A Pond

Runoff = 5.99 cfs @ 12.26 hrs, Volume= 0.487 af, Depth= 0.64"
Routed to Pond 20P : YH6-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.780	98	
	2.870	61	>75% Grass cover, Good, HSG B
	4.020	73	Brush, Good, HSG D
	1.400	98	Water Surface, HSG C
	9.070	75	Weighted Average
	6.890		75.96% Pervious Area
	2.180		24.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	150	0.0750	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
3.4	285	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
15.7	435	Total			

Summary for Subcatchment 21S: YH6-B

Runoff = 15.78 cfs @ 12.62 hrs, Volume= 2.670 af, Depth= 0.32"
Routed to Pond 21P : YH6B Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
54.330	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.610	65	Brush, Good, HSG C
26.640	73	Brush, Good, HSG D
6.480	98	Water Surface, HSG A
99.400	66	Weighted Average
92.920		93.48% Pervious Area
6.480		6.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 23S: C17-C25

Runoff = 19.00 cfs @ 12.53 hrs, Volume= 2.301 af, Depth= 0.73"
Routed to Link 21L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	12.460	98	
	16.840	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	7.960	80	>75% Grass cover, Good, HSG D
	37.620	77	Weighted Average
	25.160		66.88% Pervious Area
	12.460		33.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.8	318	0.0087	1.89		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	79	0.0830	4.32		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.6	341	0.0180	3.54	17.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.8 '/' Top.W=9.80' n= 0.035
0.5	150	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
14.6	1,367	0.0035	1.56	7.81	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035
34.5	2,534	Total			

Summary for Subcatchment 24S: C26

Runoff = 2.16 cfs @ 13.15 hrs, Volume= 0.525 af, Depth= 0.35"
Routed to Link 22L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.360	98	
	0.140	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	3.940	48	Brush, Good, HSG B
	1.810	65	Brush, Good, HSG C
	11.600	73	Brush, Good, HSG D
	17.890	67	Weighted Average
	17.530		97.99% Pervious Area
	0.360		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030
69.6	2,824	Total			

Summary for Subcatchment 25S: C27

Runoff = 5.63 cfs @ 12.54 hrs, Volume= 0.753 af, Depth= 0.52"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	3.827	98	impervious
	8.477	61	>75% Grass cover, Good, HSG B
	0.289	74	>75% Grass cover, Good, HSG C
	0.246	80	>75% Grass cover, Good, HSG D
*	3.840	70	Row crops, SR + CR, Good, HSG B
*	0.090	79	Row crops, SR + CR, Good, HSG C
	0.490	86	Fallow, bare soil, HSG B
	17.259	72	Weighted Average
	13.432		77.83% Pervious Area
	3.827		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.3	150	0.0140	1.06		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
10.3	482	0.0125	0.78		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.6	1,570	0.0125	3.45	18.44	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.7 '/' Top.W=10.70' n= 0.030
0.6	163	0.0800	4.24		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
34.3	2,515	Total			

Summary for Subcatchment 26S: C28A & C28B

Runoff = 2.80 cfs @ 12.65 hrs, Volume= 0.518 af, Depth= 0.29"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.598	98	impervious
	6.420	61	>75% Grass cover, Good, HSG B
	1.116	80	>75% Grass cover, Good, HSG D
	6.805	55	Woods, Good, HSG B
*	5.229	70	Row crops, SR + CR, Good, HSG B
	21.168	65	Weighted Average
	19.570		92.45% Pervious Area
	1.598		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	150	0.1070	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
1.2	150	0.1730	2.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.6	365	0.0360	1.71		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
5.3	651	0.0120	2.04	16.34	**Channel Flow,** Area= 8.0 sf Perim= 16.1' r= 0.50' n= 0.050
2.6	273	0.0390	1.78		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.8	1,714	0.0140	3.67	25.72	**Channel Flow,** Area= 7.0 sf Perim= 14.1' r= 0.50' n= 0.030
36.6	3,303	Total			

Summary for Subcatchment 27S: Salt Loading Area

Runoff = 0.49 cfs @ 12.13 hrs, Volume= 0.026 af, Depth= 1.52"
Routed to Pond 28P : Salt Shed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (sf)	CN	Description
*	4,694	98	
*	4,130	80	>75% Grass cover, Good, compacted, HSG C
	8,824	90	Weighted Average
	4,130		46.80% Pervious Area
	4,694		53.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 28S: Luds Lane

Runoff = 0.07 cfs @ 12.29 hrs, Volume= 0.012 af, Depth= 0.19"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
0.750	61	>75% Grass cover, Good, HSG B
0.750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	71	0.0210	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"

Summary for Subcatchment 51S: C4-B

Runoff = 3.01 cfs @ 12.35 hrs, Volume= 0.284 af, Depth= 0.73"
Routed to Pond 6P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.550	98	
	1.935	61	>75% Grass cover, Good, HSG B
	1.155	74	>75% Grass cover, Good, HSG C
	4.640	77	Weighted Average
	3.090		66.59% Pervious Area
	1.550		33.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	150	0.0330	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
1.7	129	0.0310	1.23		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	522	0.0082	2.69	16.15	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
22.0	801	Total			

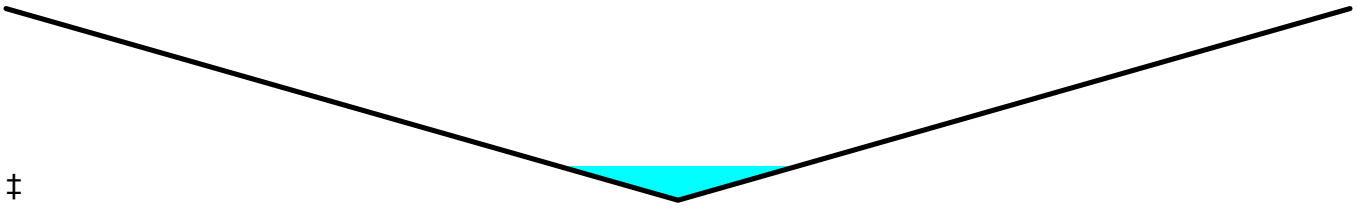
Summary for Reach 9R: Swale 1

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 0.67" for 1-yr event
Inflow = 8.97 cfs @ 13.99 hrs, Volume= 4.532 af
Outflow = 8.85 cfs @ 14.25 hrs, Volume= 4.525 af, Atten= 1%, Lag= 16.0 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.11 fps, Min. Travel Time= 17.1 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 28.1 min

Peak Storage= 9,072 cf @ 14.25 hrs
Average Depth at Peak Storage= 0.89' , Surface Width= 17.86'
Bank-Full Depth= 5.00' Flow Area= 250.0 sf, Capacity= 874.22 cfs

0.00' x 5.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 100.00'
Length= 1,137.0' Slope= 0.0041 '/'
Inlet Invert= 874.89', Outlet Invert= 870.22'



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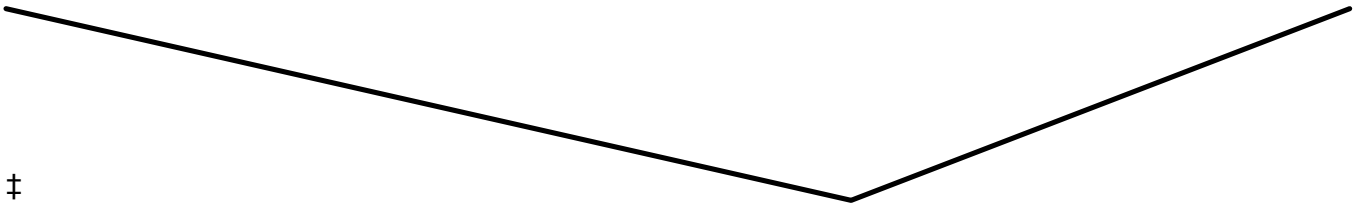
Summary for Reach 11R: Swale 4

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 55.8 sf, Capacity= 189.41 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 7.8 4.6 '/' Top Width= 37.20'
Length= 1,795.0' Slope= 0.0028 '/'
Inlet Invert= 868.00', Outlet Invert= 863.00'



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Summary for Reach 13R: Swale 2

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.23" for 1-yr event
Inflow = 0.99 cfs @ 20.43 hrs, Volume= 1.267 af
Outflow = 0.99 cfs @ 21.22 hrs, Volume= 1.221 af, Atten= 0%, Lag= 47.6 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.66 fps, Min. Travel Time= 65.5 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 78.6 min

Peak Storage= 3,875 cf @ 21.22 hrs
Average Depth at Peak Storage= 0.13' , Surface Width= 12.64'
Bank-Full Depth= 3.00' Flow Area= 120.0 sf, Capacity= 466.95 cfs

10.00' x 3.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 2,591.9' Slope= 0.0084 '/'
Inlet Invert= 892.00', Outlet Invert= 870.22'

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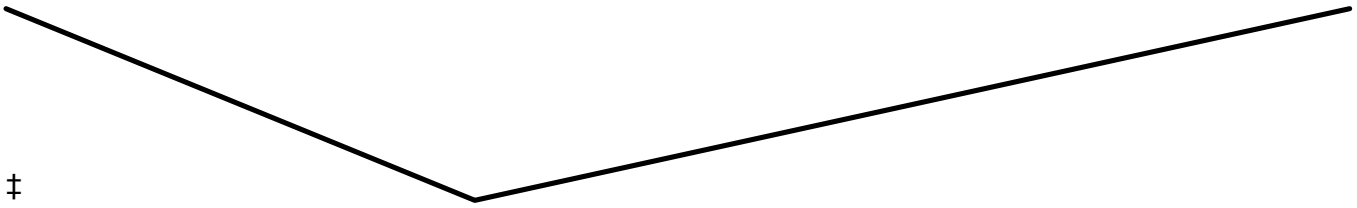
Summary for Reach 14R: Swale 3

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 58.1 sf, Capacity= 290.70 cfs

0.00' x 3.00' deep channel, n= 0.035
Side Slope Z-value= 4.5 8.4 '/' Top Width= 38.70'
Length= 1,492.0' Slope= 0.0082 '/'
Inlet Invert= 877.30', Outlet Invert= 865.00'



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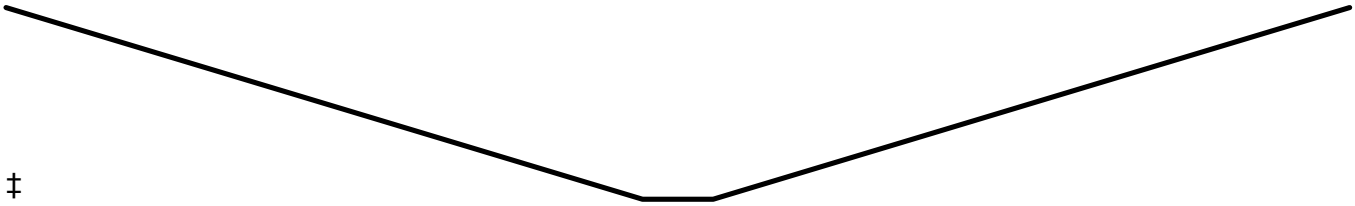
Summary for Reach 15R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,718.10 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0073 '/'
Inlet Invert= 876.00', Outlet Invert= 858.00'



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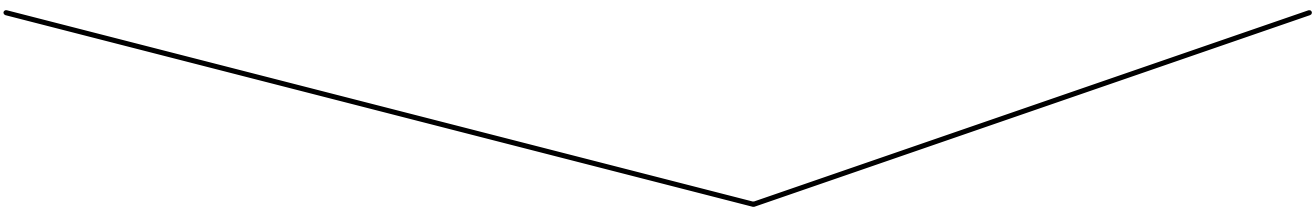
Summary for Reach 21R: Swale 5

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 22R : Swale 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 30.6 sf, Capacity= 111.43 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.9 2.9 '/' Top Width= 20.40'
Length= 690.6' Slope= 0.0033 '/'
Inlet Invert= 863.60', Outlet Invert= 861.30'



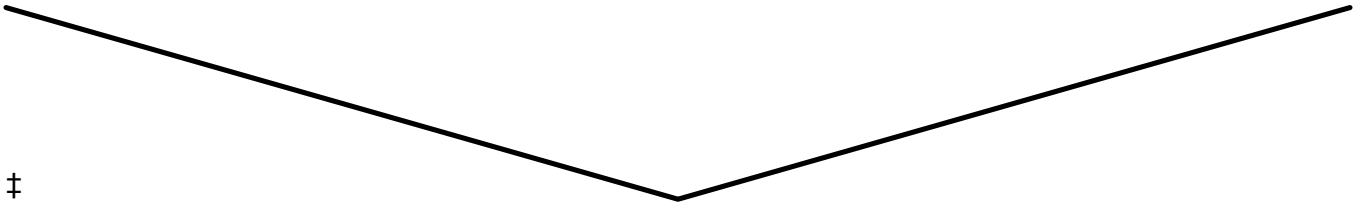
Summary for Reach 22R: Swale 6

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 21L : Ag. Ditch #4 Tributary

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 45.0 sf, Capacity= 168.82 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 1,370.6' Slope= 0.0034 '/'
Inlet Invert= 861.30', Outlet Invert= 856.60'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 1.37" for 1-yr event
Inflow = 10.37 cfs @ 12.13 hrs, Volume= 0.534 af
Outflow = 1.39 cfs @ 12.58 hrs, Volume= 0.533 af, Atten= 87%, Lag= 27.0 min
Primary = 1.39 cfs @ 12.58 hrs, Volume= 0.533 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 884.41' @ 12.58 hrs Surf.Area= 16,427 sf Storage= 10,204 cf

Plug-Flow detention time= 98.5 min calculated for 0.533 af (100% of inflow)
Center-of-Mass det. time= 97.0 min (909.8 - 812.8)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.39 cfs @ 12.58 hrs HW=884.41' TW=877.88' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 1.39 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 1.77" for 1-yr event
Inflow = 2.06 cfs @ 12.13 hrs, Volume= 0.110 af
Outflow = 0.16 cfs @ 13.07 hrs, Volume= 0.059 af, Atten= 92%, Lag= 56.5 min
Discarded = 0.01 cfs @ 13.07 hrs, Volume= 0.022 af
Primary = 0.15 cfs @ 13.07 hrs, Volume= 0.036 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.63' @ 13.07 hrs Surf.Area= 3,234 sf Storage= 3,068 cf

Plug-Flow detention time= 395.3 min calculated for 0.059 af (53% of inflow)
Center-of-Mass det. time= 303.9 min (1,096.7 - 792.7)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.01 cfs @ 13.07 hrs HW=880.63' (Free Discharge)
└**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.15 cfs @ 13.07 hrs HW=880.63' TW=878.06' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.15 cfs of 3.00 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.15 cfs @ 1.15 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 4P: County - Storm Pond 2

Inflow Area = 22.203 ac, 36.68% Impervious, Inflow Depth = 0.83" for 1-yr event
Inflow = 10.25 cfs @ 12.38 hrs, Volume= 1.542 af
Outflow = 3.26 cfs @ 13.44 hrs, Volume= 1.542 af, Atten= 68%, Lag= 63.4 min
Discarded = 0.13 cfs @ 11.45 hrs, Volume= 0.176 af
Primary = 3.13 cfs @ 13.44 hrs, Volume= 1.367 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.08' @ 13.44 hrs Surf.Area= 0.631 ac Storage= 0.472 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 106.6 min (985.0 - 878.4)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.829 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.253	0.000	0.000
877.37	0.258	0.043	0.043
877.38	0.577	0.004	0.048
878.00	0.620	0.371	0.419
879.00	0.757	0.688	1.107
880.00	0.850	0.803	1.911
881.00	0.986	0.918	2.829

Device	Routing	Invert	Outlet Devices
#1	Primary	877.12'	**15.0" Round Culvert X 2.00** L= 39.2' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.12' / 877.06' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.13 cfs Exfiltration at all elevations**
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.13 cfs @ 11.45 hrs HW=877.24' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=3.13 cfs @ 13.44 hrs HW=878.08' TW=876.75' (Dynamic Tailwater)
├**1=Culvert** (Passes 3.13 cfs of 4.20 cfs potential flow)
│ ├**2=Special & User-Defined** (Custom Controls 3.13 cfs)
│ └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 1.86" for 1-yr event
Inflow = 6.36 cfs @ 12.13 hrs, Volume= 0.344 af
Outflow = 5.34 cfs @ 12.17 hrs, Volume= 0.312 af, Atten= 16%, Lag= 2.3 min
Discarded = 0.03 cfs @ 12.17 hrs, Volume= 0.032 af
Primary = 5.31 cfs @ 12.17 hrs, Volume= 0.280 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.77' @ 12.17 hrs Surf.Area= 3,641 sf Storage= 4,996 cf

Plug-Flow detention time= 134.9 min calculated for 0.312 af (91% of inflow)
Center-of-Mass det. time= 92.4 min (880.1 - 787.7)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.17 hrs HW=881.77' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=5.30 cfs @ 12.17 hrs HW=881.77' TW=878.31' (Dynamic Tailwater)
└**1=Culvert** (Passes 5.30 cfs of 9.69 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.07 cfs @ 4.28 fps)
  └**3=Orifice/Grate** (Weir Controls 4.23 cfs @ 1.69 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: CNTY-Infiltration Basin #1

Inflow Area = 4.640 ac, 33.41% Impervious, Inflow Depth = 0.73" for 1-yr event
Inflow = 3.01 cfs @ 12.35 hrs, Volume= 0.284 af
Outflow = 0.40 cfs @ 13.72 hrs, Volume= 0.207 af, Atten= 87%, Lag= 82.2 min
Discarded = 0.05 cfs @ 13.72 hrs, Volume= 0.066 af
Primary = 0.35 cfs @ 13.72 hrs, Volume= 0.141 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.08' @ 13.72 hrs Surf.Area= 6,853 sf Storage= 6,524 cf

Plug-Flow detention time= 344.6 min calculated for 0.207 af (73% of inflow)
Center-of-Mass det. time= 253.1 min (1,116.0 - 862.8)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.05 cfs @ 13.72 hrs HW=882.08' (Free Discharge)
└**5=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.35 cfs @ 13.72 hrs HW=882.08' TW=878.36' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.35 cfs of 3.18 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.35 cfs @ 1.94 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8P: County - Storm Pond 3

Inflow Area = 16.530 ac, 61.22% Impervious, Inflow Depth = 1.09" for 1-yr event
Inflow = 25.77 cfs @ 12.14 hrs, Volume= 1.506 af
Outflow = 4.83 cfs @ 12.51 hrs, Volume= 1.478 af, Atten= 81%, Lag= 22.0 min
Primary = 4.83 cfs @ 12.51 hrs, Volume= 1.478 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.66' @ 12.51 hrs Surf.Area= 19,801 sf Storage= 25,374 cf

Plug-Flow detention time= 146.4 min calculated for 1.477 af (98% of inflow)
Center-of-Mass det. time= 135.6 min (969.4 - 833.7)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=4.83 cfs @ 12.51 hrs HW=878.66' TW=876.14' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.83 cfs of 11.92 cfs potential flow)
  - **2=Special & User-Defined** (Custom Controls 4.83 cfs)
  - **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Storage at NE and SE corners of AB

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 0.68" for 1-yr event
Inflow = 15.28 cfs @ 12.87 hrs, Volume= 4.623 af
Outflow = 8.97 cfs @ 13.99 hrs, Volume= 4.532 af, Atten= 41%, Lag= 67.0 min
Primary = 8.97 cfs @ 13.99 hrs, Volume= 4.532 af
Routed to Reach 9R : Swale 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Starting Elev= 875.66' Surf.Area= 32,564 sf Storage= 19,458 cf
Peak Elev= 876.82' @ 14.03 hrs Surf.Area= 58,833 sf Storage= 69,735 cf (50,277 cf above start)

Plug-Flow detention time= 197.1 min calculated for 4.086 af (88% of inflow)
Center-of-Mass det. time= 107.7 min (1,052.4 - 944.7)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	640,022 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.00	26,400	0	0
876.00	35,739	31,070	31,070
877.00	63,982	49,861	80,930
878.00	141,395	102,689	183,619
879.00	231,121	186,258	369,877
880.00	309,169	270,145	640,022

Device	Routing	Invert	Outlet Devices
#1	Primary	875.66'	**36.0" Round Culvert** L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.66' / 874.89' S= 0.0077 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=8.97 cfs @ 13.99 hrs HW=876.82' TW=875.78' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 8.97 cfs @ 5.29 fps)

Summary for Pond 11P: Landfill Pond

Inflow Area = 28.500 ac, 1.16% Impervious, Inflow Depth = 0.88" for 1-yr event
Inflow = 32.57 cfs @ 12.19 hrs, Volume= 2.095 af
Outflow = 2.15 cfs @ 13.69 hrs, Volume= 1.757 af, Atten= 93%, Lag= 89.8 min
Primary = 2.15 cfs @ 13.69 hrs, Volume= 1.757 af
Routed to Pond 12P : Existing Depression 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 879.95' @ 13.69 hrs Surf.Area= 0.654 ac Storage= 1.244 af

Plug-Flow detention time= 518.9 min calculated for 1.757 af (84% of inflow)
Center-of-Mass det. time= 453.3 min (1,296.3 - 843.0)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.15 cfs @ 13.69 hrs HW=879.95' TW=875.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 2.15 cfs of 11.65 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.30 cfs @ 7.74 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.31 cfs @ 7.19 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.32 cfs @ 6.61 fps)
  - **5=Orifice/Grate** (Weir Controls 1.22 cfs @ 1.40 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 12P: Existing Depression 1

Inflow Area = 37.190 ac, 5.00% Impervious, Inflow Depth > 0.68" for 1-yr event
Inflow = 5.53 cfs @ 12.19 hrs, Volume= 2.109 af
Outflow = 5.26 cfs @ 12.22 hrs, Volume= 2.109 af, Atten= 5%, Lag= 1.8 min
Primary = 5.26 cfs @ 12.22 hrs, Volume= 2.109 af
Routed to Pond 15P : Existing Depression 2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 11R : Swale 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 875.00' @ 12.22 hrs Storage= 41 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.0 min (1,225.6 - 1,225.6)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	174,699 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
875.00	0
876.00	65,278
877.00	110,909
878.00	136,383
879.00	156,855
880.00	174,699

Device	Routing	Invert	Outlet Devices
#1	Primary	874.12'	**36.0" Round Culvert** L= 100.2' Ke= 0.200 Inlet / Outlet Invert= 874.12' / 873.48' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Secondary	878.00'	**Swale to West** Head (feet) 0.00 0.10 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.010 0.060 0.350 1.040 2.230 4.050 6.580 9.930 14.170 19.400 25.690

Primary OutFlow Max=5.26 cfs @ 12.22 hrs HW=875.00' TW=871.36' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 5.26 cfs @ 4.56 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=875.00' TW=868.00' (Dynamic Tailwater)
↑—**2=Swale to West** (Controls 0.00 cfs)

Summary for Pond 13P: YH1 Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 0.35" for 1-yr event
Inflow = 8.90 cfs @ 12.99 hrs, Volume= 1.949 af
Outflow = 1.00 cfs @ 19.49 hrs, Volume= 1.313 af, Atten= 89%, Lag= 390.3 min
Primary = 1.00 cfs @ 19.49 hrs, Volume= 1.313 af
Routed to Pond 14P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 895.55' @ 19.49 hrs Surf.Area= 98,598 sf Storage= 53,558 cf

Plug-Flow detention time= 554.9 min calculated for 1.313 af (67% of inflow)
Center-of-Mass det. time= 442.0 min (1,377.7 - 935.7)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.00 cfs @ 19.49 hrs HW=895.55' TW=894.51' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.00 cfs @ 2.23 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 14P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.24" for 1-yr event
Inflow = 1.00 cfs @ 19.49 hrs, Volume= 1.313 af
Outflow = 0.99 cfs @ 20.43 hrs, Volume= 1.267 af, Atten= 1%, Lag= 56.2 min
Primary = 0.99 cfs @ 20.43 hrs, Volume= 1.267 af
Routed to Reach 13R : Swale 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 894.51' @ 20.43 hrs Surf.Area= 10,465 sf Storage= 4,180 cf

Plug-Flow detention time= 75.9 min calculated for 1.266 af (96% of inflow)
Center-of-Mass det. time= 49.4 min (1,427.1 - 1,377.7)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.99 cfs @ 20.43 hrs HW=894.51' TW=892.13' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.99 cfs @ 2.44 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 15P: Existing Depression 2

Inflow Area = 248.992 ac, 13.10% Impervious, Inflow Depth > 0.45" for 1-yr event
Inflow = 14.26 cfs @ 13.80 hrs, Volume= 9.297 af
Outflow = 9.00 cfs @ 16.43 hrs, Volume= 9.266 af, Atten= 37%, Lag= 157.9 min
Primary = 9.00 cfs @ 16.43 hrs, Volume= 9.266 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 15R : Overland Flow
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 14R : Swale 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 874.62' @ 16.43 hrs Surf.Area= 33,855 sf Storage= 47,466 cf

Plug-Flow detention time= 45.6 min calculated for 9.264 af (100% of inflow)
Center-of-Mass det. time= 42.3 min (1,180.3 - 1,138.0)

Volume	Invert	Avail.Storage	Storage Description
#1	870.00'	530,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.00	1,053	0	0
873.00	9,397	15,675	15,675
874.00	20,404	14,901	30,576
875.00	42,009	31,207	61,782
876.00	89,975	65,992	127,774
877.00	205,811	147,893	275,667
878.00	304,631	255,221	530,888

Device	Routing	Invert	Outlet Devices
#1	Primary	870.22'	**18.0" Round Culvert** L= 2,314.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 870.22' / 858.00' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	877.00'	**120.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Tertiary	877.30'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.030 0.200 0.570 1.230 3.610 7.780 14.110

Primary OutFlow Max=9.00 cfs @ 16.43 hrs HW=874.62' TW=859.03' (Dynamic Tailwater)
1=Culvert (Barrel Controls 9.00 cfs @ 5.09 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=876.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=877.30' (Dynamic Tailwater)
3=Special & User-Defined (Controls 0.00 cfs)

Summary for Pond 17P: YH3 Pond

Inflow Area = 470.972 ac, 9.99% Impervious, Inflow Depth > 0.33" for 1-yr event
Inflow = 20.64 cfs @ 13.09 hrs, Volume= 12.782 af
Outflow = 8.77 cfs @ 21.46 hrs, Volume= 9.610 af, Atten= 58%, Lag= 502.2 min
Primary = 8.77 cfs @ 21.46 hrs, Volume= 9.610 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 859.39' @ 21.46 hrs Surf.Area= 200,223 sf Storage= 262,950 cf

Plug-Flow detention time= 445.7 min calculated for 9.610 af (75% of inflow)
Center-of-Mass det. time= 300.7 min (1,428.2 - 1,127.6)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=8.77 cfs @ 21.46 hrs HW=859.39' TW=856.66' (Dynamic Tailwater)
1=Culvert (Outlet Controls 8.77 cfs @ 4.02 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 18P: YH4 Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 0.29" for 1-yr event
Inflow = 2.09 cfs @ 12.41 hrs, Volume= 0.299 af
Outflow = 0.22 cfs @ 15.74 hrs, Volume= 0.241 af, Atten= 90%, Lag= 199.8 min
Primary = 0.22 cfs @ 15.74 hrs, Volume= 0.241 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 861.30' @ 15.74 hrs Surf.Area= 24,296 sf Storage= 6,856 cf

Plug-Flow detention time= 433.9 min calculated for 0.241 af (81% of inflow)
Center-of-Mass det. time= 355.8 min (1,268.7 - 912.9)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.22 cfs @ 15.74 hrs HW=861.30' TW=858.93' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.22 cfs @ 2.15 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 19P: YH5 Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 0.88" for 1-yr event
Inflow = 3.15 cfs @ 12.15 hrs, Volume= 0.173 af
Outflow = 0.05 cfs @ 19.55 hrs, Volume= 0.082 af, Atten= 98%, Lag= 444.0 min
Primary = 0.05 cfs @ 19.55 hrs, Volume= 0.082 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 865.15' @ 19.55 hrs Surf.Area= 39,537 sf Storage= 5,728 cf

Plug-Flow detention time= 658.7 min calculated for 0.082 af (48% of inflow)
Center-of-Mass det. time= 547.1 min (1,386.7 - 839.6)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.05 cfs @ 19.55 hrs HW=865.15' TW=859.32' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.05 cfs @ 1.44 fps)

Summary for Pond 20P: YH6-A

Inflow Area = 9.070 ac, 24.04% Impervious, Inflow Depth = 0.64" for 1-yr event
Inflow = 5.99 cfs @ 12.26 hrs, Volume= 0.487 af
Outflow = 1.58 cfs @ 12.46 hrs, Volume= 0.482 af, Atten= 74%, Lag= 12.2 min
Primary = 1.58 cfs @ 12.46 hrs, Volume= 0.482 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 60,840 sf Storage= 127,764 cf
Peak Elev= 856.70' @ 13.01 hrs Surf.Area= 61,811 sf Storage= 133,968 cf (6,204 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 131.4 min (995.1 - 863.7)

Volume	Invert	Avail.Storage	Storage Description
#1	854.50'	667,659 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.50	60,840	0	0
856.60	60,840	127,764	127,764
857.00	64,679	25,104	152,868
858.00	73,339	69,009	221,877
859.00	90,134	81,737	303,613
860.00	109,122	99,628	403,241
861.00	129,626	119,374	522,615
862.00	160,461	145,044	667,659

Device	Routing	Invert	Outlet Devices
#1	Primary	854.50'	**18.0" Round Culvert**
			L= 55.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.50' / 854.22' S= 0.0051 '/' Cc= 0.900
			n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=1.56 cfs @ 12.46 hrs HW=856.68' TW=856.62' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.56 cfs @ 0.89 fps)

Summary for Pond 21P: YH6B Pond

Inflow Area = 579.442 ac, 9.62% Impervious, Inflow Depth > 0.26" for 1-yr event
Inflow = 17.30 cfs @ 12.61 hrs, Volume= 12.761 af
Outflow = 10.42 cfs @ 13.15 hrs, Volume= 12.736 af, Atten= 40%, Lag= 32.2 min
Primary = 10.42 cfs @ 13.15 hrs, Volume= 12.736 af
Routed to Link 22L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 856.67' @ 13.15 hrs Surf.Area= 285,327 sf Storage= 575,118 cf (18,671 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 20.2 min (1,325.6 - 1,305.4)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=10.42 cfs @ 13.15 hrs HW=856.67' TW=856.60' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 10.42 cfs @ 1.29 fps)

Summary for Pond 22P: Existing Depression 3

Inflow Area = 30.220 ac, 19.56% Impervious, Inflow Depth = 0.38" for 1-yr event
Inflow = 9.90 cfs @ 12.27 hrs, Volume= 0.966 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 21R : Swale 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 862.76' @ 24.81 hrs Surf.Area= 1.216 ac Storage= 0.966 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	860.00'	12.833 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
860.00	0.006	0.000	0.000
861.00	0.016	0.011	0.011
862.00	0.550	0.283	0.294
863.00	1.425	0.987	1.281
864.00	2.395	1.910	3.191
865.00	2.865	2.630	5.821
866.00	3.493	3.179	9.000
867.00	4.172	3.833	12.833

Device	Routing	Invert	Outlet Devices
#1	Primary	862.84'	**12.0" Round Culvert** L= 30.7' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 862.84' / 861.39' S= 0.0472 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	865.74'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#3	Secondary	863.60'	**Swale in ROW to West** Head (feet) 0.00 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 Disch. (cfs) 0.000 0.630 1.850 4.000 7.240 11.780 17.770 25.370 34.720 45.990 59.290 74.770

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=860.00' TW=858.00' (Dynamic Tailwater)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=860.00' TW=863.60' (Dynamic Tailwater)
└─**3=Swale in ROW to West** (Controls 0.00 cfs)

Summary for Pond 28P: Salt Shed Basin

Inflow Area = 0.203 ac, 53.20% Impervious, Inflow Depth = 1.52" for 1-yr event
Inflow = 0.49 cfs @ 12.13 hrs, Volume= 0.026 af
Outflow = 0.10 cfs @ 12.42 hrs, Volume= 0.013 af, Atten= 79%, Lag= 17.3 min
Primary = 0.10 cfs @ 12.42 hrs, Volume= 0.013 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.85' @ 12.42 hrs Surf.Area= 717 sf Storage= 601 cf

Plug-Flow detention time= 203.5 min calculated for 0.013 af (49% of inflow)
Center-of-Mass det. time= 107.7 min (913.2 - 805.5)

Volume	Invert	Avail.Storage	Storage Description
#1	881.50'	1,163 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
881.50	212	0	0
882.00	363	144	144
883.00	781	572	716
883.50	1,009	448	1,163

Device	Routing	Invert	Outlet Devices
#1	Primary	881.50'	**6.0" Round Culvert** L= 134.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 881.50' / 880.80' S= 0.0052 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	882.80'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	883.00'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.10 cfs @ 12.42 hrs HW=882.85' TW=876.05' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.10 cfs of 0.56 cfs potential flow)
  - **2=Orifice/Grate** (Weir Controls 0.10 cfs @ 0.71 fps)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 21L: Ag. Ditch #4 Tributary

Inflow Area = 37.620 ac, 33.12% Impervious, Inflow Depth = 0.73" for 1-yr event
Inflow = 19.00 cfs @ 12.53 hrs, Volume= 2.301 af
Primary = 18.99 cfs @ 12.79 hrs, Volume= 2.301 af, Atten= 0%, Lag= 15.8 min
Routed to Link 22L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 22L: Combined to Ag Ditch #4

Inflow Area = 634.952 ac, 10.79% Impervious, Inflow Depth > 0.29" for 1-yr event
Inflow = 30.15 cfs @ 12.81 hrs, Volume= 15.563 af
Primary = 30.15 cfs @ 12.81 hrs, Volume= 15.563 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 24L: Door Creek Combined

Inflow Area = 39.177 ac, 13.85% Impervious, Inflow Depth = 0.39" for 1-yr event
Inflow = 8.30 cfs @ 12.61 hrs, Volume= 1.283 af
Primary = 8.30 cfs @ 12.61 hrs, Volume= 1.283 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 25L: Combine

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 0.00% Impervious, Inflow Depth = 0.19" for 1-yr event
Inflow = 0.07 cfs @ 12.29 hrs, Volume= 0.012 af
Primary = 0.07 cfs @ 12.72 hrs, Volume= 0.012 af, Atten= 0%, Lag= 25.7 min
Routed to Link 24L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: C1

Runoff = 12.59 cfs @ 12.13 hrs, Volume= 0.653 af, Depth= 1.68"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 3.06 cfs @ 12.51 hrs, Volume= 0.412 af, Depth= 0.51"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.6	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 9.40 cfs @ 12.35 hrs, Volume= 0.854 af, Depth= 1.45"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.900	98	
*	3.870	74	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	7.043	85	Weighted Average
	3.870		54.95% Pervious Area
	3.173		45.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.9	68	0.0220	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 2.42 cfs @ 12.13 hrs, Volume= 0.130 af, Depth= 2.10"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.580	98	
*	0.165	74	>75% Grass cover, Good, HSG B
	0.745	93	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 7.44 cfs @ 12.13 hrs, Volume= 0.406 af, Depth= 2.20"
Routed to Pond 5P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7S: C4-C

Runoff = 1.37 cfs @ 12.14 hrs, Volume= 0.070 af, Depth= 1.25"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.230	98	
*	0.440	74	>75% Grass cover, Good, HSG B
	0.670	82	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 24.27 cfs @ 12.13 hrs, Volume= 1.258 af, Depth= 1.68"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	6.030	98	
	2.030	61	>75% Grass cover, Good, HSG B
*	0.640	74	>75% Grass cover, Good, HSG C
	0.300	98	Water Surface, HSG B
	9.000	88	Weighted Average
	2.670		29.67% Pervious Area
	6.330		70.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5

Runoff = 7.77 cfs @ 12.26 hrs, Volume= 0.615 af, Depth= 0.91"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.270	98	
	2.940	61	>75% Grass cover, Good, HSG B
	0.144	74	>75% Grass cover, Good, HSG C
*	2.277	70	Row crops, SR + CR, Good, HSG B
	0.494	86	Fallow, bare soil, HSG B
	8.125	76	Weighted Average
	5.855		72.06% Pervious Area
	2.270		27.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	220	0.0370	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
8.7	80	0.0260	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.5	188	0.0200	1.27		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
2.3	380	0.0090	2.70	59.39	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 30.0 '/' Top.W=40.00' n= 0.035
1.0	193	0.0010	3.23	22.85	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
16.4	1,061	Total			

Summary for Subcatchment 10S: C6

Runoff = 10.05 cfs @ 12.87 hrs, Volume= 1.810 af, Depth= 0.63"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.864	98	
	7.605	61	>75% Grass cover, Good, HSG B
	5.438	74	>75% Grass cover, Good, HSG C
	5.852	58	Woods/grass comb., Good, HSG B
*	9.844	70	Row crops, SR + CR, Good, HSG B
*	3.269	79	Row crops, SR + CR, Good, HSG C
	0.750	98	Water Surface, HSG B
	34.622	70	Weighted Average
	32.008		92.45% Pervious Area
	2.614		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	300	0.1190	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
6.6	395	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.5	218	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	688	0.0067	0.74		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0050	2.65	8.32	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.025
3.7	529	0.0060	2.41	38.62	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 16.0 '/' Top.W=32.00' n= 0.030
56.8	2,204	Total			

Summary for Subcatchment 11S: C7 - Landfill

Runoff = 42.29 cfs @ 12.19 hrs, Volume= 2.687 af, Depth= 1.13"
Routed to Pond 11P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG B
27.730	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.500	80	Weighted Average
28.170		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill's SWMP**

Summary for Subcatchment 12S: C8

Runoff = 7.38 cfs @ 12.18 hrs, Volume= 0.485 af, Depth= 0.67"
Routed to Pond 12P : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.380	98	
	4.420	61	>75% Grass cover, Good, HSG B
	0.200	74	>75% Grass cover, Good, HSG C
	2.540	72	Woods/grass comb., Good, HSG C
	0.150	98	Water Surface, HSG B
	8.690	71	Weighted Average
	7.160		82.39% Pervious Area
	1.530		17.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
1.7	168	0.0530	1.61		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	1,538	Total			

Summary for Subcatchment 13S: C9 and C10

Runoff = 4.69 cfs @ 12.13 hrs, Volume= 0.243 af, Depth= 1.68"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.215	98	
	0.366	61	>75% Grass cover, Good, HSG B
	0.160	74	>75% Grass cover, Good, HSG C
	1.741	88	Weighted Average
	0.526		30.21% Pervious Area
	1.215		69.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 14S: YH1

Runoff = 14.21 cfs @ 12.93 hrs, Volume= 2.808 af, Depth= 0.51"
Routed to Pond 13P : YH1 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 15S: YH2

Runoff = 8.96 cfs @ 12.91 hrs, Volume= 1.900 af, Depth= 0.37"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	4.098	98	
	19.840	61	>75% Grass cover, Good, HSG B
	10.130	74	>75% Grass cover, Good, HSG C
	4.830	58	Woods/grass comb., Good, HSG B
	12.800	48	Brush, Good, HSG B
	10.280	65	Brush, Good, HSG C
	61.978	63	Weighted Average
	57.880		93.39% Pervious Area
	4.098		6.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.8	591	0.0130	2.58	51.61	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
8.3	745	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.9	608	0.0080	2.09	36.53	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 & 5.0 '/' Top.W=25.00' n= 0.050
52.1	3,785	Total			

Summary for Subcatchment 16S: C11-16

Runoff = 15.85 cfs @ 12.26 hrs, Volume= 1.375 af, Depth= 0.55"
Routed to Pond 22P : Existing Depression 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	5.910	98	
	18.130	61	>75% Grass cover, Good, HSG B
	1.510	74	>75% Grass cover, Good, HSG C
	3.010	55	Woods, Good, HSG B
	0.570	70	Woods, Good, HSG C
	1.090	48	Brush, Good, HSG B
	30.220	68	Weighted Average
	24.310		80.44% Pervious Area
	5.910		19.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	23	0.0530	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
2.5	23	0.0920	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.6	64	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	1,807	0.0078	2.73	16.93	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.8 & 7.6 '/' Top.W=12.40' n= 0.030
14.4	1,917	Total			

Summary for Subcatchment 17S: YH3

Runoff = 23.22 cfs @ 12.88 hrs, Volume= 4.969 af, Depth= 0.34"
Routed to Pond 17P : YH3 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.600	98	
	106.380	61	>75% Grass cover, Good, HSG B
	26.310	74	>75% Grass cover, Good, HSG C
	31.110	48	Brush, Good, HSG B
	6.590	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	177.190	62	Weighted Average
	170.390		96.16% Pervious Area
	6.800		3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.5	2,916	Total			

Summary for Subcatchment 18S: YH4

Runoff = 3.67 cfs @ 12.38 hrs, Volume= 0.443 af, Depth= 0.43"
Routed to Pond 18P : YH4 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 19S: YH5

Runoff = 4.07 cfs @ 12.15 hrs, Volume= 0.222 af, Depth= 1.13"
Routed to Pond 19P : YH5 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
7.3	98	Total			

Summary for Subcatchment 20S: YH6A Pond

Runoff = 8.27 cfs @ 12.26 hrs, Volume= 0.648 af, Depth= 0.86"
Routed to Pond 20P : YH6-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.780	98	
	2.870	61	>75% Grass cover, Good, HSG B
	4.020	73	Brush, Good, HSG D
	1.400	98	Water Surface, HSG C
	9.070	75	Weighted Average
	6.890		75.96% Pervious Area
	2.180		24.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	150	0.0750	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
3.4	285	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
15.7	435	Total			

Summary for Subcatchment 21S: YH6-B

Runoff = 26.25 cfs @ 12.58 hrs, Volume= 3.897 af, Depth= 0.47"
Routed to Pond 21P : YH6B Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
54.330	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.610	65	Brush, Good, HSG C
26.640	73	Brush, Good, HSG D
6.480	98	Water Surface, HSG A
99.400	66	Weighted Average
92.920		93.48% Pervious Area
6.480		6.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 23S: C17-C25

Runoff = 25.58 cfs @ 12.53 hrs, Volume= 3.015 af, Depth= 0.96"
Routed to Link 21L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	12.460	98	
	16.840	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	7.960	80	>75% Grass cover, Good, HSG D
	37.620	77	Weighted Average
	25.160		66.88% Pervious Area
	12.460		33.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.8	318	0.0087	1.89		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	79	0.0830	4.32		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.6	341	0.0180	3.54	17.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.8 '/' Top.W=9.80' n= 0.035
0.5	150	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
14.6	1,367	0.0035	1.56	7.81	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035
34.5	2,534	Total			

Summary for Subcatchment 24S: C26

Runoff = 3.41 cfs @ 13.08 hrs, Volume= 0.757 af, Depth= 0.51"
Routed to Link 22L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.360	98	
	0.140	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	3.940	48	Brush, Good, HSG B
	1.810	65	Brush, Good, HSG C
	11.600	73	Brush, Good, HSG D
	17.890	67	Weighted Average
	17.530		97.99% Pervious Area
	0.360		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030
69.6	2,824	Total			

Summary for Subcatchment 25S: C27

Runoff = 8.18 cfs @ 12.54 hrs, Volume= 1.028 af, Depth= 0.71"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	3.827	98	impervious
	8.477	61	>75% Grass cover, Good, HSG B
	0.289	74	>75% Grass cover, Good, HSG C
	0.246	80	>75% Grass cover, Good, HSG D
*	3.840	70	Row crops, SR + CR, Good, HSG B
*	0.090	79	Row crops, SR + CR, Good, HSG C
	0.490	86	Fallow, bare soil, HSG B
	17.259	72	Weighted Average
	13.432		77.83% Pervious Area
	3.827		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.3	150	0.0140	1.06		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
10.3	482	0.0125	0.78		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.6	1,570	0.0125	3.45	18.44	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.7 '/' Top.W=10.70' n= 0.030
0.6	163	0.0800	4.24		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
34.3	2,515	Total			

Summary for Subcatchment 26S: C28A & C28B

Runoff = 4.79 cfs @ 12.64 hrs, Volume= 0.767 af, Depth= 0.43"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.598	98	impervious
	6.420	61	>75% Grass cover, Good, HSG B
	1.116	80	>75% Grass cover, Good, HSG D
	6.805	55	Woods, Good, HSG B
*	5.229	70	Row crops, SR + CR, Good, HSG B
	21.168	65	Weighted Average
	19.570		92.45% Pervious Area
	1.598		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	150	0.1070	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
1.2	150	0.1730	2.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.6	365	0.0360	1.71		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
5.3	651	0.0120	2.04	16.34	**Channel Flow,** Area= 8.0 sf Perim= 16.1' r= 0.50' n= 0.050
2.6	273	0.0390	1.78		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.8	1,714	0.0140	3.67	25.72	**Channel Flow,** Area= 7.0 sf Perim= 14.1' r= 0.50' n= 0.030
36.6	3,303	Total			

Summary for Subcatchment 27S: Salt Loading Area

Runoff = 0.59 cfs @ 12.13 hrs, Volume= 0.031 af, Depth= 1.84"
Routed to Pond 28P : Salt Shed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (sf)	CN	Description
*	4,694	98	
*	4,130	80	>75% Grass cover, Good, compacted, HSG C
	8,824	90	Weighted Average
	4,130		46.80% Pervious Area
	4,694		53.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 28S: Luds Lane

Runoff = 0.17 cfs @ 12.24 hrs, Volume= 0.019 af, Depth= 0.31"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.750	61	>75% Grass cover, Good, HSG B
0.750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	71	0.0210	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"

Summary for Subcatchment 51S: C4-B

Runoff = 4.06 cfs @ 12.34 hrs, Volume= 0.372 af, Depth= 0.96"
Routed to Pond 6P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.550	98	
	1.935	61	>75% Grass cover, Good, HSG B
	1.155	74	>75% Grass cover, Good, HSG C
	4.640	77	Weighted Average
	3.090		66.59% Pervious Area
	1.550		33.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	150	0.0330	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
1.7	129	0.0310	1.23		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	522	0.0082	2.69	16.15	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
22.0	801	Total			

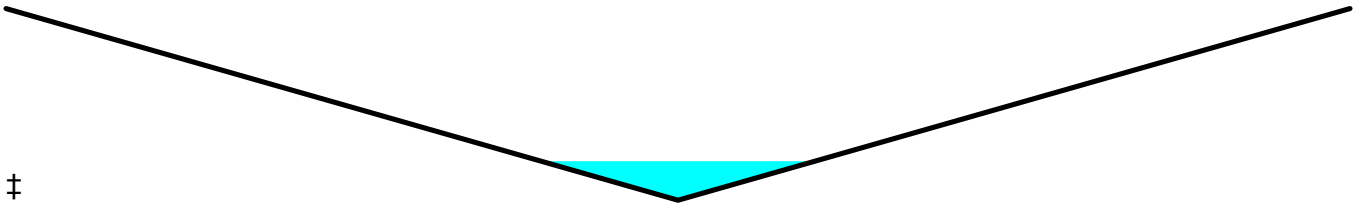
Summary for Reach 9R: Swale 1

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 0.88" for 2-yr event
Inflow = 12.79 cfs @ 13.85 hrs, Volume= 6.000 af
Outflow = 12.64 cfs @ 14.09 hrs, Volume= 5.992 af, Atten= 1%, Lag= 14.8 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.21 fps, Min. Travel Time= 15.6 min
Avg. Velocity = 0.71 fps, Avg. Travel Time= 26.8 min

Peak Storage= 11,849 cf @ 14.09 hrs
Average Depth at Peak Storage= 1.02' , Surface Width= 20.41'
Bank-Full Depth= 5.00' Flow Area= 250.0 sf, Capacity= 874.22 cfs

0.00' x 5.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 100.00'
Length= 1,137.0' Slope= 0.0041 '/'
Inlet Invert= 874.89', Outlet Invert= 870.22'



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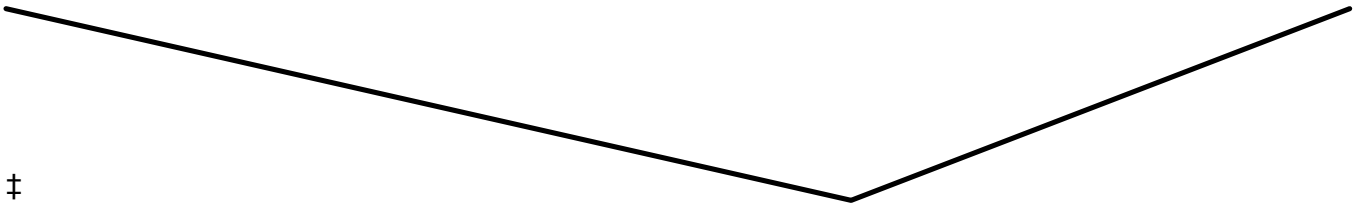
Summary for Reach 11R: Swale 4

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 55.8 sf, Capacity= 189.41 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 7.8 4.6 '/' Top Width= 37.20'
Length= 1,795.0' Slope= 0.0028 '/'
Inlet Invert= 868.00', Outlet Invert= 863.00'



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Summary for Reach 13R: Swale 2

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.36" for 2-yr event
Inflow = 1.63 cfs @ 18.72 hrs, Volume= 2.018 af
Outflow = 1.62 cfs @ 19.54 hrs, Volume= 1.962 af, Atten= 1%, Lag= 49.3 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.78 fps, Min. Travel Time= 55.3 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 67.1 min

Peak Storage= 5,387 cf @ 19.54 hrs
Average Depth at Peak Storage= 0.18' , Surface Width= 13.53'
Bank-Full Depth= 3.00' Flow Area= 120.0 sf, Capacity= 466.95 cfs

10.00' x 3.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 2,591.9' Slope= 0.0084 '/'
Inlet Invert= 892.00', Outlet Invert= 870.22'

‡

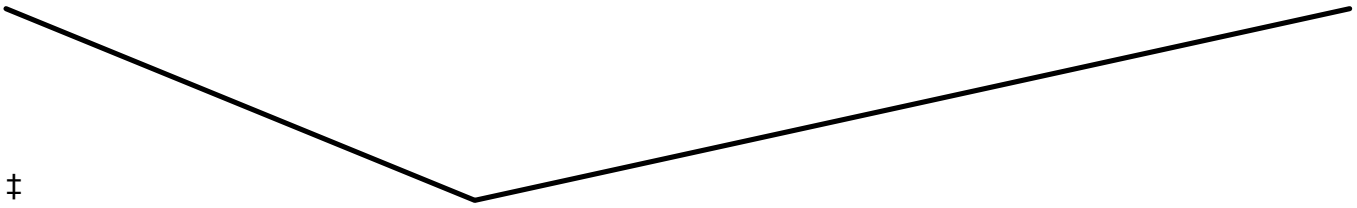
Summary for Reach 14R: Swale 3

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 58.1 sf, Capacity= 290.70 cfs

0.00' x 3.00' deep channel, n= 0.035
Side Slope Z-value= 4.5 8.4 '/' Top Width= 38.70'
Length= 1,492.0' Slope= 0.0082 '/'
Inlet Invert= 877.30', Outlet Invert= 865.00'



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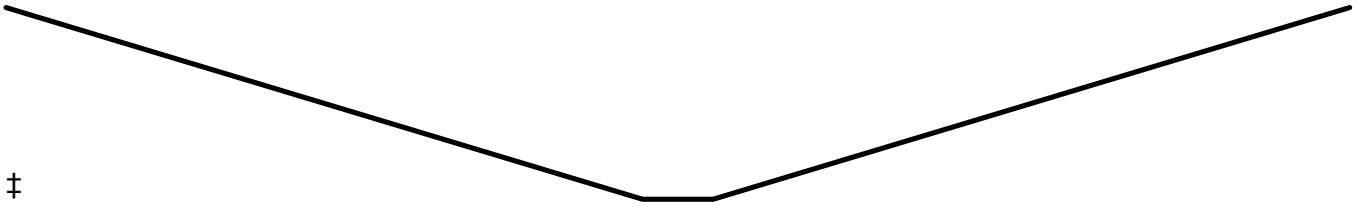
Summary for Reach 15R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,718.10 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0073 '/'
Inlet Invert= 876.00', Outlet Invert= 858.00'



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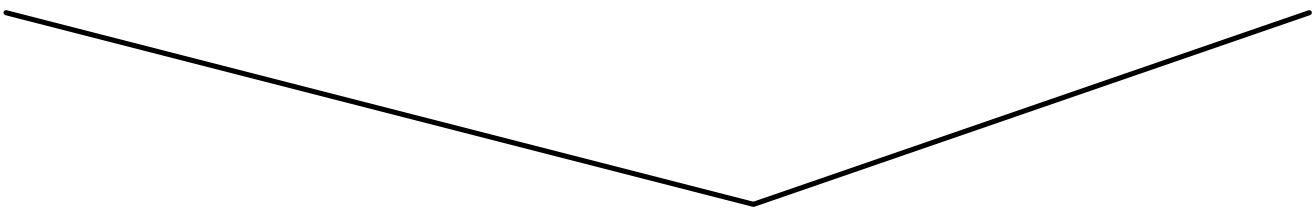
Summary for Reach 21R: Swale 5

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 22R : Swale 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 30.6 sf, Capacity= 111.43 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.9 2.9 '/' Top Width= 20.40'
Length= 690.6' Slope= 0.0033 '/'
Inlet Invert= 863.60', Outlet Invert= 861.30'



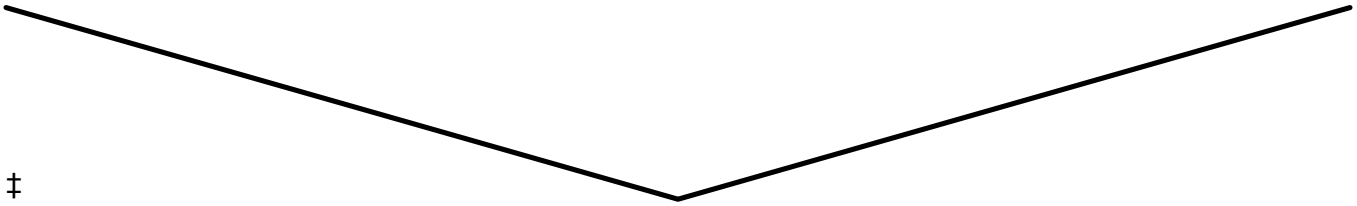
Summary for Reach 22R: Swale 6

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 21L : Ag. Ditch #4 Tributary

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 45.0 sf, Capacity= 168.82 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 1,370.6' Slope= 0.0034 '/'
Inlet Invert= 861.30', Outlet Invert= 856.60'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 1.68" for 2-yr event
Inflow = 12.59 cfs @ 12.13 hrs, Volume= 0.653 af
Outflow = 1.61 cfs @ 12.59 hrs, Volume= 0.651 af, Atten= 87%, Lag= 27.6 min
Primary = 1.61 cfs @ 12.59 hrs, Volume= 0.651 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 884.56' @ 12.59 hrs Surf.Area= 18,907 sf Storage= 12,767 cf

Plug-Flow detention time= 104.7 min calculated for 0.651 af (100% of inflow)
Center-of-Mass det. time= 103.5 min (911.6 - 808.0)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.61 cfs @ 12.59 hrs HW=884.56' TW=878.08' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 1.61 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 2.10" for 2-yr event
Inflow = 2.42 cfs @ 12.13 hrs, Volume= 0.130 af
Outflow = 0.32 cfs @ 12.56 hrs, Volume= 0.079 af, Atten= 87%, Lag= 25.9 min
Discarded = 0.01 cfs @ 12.56 hrs, Volume= 0.023 af
Primary = 0.31 cfs @ 12.56 hrs, Volume= 0.056 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.71' @ 12.56 hrs Surf.Area= 3,311 sf Storage= 3,338 cf

Plug-Flow detention time= 325.2 min calculated for 0.079 af (61% of inflow)
Center-of-Mass det. time= 238.7 min (1,027.4 - 788.7)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.01 cfs @ 12.56 hrs HW=880.71' (Free Discharge)
└**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.31 cfs @ 12.56 hrs HW=880.71' TW=878.05' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.31 cfs of 3.19 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 1.47 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 4P: County - Storm Pond 2

Inflow Area = 22.203 ac, 36.68% Impervious, Inflow Depth = 1.07" for 2-yr event
Inflow = 13.64 cfs @ 12.38 hrs, Volume= 1.974 af
Outflow = 4.88 cfs @ 13.14 hrs, Volume= 1.974 af, Atten= 64%, Lag= 45.3 min
Discarded = 0.13 cfs @ 11.19 hrs, Volume= 0.186 af
Primary = 4.75 cfs @ 13.14 hrs, Volume= 1.787 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.25' @ 13.14 hrs Surf.Area= 0.655 ac Storage= 0.594 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 103.8 min (977.8 - 874.1)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.829 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.253	0.000	0.000
877.37	0.258	0.043	0.043
877.38	0.577	0.004	0.048
878.00	0.620	0.371	0.419
879.00	0.757	0.688	1.107
880.00	0.850	0.803	1.911
881.00	0.986	0.918	2.829

Device	Routing	Invert	Outlet Devices
#1	Primary	877.12'	**15.0" Round Culvert X 2.00** L= 39.2' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.12' / 877.06' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.13 cfs Exfiltration at all elevations**
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.13 cfs @ 11.19 hrs HW=877.24' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=4.75 cfs @ 13.14 hrs HW=878.25' TW=876.92' (Dynamic Tailwater)
├**1=Culvert** (Passes 4.75 cfs of 5.59 cfs potential flow)
│ ├**2=Special & User-Defined** (Custom Controls 3.79 cfs)
│ └**3=Broad-Crested Rectangular Weir** (Weir Controls 0.96 cfs @ 0.59 fps)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 2.20" for 2-yr event
Inflow = 7.44 cfs @ 12.13 hrs, Volume= 0.406 af
Outflow = 6.63 cfs @ 12.16 hrs, Volume= 0.374 af, Atten= 11%, Lag= 1.8 min
Discarded = 0.03 cfs @ 12.16 hrs, Volume= 0.033 af
Primary = 6.60 cfs @ 12.16 hrs, Volume= 0.341 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.82' @ 12.16 hrs Surf.Area= 3,702 sf Storage= 5,181 cf

Plug-Flow detention time= 120.7 min calculated for 0.374 af (92% of inflow)
Center-of-Mass det. time= 83.0 min (866.8 - 783.8)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.16 hrs HW=881.82' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=6.59 cfs @ 12.16 hrs HW=881.82' TW=878.55' (Dynamic Tailwater)
└**1=Culvert** (Passes 6.59 cfs of 9.87 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.10 cfs @ 4.41 fps)
  └**3=Orifice/Grate** (Weir Controls 5.49 cfs @ 1.84 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: CNTY-Infiltration Basin #1

Inflow Area = 4.640 ac, 33.41% Impervious, Inflow Depth = 0.96" for 2-yr event
Inflow = 4.06 cfs @ 12.34 hrs, Volume= 0.372 af
Outflow = 0.71 cfs @ 13.36 hrs, Volume= 0.294 af, Atten= 83%, Lag= 61.3 min
Discarded = 0.06 cfs @ 13.36 hrs, Volume= 0.070 af
Primary = 0.65 cfs @ 13.36 hrs, Volume= 0.225 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.26' @ 13.36 hrs Surf.Area= 7,653 sf Storage= 7,853 cf

Plug-Flow detention time= 279.0 min calculated for 0.294 af (79% of inflow)
Center-of-Mass det. time= 201.1 min (1,056.7 - 855.6)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.06 cfs @ 13.36 hrs HW=882.26' (Free Discharge)
└**5=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.65 cfs @ 13.36 hrs HW=882.26' TW=878.66' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.65 cfs of 3.53 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.65 cfs @ 2.38 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8P: County - Storm Pond 3

Inflow Area = 16.530 ac, 61.22% Impervious, Inflow Depth = 1.37" for 2-yr event
Inflow = 31.84 cfs @ 12.14 hrs, Volume= 1.893 af
Outflow = 6.50 cfs @ 12.47 hrs, Volume= 1.863 af, Atten= 80%, Lag= 19.9 min
Primary = 6.50 cfs @ 12.47 hrs, Volume= 1.863 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.94' @ 12.47 hrs Surf.Area= 20,781 sf Storage= 31,017 cf

Plug-Flow detention time= 132.6 min calculated for 1.863 af (98% of inflow)
Center-of-Mass det. time= 123.4 min (953.7 - 830.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=6.50 cfs @ 12.47 hrs HW=878.94' TW=876.28' (Dynamic Tailwater)
- **1=Culvert** (Passes 6.50 cfs of 14.92 cfs potential flow)
  - **2=Special & User-Defined** (Custom Controls 6.50 cfs)
  - **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Storage at NE and SE corners of AB

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 0.90" for 2-yr event
Inflow = 21.64 cfs @ 12.88 hrs, Volume= 6.093 af
Outflow = 12.79 cfs @ 13.85 hrs, Volume= 6.000 af, Atten= 41%, Lag= 57.9 min
Primary = 12.79 cfs @ 13.85 hrs, Volume= 6.000 af
Routed to Reach 9R : Swale 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Starting Elev= 875.66' Surf.Area= 32,564 sf Storage= 19,458 cf
Peak Elev= 877.08' @ 13.85 hrs Surf.Area= 69,947 sf Storage= 86,090 cf (66,632 cf above start)

Plug-Flow detention time= 169.1 min calculated for 5.553 af (91% of inflow)
Center-of-Mass det. time= 99.8 min (1,033.5 - 933.7)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	640,022 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.00	26,400	0	0
876.00	35,739	31,070	31,070
877.00	63,982	49,861	80,930
878.00	141,395	102,689	183,619
879.00	231,121	186,258	369,877
880.00	309,169	270,145	640,022

Device	Routing	Invert	Outlet Devices
#1	Primary	875.66'	**36.0" Round Culvert** L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.66' / 874.89' S= 0.0077 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=12.79 cfs @ 13.85 hrs HW=877.08' TW=875.90' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 12.79 cfs @ 5.71 fps)

Summary for Pond 11P: Landfill Pond

Inflow Area = 28.500 ac, 1.16% Impervious, Inflow Depth = 1.13" for 2-yr event
Inflow = 42.29 cfs @ 12.19 hrs, Volume= 2.687 af
Outflow = 4.98 cfs @ 13.15 hrs, Volume= 2.324 af, Atten= 88%, Lag= 57.6 min
Primary = 4.98 cfs @ 13.15 hrs, Volume= 2.324 af
Routed to Pond 12P : Existing Depression 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.18' @ 13.15 hrs Surf.Area= 0.712 ac Storage= 1.396 af

Plug-Flow detention time= 416.6 min calculated for 2.324 af (87% of inflow)
Center-of-Mass det. time= 359.2 min (1,196.0 - 836.7)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.98 cfs @ 13.15 hrs HW=880.18' TW=875.02' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.98 cfs of 12.32 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 8.06 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.33 cfs @ 7.54 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.34 cfs @ 6.99 fps)
  - **5=Orifice/Grate** (Weir Controls 4.00 cfs @ 2.09 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 12P: Existing Depression 1

Inflow Area = 37.190 ac, 5.00% Impervious, Inflow Depth > 0.91" for 2-yr event
Inflow = 8.03 cfs @ 12.18 hrs, Volume= 2.810 af
Outflow = 5.49 cfs @ 13.27 hrs, Volume= 2.811 af, Atten= 32%, Lag= 65.0 min
Primary = 5.49 cfs @ 13.27 hrs, Volume= 2.811 af
Routed to Pond 15P : Existing Depression 2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 11R : Swale 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 875.62' @ 18.79 hrs Storage= 40,460 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 148.0 min (1,286.5 - 1,138.4)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	174,699 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
875.00	0
876.00	65,278
877.00	110,909
878.00	136,383
879.00	156,855
880.00	174,699

Device	Routing	Invert	Outlet Devices
#1	Primary	874.12'	**36.0" Round Culvert** L= 100.2' Ke= 0.200 Inlet / Outlet Invert= 874.12' / 873.48' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Secondary	878.00'	**Swale to West** Head (feet) 0.00 0.10 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.010 0.060 0.350 1.040 2.230 4.050 6.580 9.930 14.170 19.400 25.690

Primary OutFlow Max=5.49 cfs @ 13.27 hrs HW=875.02' TW=874.15' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 5.49 cfs @ 4.61 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=875.00' TW=868.00' (Dynamic Tailwater)
↑—**2=Swale to West** (Controls 0.00 cfs)

Summary for Pond 13P: YH1 Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 0.51" for 2-yr event
Inflow = 14.21 cfs @ 12.93 hrs, Volume= 2.808 af
Outflow = 1.65 cfs @ 17.28 hrs, Volume= 2.072 af, Atten= 88%, Lag= 261.3 min
Primary = 1.65 cfs @ 17.28 hrs, Volume= 2.072 af
Routed to Pond 14P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 895.75' @ 17.28 hrs Surf.Area= 99,908 sf Storage= 73,276 cf

Plug-Flow detention time= 512.5 min calculated for 2.072 af (74% of inflow)
Center-of-Mass det. time= 416.4 min (1,338.9 - 922.5)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.65 cfs @ 17.28 hrs HW=895.75' TW=894.68' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.65 cfs @ 2.61 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 14P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.37" for 2-yr event
Inflow = 1.65 cfs @ 17.28 hrs, Volume= 2.072 af
Outflow = 1.63 cfs @ 18.72 hrs, Volume= 2.018 af, Atten= 1%, Lag= 86.0 min
Primary = 1.63 cfs @ 18.72 hrs, Volume= 2.018 af
Routed to Reach 13R : Swale 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 894.69' @ 18.72 hrs Surf.Area= 12,059 sf Storage= 6,162 cf

Plug-Flow detention time= 67.2 min calculated for 2.017 af (97% of inflow)
Center-of-Mass det. time= 46.3 min (1,385.2 - 1,338.9)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.63 cfs @ 18.72 hrs HW=894.69' TW=892.18' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.63 cfs @ 2.83 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 15P: Existing Depression 2

Inflow Area = 248.992 ac, 13.10% Impervious, Inflow Depth > 0.62" for 2-yr event
Inflow = 22.23 cfs @ 13.28 hrs, Volume= 12.908 af
Outflow = 9.32 cfs @ 17.04 hrs, Volume= 12.875 af, Atten= 58%, Lag= 225.8 min
Primary = 9.32 cfs @ 17.04 hrs, Volume= 12.875 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 15R : Overland Flow
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 14R : Swale 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 875.71' @ 17.04 hrs Surf.Area= 75,950 sf Storage= 103,517 cf

Plug-Flow detention time= 119.0 min calculated for 12.871 af (100% of inflow)
Center-of-Mass det. time= 116.4 min (1,254.3 - 1,137.9)

Volume	Invert	Avail.Storage	Storage Description
#1	870.00'	530,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.00	1,053	0	0
873.00	9,397	15,675	15,675
874.00	20,404	14,901	30,576
875.00	42,009	31,207	61,782
876.00	89,975	65,992	127,774
877.00	205,811	147,893	275,667
878.00	304,631	255,221	530,888

Device	Routing	Invert	Outlet Devices
#1	Primary	870.22'	**18.0" Round Culvert** L= 2,314.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 870.22' / 858.00' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	877.00'	**120.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Tertiary	877.30'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.030 0.200 0.570 1.230 3.610 7.780 14.110

Primary OutFlow Max=9.32 cfs @ 17.04 hrs HW=875.71' TW=859.34' (Dynamic Tailwater)
1=Culvert (Barrel Controls 9.32 cfs @ 5.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=876.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=877.30' (Dynamic Tailwater)
3=Special & User-Defined (Controls 0.00 cfs)

Summary for Pond 17P: YH3 Pond

Inflow Area = 470.972 ac, 9.99% Impervious, Inflow Depth > 0.47" for 2-yr event
Inflow = 32.01 cfs @ 12.88 hrs, Volume= 18.492 af
Outflow = 11.03 cfs @ 23.01 hrs, Volume= 14.738 af, Atten= 66%, Lag= 608.1 min
Primary = 11.03 cfs @ 23.01 hrs, Volume= 14.738 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 859.56' @ 22.98 hrs Surf.Area= 204,190 sf Storage= 296,937 cf

Plug-Flow detention time= 398.3 min calculated for 14.738 af (80% of inflow)
Center-of-Mass det. time= 271.9 min (1,443.8 - 1,171.8)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.03 cfs @ 23.01 hrs HW=859.56' TW=856.69' (Dynamic Tailwater)
1=Culvert (Outlet Controls 11.03 cfs @ 4.34 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 18P: YH4 Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 0.43" for 2-yr event
Inflow = 3.67 cfs @ 12.38 hrs, Volume= 0.443 af
Outflow = 0.40 cfs @ 15.27 hrs, Volume= 0.380 af, Atten= 89%, Lag= 172.9 min
Primary = 0.40 cfs @ 15.27 hrs, Volume= 0.380 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 861.41' @ 15.27 hrs Surf.Area= 25,237 sf Storage= 9,750 cf

Plug-Flow detention time= 378.9 min calculated for 0.380 af (86% of inflow)
Center-of-Mass det. time= 317.8 min (1,215.4 - 897.5)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.40 cfs @ 15.27 hrs HW=861.41' TW=859.12' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 0.40 cfs @ 2.52 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 19P: YH5 Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 1.13" for 2-yr event
Inflow = 4.07 cfs @ 12.15 hrs, Volume= 0.222 af
Outflow = 0.08 cfs @ 17.88 hrs, Volume= 0.120 af, Atten= 98%, Lag= 343.6 min
Primary = 0.08 cfs @ 17.88 hrs, Volume= 0.120 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 865.18' @ 17.88 hrs Surf.Area= 39,749 sf Storage= 7,048 cf

Plug-Flow detention time= 627.2 min calculated for 0.120 af (54% of inflow)
Center-of-Mass det. time= 522.6 min (1,355.9 - 833.3)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.08 cfs @ 17.88 hrs HW=865.18' TW=859.41' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.08 cfs @ 1.62 fps)

Summary for Pond 20P: YH6-A

Inflow Area = 9.070 ac, 24.04% Impervious, Inflow Depth = 0.86" for 2-yr event
Inflow = 8.27 cfs @ 12.26 hrs, Volume= 0.648 af
Outflow = 1.83 cfs @ 12.43 hrs, Volume= 0.637 af, Atten= 78%, Lag= 10.2 min
Primary = 1.83 cfs @ 12.43 hrs, Volume= 0.637 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 60,840 sf Storage= 127,764 cf
Peak Elev= 856.76' @ 13.32 hrs Surf.Area= 62,375 sf Storage= 137,621 cf (9,857 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 195.3 min (1,051.0 - 855.7)

Volume	Invert	Avail.Storage	Storage Description
#1	854.50'	667,659 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.50	60,840	0	0
856.60	60,840	127,764	127,764
857.00	64,679	25,104	152,868
858.00	73,339	69,009	221,877
859.00	90,134	81,737	303,613
860.00	109,122	99,628	403,241
861.00	129,626	119,374	522,615
862.00	160,461	145,044	667,659

Device	Routing	Invert	Outlet Devices
#1	Primary	854.50'	**18.0" Round Culvert**
			L= 55.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.50' / 854.22' S= 0.0051 '/' Cc= 0.900
			n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=1.81 cfs @ 12.43 hrs HW=856.72' TW=856.63' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.81 cfs @ 1.02 fps)

Summary for Pond 21P: YH6B Pond

Inflow Area = 579.442 ac, 9.62% Impervious, Inflow Depth > 0.40" for 2-yr event
Inflow = 28.02 cfs @ 12.57 hrs, Volume= 19.272 af
Outflow = 14.72 cfs @ 13.18 hrs, Volume= 19.219 af, Atten= 47%, Lag= 36.6 min
Primary = 14.72 cfs @ 13.18 hrs, Volume= 19.219 af
Routed to Link 22L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 856.72' @ 13.18 hrs Surf.Area= 287,761 sf Storage= 591,118 cf (34,672 cf above start)

Plug-Flow detention time= 878.1 min calculated for 6.443 af (33% of inflow)
Center-of-Mass det. time= 27.8 min (1,349.6 - 1,321.9)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=14.72 cfs @ 13.18 hrs HW=856.72' TW=856.60' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 14.72 cfs @ 1.76 fps)

Summary for Pond 22P: Existing Depression 3

Inflow Area = 30.220 ac, 19.56% Impervious, Inflow Depth = 0.55" for 2-yr event
Inflow = 15.85 cfs @ 12.26 hrs, Volume= 1.375 af
Outflow = 0.15 cfs @ 24.12 hrs, Volume= 0.149 af, Atten= 99%, Lag= 711.9 min
Primary = 0.15 cfs @ 24.12 hrs, Volume= 0.149 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 21R : Swale 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 863.03' @ 24.12 hrs Surf.Area= 1.452 ac Storage= 1.322 af

Plug-Flow detention time= 868.4 min calculated for 0.149 af (11% of inflow)
Center-of-Mass det. time= 719.5 min (1,597.8 - 878.3)

Volume	Invert	Avail.Storage	Storage Description
#1	860.00'	12.833 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
860.00	0.006	0.000	0.000
861.00	0.016	0.011	0.011
862.00	0.550	0.283	0.294
863.00	1.425	0.987	1.281
864.00	2.395	1.910	3.191
865.00	2.865	2.630	5.821
866.00	3.493	3.179	9.000
867.00	4.172	3.833	12.833

Device	Routing	Invert	Outlet Devices
#1	Primary	862.84'	**12.0" Round Culvert** L= 30.7' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 862.84' / 861.39' S= 0.0472 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	865.74'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#3	Secondary	863.60'	**Swale in ROW to West** Head (feet) 0.00 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 Disch. (cfs) 0.000 0.630 1.850 4.000 7.240 11.780 17.770 25.370 34.720 45.990 59.290 74.770

Primary OutFlow Max=0.15 cfs @ 24.12 hrs HW=863.03' TW=859.55' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.15 cfs @ 1.48 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=860.00' TW=863.60' (Dynamic Tailwater)
└─**3=Swale in ROW to West** (Controls 0.00 cfs)

Summary for Pond 28P: Salt Shed Basin

Inflow Area = 0.203 ac, 53.20% Impervious, Inflow Depth = 1.84" for 2-yr event
Inflow = 0.59 cfs @ 12.13 hrs, Volume= 0.031 af
Outflow = 0.25 cfs @ 12.25 hrs, Volume= 0.018 af, Atten= 58%, Lag= 7.1 min
Primary = 0.25 cfs @ 12.25 hrs, Volume= 0.018 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.88' @ 12.25 hrs Surf.Area= 732 sf Storage= 628 cf

Plug-Flow detention time= 170.6 min calculated for 0.018 af (58% of inflow)
Center-of-Mass det. time= 80.4 min (881.4 - 801.0)

Volume	Invert	Avail.Storage	Storage Description
#1	881.50'	1,163 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
881.50	212	0	0
882.00	363	144	144
883.00	781	572	716
883.50	1,009	448	1,163

Device	Routing	Invert	Outlet Devices
#1	Primary	881.50'	**6.0" Round Culvert** L= 134.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 881.50' / 880.80' S= 0.0052 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	882.80'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	883.00'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.25 cfs @ 12.25 hrs HW=882.88' TW=875.96' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.25 cfs of 0.57 cfs potential flow)
  - **2=Orifice/Grate** (Weir Controls 0.25 cfs @ 0.95 fps)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 21L: Ag. Ditch #4 Tributary

Inflow Area = 37.620 ac, 33.12% Impervious, Inflow Depth = 0.96" for 2-yr event
Inflow = 25.58 cfs @ 12.53 hrs, Volume= 3.015 af
Primary = 25.57 cfs @ 12.79 hrs, Volume= 3.015 af, Atten= 0%, Lag= 15.6 min
Routed to Link 22L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 22L: Combined to Ag Ditch #4

Inflow Area = 634.952 ac, 10.79% Impervious, Inflow Depth > 0.43" for 2-yr event
Inflow = 41.71 cfs @ 12.81 hrs, Volume= 22.990 af
Primary = 41.71 cfs @ 12.81 hrs, Volume= 22.990 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 24L: Door Creek Combined

Inflow Area = 39.177 ac, 13.85% Impervious, Inflow Depth = 0.56" for 2-yr event
Inflow = 12.88 cfs @ 12.57 hrs, Volume= 1.814 af
Primary = 12.88 cfs @ 12.57 hrs, Volume= 1.814 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 25L: Combine

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 0.00% Impervious, Inflow Depth = 0.31" for 2-yr event
Inflow = 0.17 cfs @ 12.24 hrs, Volume= 0.019 af
Primary = 0.16 cfs @ 12.67 hrs, Volume= 0.019 af, Atten= 0%, Lag= 25.7 min
Routed to Link 24L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: C1

Runoff = 16.51 cfs @ 12.13 hrs, Volume= 0.865 af, Depth= 2.22"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 5.58 cfs @ 12.48 hrs, Volume= 0.668 af, Depth= 0.82"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.6	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 12.75 cfs @ 12.35 hrs, Volume= 1.158 af, Depth= 1.97"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.900	98	
*	3.870	74	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	7.043	85	Weighted Average
	3.870		54.95% Pervious Area
	3.173		45.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.9	68	0.0220	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 3.05 cfs @ 12.13 hrs, Volume= 0.167 af, Depth= 2.69"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.580	98	
*	0.165	74	>75% Grass cover, Good, HSG B
	0.745	93	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 9.29 cfs @ 12.13 hrs, Volume= 0.516 af, Depth= 2.79"
Routed to Pond 5P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7S: C4-C

Runoff = 1.90 cfs @ 12.13 hrs, Volume= 0.097 af, Depth= 1.74"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.230	98	
*	0.440	74	>75% Grass cover, Good, HSG B
	0.670	82	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 31.82 cfs @ 12.13 hrs, Volume= 1.667 af, Depth= 2.22"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	6.030	98	
	2.030	61	>75% Grass cover, Good, HSG B
*	0.640	74	>75% Grass cover, Good, HSG C
	0.300	98	Water Surface, HSG B
	9.000	88	Weighted Average
	2.670		29.67% Pervious Area
	6.330		70.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5

Runoff = 11.68 cfs @ 12.26 hrs, Volume= 0.900 af, Depth= 1.33"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.270	98	
	2.940	61	>75% Grass cover, Good, HSG B
	0.144	74	>75% Grass cover, Good, HSG C
*	2.277	70	Row crops, SR + CR, Good, HSG B
	0.494	86	Fallow, bare soil, HSG B
	8.125	76	Weighted Average
	5.855		72.06% Pervious Area
	2.270		27.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	220	0.0370	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
8.7	80	0.0260	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.5	188	0.0200	1.27		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
2.3	380	0.0090	2.70	59.39	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 30.0 '/' Top.W=40.00' n= 0.035
1.0	193	0.0010	3.23	22.85	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
16.4	1,061	Total			

Summary for Subcatchment 10S: C6

Runoff = 16.88 cfs @ 12.82 hrs, Volume= 2.820 af, Depth= 0.98"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.864	98	
	7.605	61	>75% Grass cover, Good, HSG B
	5.438	74	>75% Grass cover, Good, HSG C
	5.852	58	Woods/grass comb., Good, HSG B
*	9.844	70	Row crops, SR + CR, Good, HSG B
*	3.269	79	Row crops, SR + CR, Good, HSG C
	0.750	98	Water Surface, HSG B
	34.622	70	Weighted Average
	32.008		92.45% Pervious Area
	2.614		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	300	0.1190	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
6.6	395	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.5	218	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	688	0.0067	0.74		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0050	2.65	8.32	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.025
3.7	529	0.0060	2.41	38.62	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 16.0 '/' Top.W=32.00' n= 0.030
56.8	2,204	Total			

Summary for Subcatchment 11S: C7 - Landfill

Runoff = 60.21 cfs @ 12.19 hrs, Volume= 3.792 af, Depth= 1.60"
Routed to Pond 11P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG B
27.730	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.500	80	Weighted Average
28.170		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill's SWMP**

Summary for Subcatchment 12S: C8

Runoff = 12.01 cfs @ 12.18 hrs, Volume= 0.747 af, Depth= 1.03"
Routed to Pond 12P : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.380	98	
	4.420	61	>75% Grass cover, Good, HSG B
	0.200	74	>75% Grass cover, Good, HSG C
	2.540	72	Woods/grass comb., Good, HSG C
	0.150	98	Water Surface, HSG B
	8.690	71	Weighted Average
	7.160		82.39% Pervious Area
	1.530		17.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
1.7	168	0.0530	1.61		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	1,538	Total			

Summary for Subcatchment 13S: C9 and C10

Runoff = 6.16 cfs @ 12.13 hrs, Volume= 0.323 af, Depth= 2.22"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.215	98	
	0.366	61	>75% Grass cover, Good, HSG B
	0.160	74	>75% Grass cover, Good, HSG C
	1.741	88	Weighted Average
	0.526		30.21% Pervious Area
	1.215		69.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 14S: YH1

Runoff = 25.44 cfs @ 12.87 hrs, Volume= 4.549 af, Depth= 0.82"
Routed to Pond 13P : YH1 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 15S: YH2

Runoff = 18.08 cfs @ 12.85 hrs, Volume= 3.282 af, Depth= 0.64"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	4.098	98	
	19.840	61	>75% Grass cover, Good, HSG B
	10.130	74	>75% Grass cover, Good, HSG C
	4.830	58	Woods/grass comb., Good, HSG B
	12.800	48	Brush, Good, HSG B
	10.280	65	Brush, Good, HSG C
	61.978	63	Weighted Average
	57.880		93.39% Pervious Area
	4.098		6.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.8	591	0.0130	2.58	51.61	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
8.3	745	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.9	608	0.0080	2.09	36.53	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 & 5.0 '/' Top.W=25.00' n= 0.050
52.1	3,785	Total			

Summary for Subcatchment 16S: C11-16

Runoff = 28.05 cfs @ 12.24 hrs, Volume= 2.197 af, Depth= 0.87"
Routed to Pond 22P : Existing Depression 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	5.910	98	
	18.130	61	>75% Grass cover, Good, HSG B
	1.510	74	>75% Grass cover, Good, HSG C
	3.010	55	Woods, Good, HSG B
	0.570	70	Woods, Good, HSG C
	1.090	48	Brush, Good, HSG B
	30.220	68	Weighted Average
	24.310		80.44% Pervious Area
	5.910		19.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	23	0.0530	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
2.5	23	0.0920	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.6	64	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	1,807	0.0078	2.73	16.93	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.8 & 7.6 '/' Top.W=12.40' n= 0.030
14.4	1,917	Total			

Summary for Subcatchment 17S: YH3

Runoff = 48.87 cfs @ 12.78 hrs, Volume= 8.745 af, Depth= 0.59"
Routed to Pond 17P : YH3 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.600	98	
	106.380	61	>75% Grass cover, Good, HSG B
	26.310	74	>75% Grass cover, Good, HSG C
	31.110	48	Brush, Good, HSG B
	6.590	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	177.190	62	Weighted Average
	170.390		96.16% Pervious Area
	6.800		3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.5	2,916	Total			

Summary for Subcatchment 18S: YH4

Runoff = 7.18 cfs @ 12.36 hrs, Volume= 0.739 af, Depth= 0.73"
Routed to Pond 18P : YH4 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 19S: YH5

Runoff = 5.78 cfs @ 12.15 hrs, Volume= 0.313 af, Depth= 1.60"
Routed to Pond 19P : YH5 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
7.3	98	Total			

Summary for Subcatchment 20S: YH6A Pond

Runoff = 12.60 cfs @ 12.25 hrs, Volume= 0.957 af, Depth= 1.27"
Routed to Pond 20P : YH6-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.780	98	
	2.870	61	>75% Grass cover, Good, HSG B
	4.020	73	Brush, Good, HSG D
	1.400	98	Water Surface, HSG C
	9.070	75	Weighted Average
	6.890		75.96% Pervious Area
	2.180		24.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	150	0.0750	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
3.4	285	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
15.7	435	Total			

Summary for Subcatchment 21S: YH6-B

Runoff = 48.83 cfs @ 12.57 hrs, Volume= 6.406 af, Depth= 0.77"
Routed to Pond 21P : YH6B Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
54.330	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.610	65	Brush, Good, HSG C
26.640	73	Brush, Good, HSG D
6.480	98	Water Surface, HSG A
99.400	66	Weighted Average
92.920		93.48% Pervious Area
6.480		6.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 23S: C17-C25

Runoff = 38.05 cfs @ 12.50 hrs, Volume= 4.369 af, Depth= 1.39"
Routed to Link 21L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	12.460	98	
	16.840	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	7.960	80	>75% Grass cover, Good, HSG D
	37.620	77	Weighted Average
	25.160		66.88% Pervious Area
	12.460		33.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.8	318	0.0087	1.89		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	79	0.0830	4.32		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.6	341	0.0180	3.54	17.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.8 '/' Top.W=9.80' n= 0.035
0.5	150	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
14.6	1,367	0.0035	1.56	7.81	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035
34.5	2,534	Total			

Summary for Subcatchment 24S: C26

Runoff = 6.10 cfs @ 13.07 hrs, Volume= 1.226 af, Depth= 0.82"
Routed to Link 22L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.360	98	
	0.140	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	3.940	48	Brush, Good, HSG B
	1.810	65	Brush, Good, HSG C
	11.600	73	Brush, Good, HSG D
	17.890	67	Weighted Average
	17.530		97.99% Pervious Area
	0.360		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030
69.6	2,824	Total			

Summary for Subcatchment 25S: C27

Runoff = 13.15 cfs @ 12.53 hrs, Volume= 1.565 af, Depth= 1.09"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	3.827	98	impervious
	8.477	61	>75% Grass cover, Good, HSG B
	0.289	74	>75% Grass cover, Good, HSG C
	0.246	80	>75% Grass cover, Good, HSG D
*	3.840	70	Row crops, SR + CR, Good, HSG B
*	0.090	79	Row crops, SR + CR, Good, HSG C
	0.490	86	Fallow, bare soil, HSG B
	17.259	72	Weighted Average
	13.432		77.83% Pervious Area
	3.827		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.3	150	0.0140	1.06		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
10.3	482	0.0125	0.78		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.6	1,570	0.0125	3.45	18.44	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.7 '/' Top.W=10.70' n= 0.030
0.6	163	0.0800	4.24		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
34.3	2,515	Total			

Summary for Subcatchment 26S: C28A & C28B

Runoff = 9.21 cfs @ 12.57 hrs, Volume= 1.281 af, Depth= 0.73"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.598	98	impervious
	6.420	61	>75% Grass cover, Good, HSG B
	1.116	80	>75% Grass cover, Good, HSG D
	6.805	55	Woods, Good, HSG B
*	5.229	70	Row crops, SR + CR, Good, HSG B
	21.168	65	Weighted Average
	19.570		92.45% Pervious Area
	1.598		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	150	0.1070	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
1.2	150	0.1730	2.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.6	365	0.0360	1.71		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
5.3	651	0.0120	2.04	16.34	**Channel Flow,** Area= 8.0 sf Perim= 16.1' r= 0.50' n= 0.050
2.6	273	0.0390	1.78		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.8	1,714	0.0140	3.67	25.72	**Channel Flow,** Area= 7.0 sf Perim= 14.1' r= 0.50' n= 0.030
36.6	3,303	Total			

Summary for Subcatchment 27S: Salt Loading Area

Runoff = 0.76 cfs @ 12.13 hrs, Volume= 0.041 af, Depth= 2.40"
Routed to Pond 28P : Salt Shed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (sf)	CN	Description
*	4,694	98	
*	4,130	80	>75% Grass cover, Good, compacted, HSG C
	8,824	90	Weighted Average
	4,130		46.80% Pervious Area
	4,694		53.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 28S: Luds Lane

Runoff = 0.41 cfs @ 12.22 hrs, Volume= 0.034 af, Depth= 0.55"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
0.750	61	>75% Grass cover, Good, HSG B
0.750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	71	0.0210	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"

Summary for Subcatchment 51S: C4-B

Runoff = 6.02 cfs @ 12.34 hrs, Volume= 0.539 af, Depth= 1.39"
Routed to Pond 6P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.550	98	
	1.935	61	>75% Grass cover, Good, HSG B
	1.155	74	>75% Grass cover, Good, HSG C
	4.640	77	Weighted Average
	3.090		66.59% Pervious Area
	1.550		33.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	150	0.0330	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
1.7	129	0.0310	1.23		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	522	0.0082	2.69	16.15	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
22.0	801	Total			

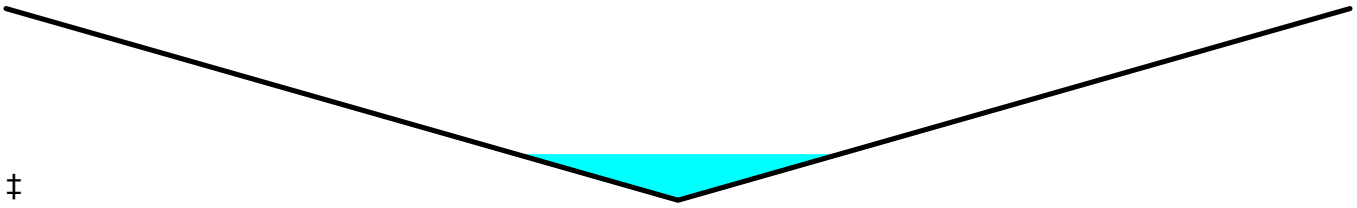
Summary for Reach 9R: Swale 1

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 1.29" for 5-yr event
Inflow = 19.70 cfs @ 13.80 hrs, Volume= 8.795 af
Outflow = 19.55 cfs @ 14.00 hrs, Volume= 8.787 af, Atten= 1%, Lag= 12.4 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.35 fps, Min. Travel Time= 14.0 min
Avg. Velocity = 0.75 fps, Avg. Travel Time= 25.4 min

Peak Storage= 16,439 cf @ 14.00 hrs
Average Depth at Peak Storage= 1.20' , Surface Width= 24.05'
Bank-Full Depth= 5.00' Flow Area= 250.0 sf, Capacity= 874.22 cfs

0.00' x 5.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 100.00'
Length= 1,137.0' Slope= 0.0041 '/'
Inlet Invert= 874.89', Outlet Invert= 870.22'



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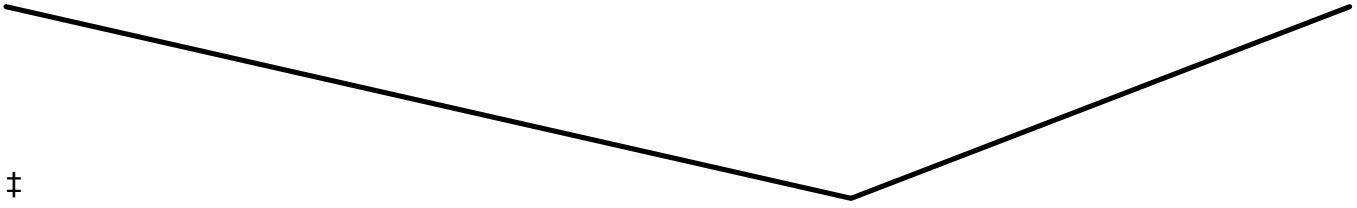
Summary for Reach 11R: Swale 4

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 55.8 sf, Capacity= 189.41 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 7.8 4.6 '/' Top Width= 37.20'
Length= 1,795.0' Slope= 0.0028 '/'
Inlet Invert= 868.00', Outlet Invert= 863.00'



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Summary for Reach 13R: Swale 2

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.64" for 5-yr event
Inflow = 2.70 cfs @ 19.06 hrs, Volume= 3.538 af
Outflow = 2.70 cfs @ 19.65 hrs, Volume= 3.464 af, Atten= 0%, Lag= 35.5 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.93 fps, Min. Travel Time= 46.7 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 55.4 min

Peak Storage= 7,556 cf @ 19.65 hrs
Average Depth at Peak Storage= 0.24' , Surface Width= 14.72'
Bank-Full Depth= 3.00' Flow Area= 120.0 sf, Capacity= 466.95 cfs

10.00' x 3.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 2,591.9' Slope= 0.0084 '/'
Inlet Invert= 892.00', Outlet Invert= 870.22'

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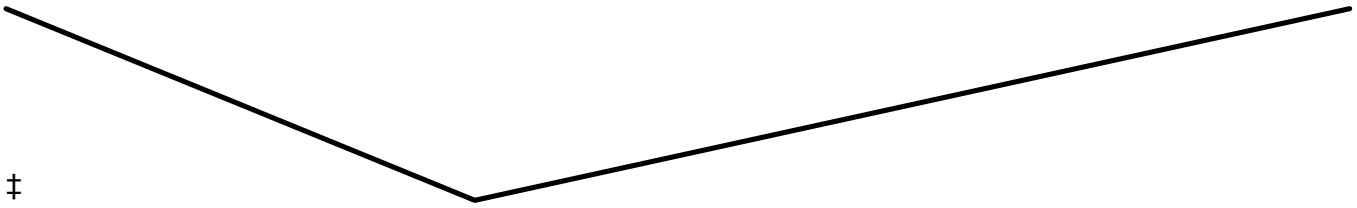
Summary for Reach 14R: Swale 3

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 58.1 sf, Capacity= 290.70 cfs

0.00' x 3.00' deep channel, n= 0.035
Side Slope Z-value= 4.5 8.4 '/' Top Width= 38.70'
Length= 1,492.0' Slope= 0.0082 '/'
Inlet Invert= 877.30', Outlet Invert= 865.00'



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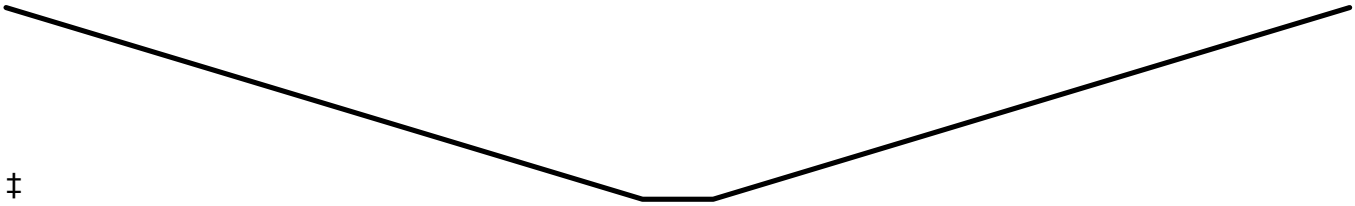
Summary for Reach 15R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,718.10 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0073 '/'
Inlet Invert= 876.00', Outlet Invert= 858.00'



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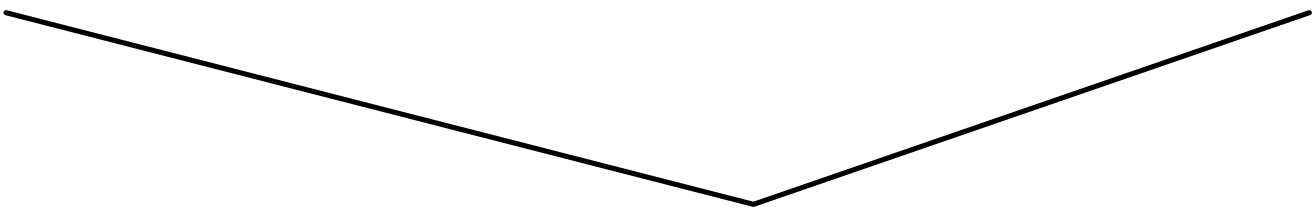
Summary for Reach 21R: Swale 5

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 22R : Swale 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 30.6 sf, Capacity= 111.43 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.9 2.9 '/' Top Width= 20.40'
Length= 690.6' Slope= 0.0033 '/'
Inlet Invert= 863.60', Outlet Invert= 861.30'



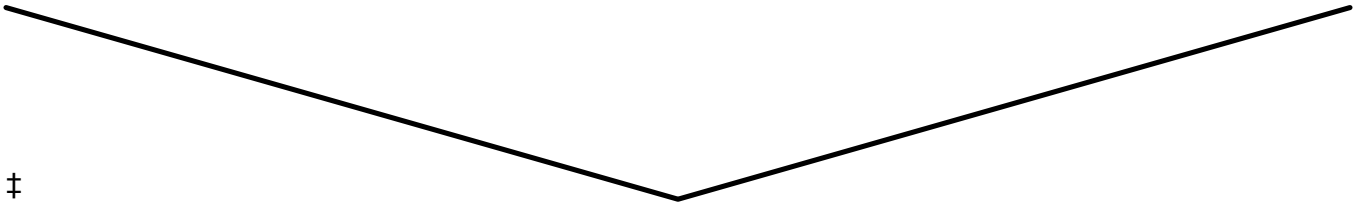
Summary for Reach 22R: Swale 6

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 21L : Ag. Ditch #4 Tributary

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 45.0 sf, Capacity= 168.82 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 1,370.6' Slope= 0.0034 '/'
Inlet Invert= 861.30', Outlet Invert= 856.60'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 2.22" for 5-yr event
Inflow = 16.51 cfs @ 12.13 hrs, Volume= 0.865 af
Outflow = 1.97 cfs @ 12.61 hrs, Volume= 0.864 af, Atten= 88%, Lag= 28.4 min
Primary = 1.97 cfs @ 12.61 hrs, Volume= 0.864 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 884.79' @ 12.61 hrs Surf.Area= 22,763 sf Storage= 17,467 cf

Plug-Flow detention time= 115.1 min calculated for 0.864 af (100% of inflow)
Center-of-Mass det. time= 114.1 min (915.5 - 801.4)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.97 cfs @ 12.61 hrs HW=884.79' TW=878.40' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 1.97 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 2.69" for 5-yr event
Inflow = 3.05 cfs @ 12.13 hrs, Volume= 0.167 af
Outflow = 0.63 cfs @ 12.41 hrs, Volume= 0.115 af, Atten= 79%, Lag= 16.8 min
Discarded = 0.02 cfs @ 12.41 hrs, Volume= 0.023 af
Primary = 0.61 cfs @ 12.41 hrs, Volume= 0.092 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.89' @ 12.41 hrs Surf.Area= 3,474 sf Storage= 3,936 cf

Plug-Flow detention time= 259.6 min calculated for 0.115 af (69% of inflow)
Center-of-Mass det. time= 180.1 min (963.1 - 783.0)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.41 hrs HW=880.89' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=0.61 cfs @ 12.41 hrs HW=880.89' TW=878.12' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.61 cfs of 3.56 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.61 cfs @ 2.44 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 4P: County - Storm Pond 2

Inflow Area = 22.203 ac, 36.68% Impervious, Inflow Depth = 1.50" for 5-yr event
Inflow = 20.03 cfs @ 12.38 hrs, Volume= 2.781 af
Outflow = 7.89 cfs @ 12.97 hrs, Volume= 2.781 af, Atten= 61%, Lag= 35.5 min
Discarded = 0.13 cfs @ 10.64 hrs, Volume= 0.201 af
Primary = 7.76 cfs @ 12.97 hrs, Volume= 2.580 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.54' @ 12.97 hrs Surf.Area= 0.694 ac Storage= 0.791 af

Plug-Flow detention time= 94.1 min calculated for 2.781 af (100% of inflow)
Center-of-Mass det. time= 94.2 min (962.7 - 868.5)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.829 af	**Custom Stage Data (Prismatic)**Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.253	0.000	0.000
877.37	0.258	0.043	0.043
877.38	0.577	0.004	0.048
878.00	0.620	0.371	0.419
879.00	0.757	0.688	1.107
880.00	0.850	0.803	1.911
881.00	0.986	0.918	2.829

Device	Routing	Invert	Outlet Devices
#1	Primary	877.12'	**15.0" Round Culvert X 2.00** L= 39.2' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.12' / 877.06' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.13 cfs Exfiltration at all elevations**
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.13 cfs @ 10.64 hrs HW=877.24' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=7.76 cfs @ 12.97 hrs HW=878.54' TW=877.26' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 7.76 cfs @ 3.48 fps)
  └**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 15.49 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 2.79" for 5-yr event
Inflow = 9.29 cfs @ 12.13 hrs, Volume= 0.516 af
Outflow = 8.51 cfs @ 12.16 hrs, Volume= 0.483 af, Atten= 8%, Lag= 1.6 min
Discarded = 0.03 cfs @ 12.16 hrs, Volume= 0.035 af
Primary = 8.48 cfs @ 12.16 hrs, Volume= 0.448 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.88' @ 12.16 hrs Surf.Area= 3,783 sf Storage= 5,432 cf

Plug-Flow detention time= 103.7 min calculated for 0.483 af (94% of inflow)
Center-of-Mass det. time= 72.1 min (850.5 - 778.4)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.16 hrs HW=881.88' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=8.46 cfs @ 12.16 hrs HW=881.88' TW=878.97' (Dynamic Tailwater)
└**1=Culvert** (Passes 8.46 cfs of 10.12 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 1.15 cfs @ 4.59 fps)
└**3=Orifice/Grate** (Weir Controls 7.31 cfs @ 2.02 fps)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 6P: CNTY-Infiltration Basin #1

Inflow Area = 4.640 ac, 33.41% Impervious, Inflow Depth = 1.39" for 5-yr event
Inflow = 6.02 cfs @ 12.34 hrs, Volume= 0.539 af
Outflow = 1.40 cfs @ 12.99 hrs, Volume= 0.460 af, Atten= 77%, Lag= 39.2 min
Discarded = 0.08 cfs @ 12.99 hrs, Volume= 0.076 af
Primary = 1.32 cfs @ 12.99 hrs, Volume= 0.384 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.59' @ 12.99 hrs Surf.Area= 9,089 sf Storage= 10,607 cf

Plug-Flow detention time= 215.1 min calculated for 0.460 af (85% of inflow)
Center-of-Mass det. time= 154.7 min (1,000.9 - 846.2)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.08 cfs @ 12.99 hrs HW=882.59' (Free Discharge)
└**5=Exfiltration** (Controls 0.08 cfs)

Primary OutFlow Max=1.32 cfs @ 12.99 hrs HW=882.59' TW=879.06' (Dynamic Tailwater)
├**1=Culvert** (Passes 1.32 cfs of 4.08 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 1.32 cfs @ 3.01 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8P: County - Storm Pond 3

Inflow Area = 16.530 ac, 61.22% Impervious, Inflow Depth = 1.89" for 5-yr event
Inflow = 41.82 cfs @ 12.14 hrs, Volume= 2.597 af
Outflow = 14.11 cfs @ 12.31 hrs, Volume= 2.565 af, Atten= 66%, Lag= 10.3 min
Primary = 14.11 cfs @ 12.31 hrs, Volume= 2.565 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 879.30' @ 12.31 hrs Surf.Area= 22,157 sf Storage= 38,870 cf

Plug-Flow detention time= 114.7 min calculated for 2.565 af (99% of inflow)
Center-of-Mass det. time= 107.2 min (932.2 - 825.0)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=14.10 cfs @ 12.31 hrs HW=879.30' TW=876.33' (Dynamic Tailwater)
- **1=Culvert** (Passes 14.10 cfs of 17.63 cfs potential flow)
  - **2=Special & User-Defined** (Custom Controls 8.30 cfs)
  - **3=Broad-Crested Rectangular Weir** (Weir Controls 5.80 cfs @ 0.82 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Storage at NE and SE corners of AB

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 1.31" for 5-yr event
Inflow = 34.95 cfs @ 12.81 hrs, Volume= 8.893 af
Outflow = 19.70 cfs @ 13.80 hrs, Volume= 8.795 af, Atten= 44%, Lag= 59.3 min
Primary = 19.70 cfs @ 13.80 hrs, Volume= 8.795 af
Routed to Reach 9R : Swale 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Starting Elev= 875.66' Surf.Area= 32,564 sf Storage= 19,458 cf
Peak Elev= 877.50' @ 13.80 hrs Surf.Area= 102,735 sf Storage= 122,659 cf (103,201 cf above start)

Plug-Flow detention time= 142.5 min calculated for 8.346 af (94% of inflow)
Center-of-Mass det. time= 93.5 min (1,011.1 - 917.6)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	640,022 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.00	26,400	0	0
876.00	35,739	31,070	31,070
877.00	63,982	49,861	80,930
878.00	141,395	102,689	183,619
879.00	231,121	186,258	369,877
880.00	309,169	270,145	640,022

Device	Routing	Invert	Outlet Devices
#1	Primary	875.66'	**36.0" Round Culvert** L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.66' / 874.89' S= 0.0077 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=19.70 cfs @ 13.80 hrs HW=877.50' TW=876.09' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 19.70 cfs @ 6.20 fps)

Summary for Pond 11P: Landfill Pond

Inflow Area = 28.500 ac, 1.16% Impervious, Inflow Depth = 1.60" for 5-yr event
Inflow = 60.21 cfs @ 12.19 hrs, Volume= 3.792 af
Outflow = 9.31 cfs @ 12.73 hrs, Volume= 3.400 af, Atten= 85%, Lag= 32.5 min
Primary = 9.31 cfs @ 12.73 hrs, Volume= 3.400 af
Routed to Pond 12P : Existing Depression 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.70' @ 12.73 hrs Surf.Area= 0.866 ac Storage= 1.812 af

Plug-Flow detention time= 310.9 min calculated for 3.400 af (90% of inflow)
Center-of-Mass det. time= 264.1 min (1,092.4 - 828.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=9.31 cfs @ 12.73 hrs HW=880.70' TW=875.20' (Dynamic Tailwater)
- **1=Culvert** (Passes 9.31 cfs of 13.79 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.34 cfs @ 8.79 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.36 cfs @ 8.32 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.38 cfs @ 7.81 fps)
  - **5=Orifice/Grate** (Orifice Controls 8.23 cfs @ 4.66 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 12P: Existing Depression 1

Inflow Area = 37.190 ac, 5.00% Impervious, Inflow Depth > 1.34" for 5-yr event
Inflow = 13.67 cfs @ 12.32 hrs, Volume= 4.148 af
Outflow = 7.96 cfs @ 12.84 hrs, Volume= 4.011 af, Atten= 42%, Lag= 30.7 min
Primary = 7.96 cfs @ 12.84 hrs, Volume= 4.011 af
Routed to Pond 15P : Existing Depression 2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 11R : Swale 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 876.89' @ 20.48 hrs Storage= 106,082 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 565.5 min (1,614.3 - 1,048.8)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	174,699 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
875.00	0
876.00	65,278
877.00	110,909
878.00	136,383
879.00	156,855
880.00	174,699

Device	Routing	Invert	Outlet Devices
#1	Primary	874.12'	**36.0" Round Culvert** L= 100.2' Ke= 0.200 Inlet / Outlet Invert= 874.12' / 873.48' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Secondary	878.00'	**Swale to West** Head (feet) 0.00 0.10 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.010 0.060 0.350 1.040 2.230 4.050 6.580 9.930 14.170 19.400 25.690

Primary OutFlow Max=7.84 cfs @ 12.84 hrs HW=875.22' TW=874.33' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 7.84 cfs @ 4.96 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=875.00' TW=868.00' (Dynamic Tailwater)
↑—**2=Swale to West** (Controls 0.00 cfs)

Summary for Pond 13P: YH1 Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 0.82" for 5-yr event
Inflow = 25.44 cfs @ 12.87 hrs, Volume= 4.549 af
Outflow = 2.78 cfs @ 16.34 hrs, Volume= 3.611 af, Atten= 89%, Lag= 208.1 min
Primary = 2.78 cfs @ 16.34 hrs, Volume= 3.611 af
Routed to Pond 14P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 896.19' @ 16.34 hrs Surf.Area= 112,821 sf Storage= 119,008 cf

Plug-Flow detention time= 499.9 min calculated for 3.611 af (79% of inflow)
Center-of-Mass det. time= 419.6 min (1,326.7 - 907.1)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.78 cfs @ 16.34 hrs HW=896.19' TW=894.95' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.78 cfs @ 3.54 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 14P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.65" for 5-yr event
Inflow = 2.78 cfs @ 16.34 hrs, Volume= 3.611 af
Outflow = 2.70 cfs @ 19.06 hrs, Volume= 3.538 af, Atten= 3%, Lag= 163.0 min
Primary = 2.70 cfs @ 19.06 hrs, Volume= 3.538 af
Routed to Reach 13R : Swale 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 895.01' @ 19.06 hrs Surf.Area= 15,062 sf Storage= 10,508 cf

Plug-Flow detention time= 63.5 min calculated for 3.538 af (98% of inflow)
Center-of-Mass det. time= 47.0 min (1,373.6 - 1,326.7)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.70 cfs @ 19.06 hrs HW=895.01' TW=892.24' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.70 cfs @ 3.44 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 15P: Existing Depression 2

Inflow Area = 248.992 ac, 13.10% Impervious, Inflow Depth > 0.96" for 5-yr event
Inflow = 36.42 cfs @ 12.91 hrs, Volume= 19.866 af
Outflow = 9.57 cfs @ 18.44 hrs, Volume= 18.695 af, Atten= 74%, Lag= 331.9 min
Primary = 9.57 cfs @ 18.44 hrs, Volume= 18.695 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 15R : Overland Flow
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 14R : Swale 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 876.90' @ 19.27 hrs Surf.Area= 194,460 sf Storage= 256,056 cf

Plug-Flow detention time= 304.1 min calculated for 18.690 af (94% of inflow)
Center-of-Mass det. time= 248.6 min (1,438.9 - 1,190.3)

Volume	Invert	Avail.Storage	Storage Description
#1	870.00'	530,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.00	1,053	0	0
873.00	9,397	15,675	15,675
874.00	20,404	14,901	30,576
875.00	42,009	31,207	61,782
876.00	89,975	65,992	127,774
877.00	205,811	147,893	275,667
878.00	304,631	255,221	530,888

Device	Routing	Invert	Outlet Devices
#1	Primary	870.22'	**18.0" Round Culvert** L= 2,314.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 870.22' / 858.00' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	877.00'	**120.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Tertiary	877.30'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.030 0.200 0.570 1.230 3.610 7.780 14.110

Primary OutFlow Max=9.57 cfs @ 18.44 hrs HW=876.89' TW=859.79' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.57 cfs @ 5.42 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=876.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=877.30' (Dynamic Tailwater)
3=Special & User-Defined (Controls 0.00 cfs)

Summary for Pond 17P: YH3 Pond

Inflow Area = 470.972 ac, 9.99% Impervious, Inflow Depth > 0.74" for 5-yr event
Inflow = 58.37 cfs @ 12.78 hrs, Volume= 29.172 af
Outflow = 14.65 cfs @ 20.23 hrs, Volume= 22.753 af, Atten= 75%, Lag= 446.6 min
Primary = 14.65 cfs @ 20.23 hrs, Volume= 22.753 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 859.80' @ 20.17 hrs Surf.Area= 210,019 sf Storage= 348,095 cf

Plug-Flow detention time= 365.3 min calculated for 22.747 af (78% of inflow)
Center-of-Mass det. time= 183.7 min (1,456.5 - 1,272.8)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=14.65 cfs @ 20.23 hrs HW=859.80' TW=856.76' (Dynamic Tailwater)
1=Culvert (Outlet Controls 14.65 cfs @ 4.74 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 18P: YH4 Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 0.73" for 5-yr event
Inflow = 7.18 cfs @ 12.36 hrs, Volume= 0.739 af
Outflow = 0.80 cfs @ 14.07 hrs, Volume= 0.670 af, Atten= 89%, Lag= 102.4 min
Primary = 0.80 cfs @ 14.07 hrs, Volume= 0.670 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 861.65' @ 14.07 hrs Surf.Area= 27,111 sf Storage= 15,840 cf

Plug-Flow detention time= 325.7 min calculated for 0.670 af (91% of inflow)
Center-of-Mass det. time= 282.2 min (1,162.2 - 880.1)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.80 cfs @ 14.07 hrs HW=861.65' TW=859.33' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 0.80 cfs @ 2.94 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 19P: YH5 Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 1.60" for 5-yr event
Inflow = 5.78 cfs @ 12.15 hrs, Volume= 0.313 af
Outflow = 0.15 cfs @ 15.18 hrs, Volume= 0.195 af, Atten= 97%, Lag= 182.2 min
Primary = 0.15 cfs @ 15.18 hrs, Volume= 0.195 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 865.24' @ 15.18 hrs Surf.Area= 40,150 sf Storage= 9,560 cf

Plug-Flow detention time= 581.7 min calculated for 0.195 af (62% of inflow)
Center-of-Mass det. time= 486.8 min (1,311.6 - 824.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.15 cfs @ 15.18 hrs HW=865.24' TW=859.58' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.15 cfs @ 1.92 fps)

Summary for Pond 20P: YH6-A

Inflow Area = 9.070 ac, 24.04% Impervious, Inflow Depth = 1.27" for 5-yr event
Inflow = 12.60 cfs @ 12.25 hrs, Volume= 0.957 af
Outflow = 2.20 cfs @ 12.39 hrs, Volume= 0.871 af, Atten= 83%, Lag= 8.1 min
Primary = 2.20 cfs @ 12.39 hrs, Volume= 0.871 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 60,840 sf Storage= 127,764 cf
Peak Elev= 856.89' @ 13.61 hrs Surf.Area= 63,650 sf Storage= 145,990 cf (18,226 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 195.0 min (1,040.5 - 845.5)

Volume	Invert	Avail.Storage	Storage Description
#1	854.50'	667,659 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.50	60,840	0	0
856.60	60,840	127,764	127,764
857.00	64,679	25,104	152,868
858.00	73,339	69,009	221,877
859.00	90,134	81,737	303,613
860.00	109,122	99,628	403,241
861.00	129,626	119,374	522,615
862.00	160,461	145,044	667,659

Device	Routing	Invert	Outlet Devices
#1	Primary	854.50'	**18.0" Round Culvert**
			L= 55.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.50' / 854.22' S= 0.0051 '/' Cc= 0.900
			n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=2.17 cfs @ 12.39 hrs HW=856.78' TW=856.66' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.17 cfs @ 1.23 fps)

Summary for Pond 21P: YH6B Pond

Inflow Area = 579.442 ac, 9.62% Impervious, Inflow Depth > 0.62" for 5-yr event
Inflow = 50.94 cfs @ 12.57 hrs, Volume= 30.030 af
Outflow = 23.18 cfs @ 13.27 hrs, Volume= 29.629 af, Atten= 54%, Lag= 42.3 min
Primary = 23.18 cfs @ 13.27 hrs, Volume= 29.629 af
Routed to Link 22L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 856.85' @ 13.27 hrs Surf.Area= 293,520 sf Storage= 629,510 cf (73,064 cf above start)

Plug-Flow detention time= 632.4 min calculated for 16.850 af (56% of inflow)
Center-of-Mass det. time= 29.5 min (1,352.9 - 1,323.3)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=23.18 cfs @ 13.27 hrs HW=856.85' TW=856.60' (Dynamic Tailwater)
1=Culvert (Outlet Controls 23.18 cfs @ 2.56 fps)

Summary for Pond 22P: Existing Depression 3

Inflow Area = 30.220 ac, 19.56% Impervious, Inflow Depth = 0.87" for 5-yr event
Inflow = 28.05 cfs @ 12.24 hrs, Volume= 2.197 af
Outflow = 0.74 cfs @ 20.11 hrs, Volume= 0.867 af, Atten= 97%, Lag= 472.3 min
Primary = 0.74 cfs @ 20.11 hrs, Volume= 0.867 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 21R : Swale 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 863.28' @ 20.11 hrs Surf.Area= 1.694 ac Storage= 1.714 af

Plug-Flow detention time= 629.5 min calculated for 0.867 af (39% of inflow)
Center-of-Mass det. time= 502.7 min (1,366.5 - 863.7)

Volume	Invert	Avail.Storage	Storage Description
#1	860.00'	12.833 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
860.00	0.006	0.000	0.000
861.00	0.016	0.011	0.011
862.00	0.550	0.283	0.294
863.00	1.425	0.987	1.281
864.00	2.395	1.910	3.191
865.00	2.865	2.630	5.821
866.00	3.493	3.179	9.000
867.00	4.172	3.833	12.833

Device	Routing	Invert	Outlet Devices
#1	Primary	862.84'	**12.0" Round Culvert** L= 30.7' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 862.84' / 861.39' S= 0.0472 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	865.74'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#3	Secondary	863.60'	**Swale in ROW to West** Head (feet) 0.00 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 Disch. (cfs) 0.000 0.630 1.850 4.000 7.240 11.780 17.770 25.370 34.720 45.990 59.290 74.770

Primary OutFlow Max=0.74 cfs @ 20.11 hrs HW=863.28' TW=859.80' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 0.74 cfs @ 2.25 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=860.00' TW=863.60' (Dynamic Tailwater)
└─**3=Swale in ROW to West** (Controls 0.00 cfs)

Summary for Pond 28P: Salt Shed Basin

Inflow Area = 0.203 ac, 53.20% Impervious, Inflow Depth = 2.40" for 5-yr event
Inflow = 0.76 cfs @ 12.13 hrs, Volume= 0.041 af
Outflow = 0.58 cfs @ 12.18 hrs, Volume= 0.027 af, Atten= 24%, Lag= 2.8 min
Primary = 0.58 cfs @ 12.18 hrs, Volume= 0.027 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.96' @ 12.18 hrs Surf.Area= 763 sf Storage= 682 cf

Plug-Flow detention time= 140.8 min calculated for 0.027 af (68% of inflow)
Center-of-Mass det. time= 58.7 min (853.4 - 794.7)

Volume	Invert	Avail.Storage	Storage Description
#1	881.50'	1,163 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
881.50	212	0	0
882.00	363	144	144
883.00	781	572	716
883.50	1,009	448	1,163

Device	Routing	Invert	Outlet Devices
#1	Primary	881.50'	**6.0" Round Culvert** L= 134.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 881.50' / 880.80' S= 0.0052 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	882.80'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	883.00'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.58 cfs @ 12.18 hrs HW=882.96' TW=876.05' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 0.58 cfs @ 2.97 fps)
  - **2=Orifice/Grate** (Passes 0.58 cfs of 0.63 cfs potential flow)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 21L: Ag. Ditch #4 Tributary

Inflow Area = 37.620 ac, 33.12% Impervious, Inflow Depth = 1.39" for 5-yr event
Inflow = 38.05 cfs @ 12.50 hrs, Volume= 4.369 af
Primary = 38.04 cfs @ 12.76 hrs, Volume= 4.369 af, Atten= 0%, Lag= 15.8 min
Routed to Link 22L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 22L: Combined to Ag Ditch #4

Inflow Area = 634.952 ac, 10.79% Impervious, Inflow Depth > 0.67" for 5-yr event
Inflow = 63.97 cfs @ 12.80 hrs, Volume= 35.223 af
Primary = 63.97 cfs @ 12.80 hrs, Volume= 35.223 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 24L: Door Creek Combined

Inflow Area = 39.177 ac, 13.85% Impervious, Inflow Depth = 0.88" for 5-yr event
Inflow = 22.41 cfs @ 12.56 hrs, Volume= 2.880 af
Primary = 22.41 cfs @ 12.56 hrs, Volume= 2.880 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 25L: Combine

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 0.00% Impervious, Inflow Depth = 0.55" for 5-yr event
Inflow = 0.41 cfs @ 12.22 hrs, Volume= 0.034 af
Primary = 0.41 cfs @ 12.64 hrs, Volume= 0.034 af, Atten= 0%, Lag= 25.6 min
Routed to Link 24L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: C1

Runoff = 20.65 cfs @ 12.13 hrs, Volume= 1.095 af, Depth= 2.81"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 8.63 cfs @ 12.48 hrs, Volume= 0.975 af, Depth= 1.20"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.6	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 16.36 cfs @ 12.35 hrs, Volume= 1.490 af, Depth= 2.54"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.900	98	
*	3.870	74	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	7.043	85	Weighted Average
	3.870		54.95% Pervious Area
	3.173		45.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.9	68	0.0220	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 3.70 cfs @ 12.13 hrs, Volume= 0.205 af, Depth= 3.31"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.580	98	
*	0.165	74	>75% Grass cover, Good, HSG B
	0.745	93	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 11.23 cfs @ 12.13 hrs, Volume= 0.631 af, Depth= 3.41"
Routed to Pond 5P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7S: C4-C

Runoff = 2.47 cfs @ 12.13 hrs, Volume= 0.127 af, Depth= 2.28"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.230	98	
*	0.440	74	>75% Grass cover, Good, HSG B
	0.670	82	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 39.80 cfs @ 12.13 hrs, Volume= 2.109 af, Depth= 2.81"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	6.030	98	
	2.030	61	>75% Grass cover, Good, HSG B
*	0.640	74	>75% Grass cover, Good, HSG C
	0.300	98	Water Surface, HSG B
	9.000	88	Weighted Average
	2.670		29.67% Pervious Area
	6.330		70.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5

Runoff = 16.09 cfs @ 12.26 hrs, Volume= 1.224 af, Depth= 1.81"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.270	98	
	2.940	61	>75% Grass cover, Good, HSG B
	0.144	74	>75% Grass cover, Good, HSG C
*	2.277	70	Row crops, SR + CR, Good, HSG B
	0.494	86	Fallow, bare soil, HSG B
	8.125	76	Weighted Average
	5.855		72.06% Pervious Area
	2.270		27.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	220	0.0370	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
8.7	80	0.0260	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.5	188	0.0200	1.27		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
2.3	380	0.0090	2.70	59.39	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 30.0 '/' Top.W=40.00' n= 0.035
1.0	193	0.0010	3.23	22.85	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
16.4	1,061	Total			

Summary for Subcatchment 10S: C6

Runoff = 25.06 cfs @ 12.81 hrs, Volume= 4.011 af, Depth= 1.39"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.864	98	
	7.605	61	>75% Grass cover, Good, HSG B
	5.438	74	>75% Grass cover, Good, HSG C
	5.852	58	Woods/grass comb., Good, HSG B
*	9.844	70	Row crops, SR + CR, Good, HSG B
*	3.269	79	Row crops, SR + CR, Good, HSG C
	0.750	98	Water Surface, HSG B
	34.622	70	Weighted Average
	32.008		92.45% Pervious Area
	2.614		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	300	0.1190	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
6.6	395	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.5	218	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	688	0.0067	0.74		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0050	2.65	8.32	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.025
3.7	529	0.0060	2.41	38.62	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 16.0 '/' Top.W=32.00' n= 0.030
56.8	2,204	Total			

Summary for Subcatchment 11S: C7 - Landfill

Runoff = 79.92 cfs @ 12.19 hrs, Volume= 5.026 af, Depth= 2.12"
Routed to Pond 11P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG B
27.730	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.500	80	Weighted Average
28.170		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill's SWMP**

Summary for Subcatchment 12S: C8

Runoff = 17.39 cfs @ 12.17 hrs, Volume= 1.054 af, Depth= 1.46"
Routed to Pond 12P : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.380	98	
	4.420	61	>75% Grass cover, Good, HSG B
	0.200	74	>75% Grass cover, Good, HSG C
	2.540	72	Woods/grass comb., Good, HSG C
	0.150	98	Water Surface, HSG B
	8.690	71	Weighted Average
	7.160		82.39% Pervious Area
	1.530		17.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
1.7	168	0.0530	1.61		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	1,538	Total			

Summary for Subcatchment 13S: C9 and C10

Runoff = 7.70 cfs @ 12.13 hrs, Volume= 0.408 af, Depth= 2.81"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.215	98	
	0.366	61	>75% Grass cover, Good, HSG B
	0.160	74	>75% Grass cover, Good, HSG C
	1.741	88	Weighted Average
	0.526		30.21% Pervious Area
	1.215		69.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 14S: YH1

Runoff = 39.37 cfs @ 12.86 hrs, Volume= 6.643 af, Depth= 1.20"
Routed to Pond 13P : YH1 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 15S: YH2

Runoff = 30.12 cfs @ 12.80 hrs, Volume= 4.995 af, Depth= 0.97"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	4.098	98	
	19.840	61	>75% Grass cover, Good, HSG B
	10.130	74	>75% Grass cover, Good, HSG C
	4.830	58	Woods/grass comb., Good, HSG B
	12.800	48	Brush, Good, HSG B
	10.280	65	Brush, Good, HSG C
	61.978	63	Weighted Average
	57.880		93.39% Pervious Area
	4.098		6.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.8	591	0.0130	2.58	51.61	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
8.3	745	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.9	608	0.0080	2.09	36.53	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 & 5.0 '/' Top.W=25.00' n= 0.050
52.1	3,785	Total			

Summary for Subcatchment 16S: C11-16

Runoff = 42.54 cfs @ 12.24 hrs, Volume= 3.179 af, Depth= 1.26"
Routed to Pond 22P : Existing Depression 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	5.910	98	
	18.130	61	>75% Grass cover, Good, HSG B
	1.510	74	>75% Grass cover, Good, HSG C
	3.010	55	Woods, Good, HSG B
	0.570	70	Woods, Good, HSG C
	1.090	48	Brush, Good, HSG B
	30.220	68	Weighted Average
	24.310		80.44% Pervious Area
	5.910		19.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	23	0.0530	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
2.5	23	0.0920	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.6	64	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	1,807	0.0078	2.73	16.93	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.8 & 7.6 '/' Top.W=12.40' n= 0.030
14.4	1,917	Total			

Summary for Subcatchment 17S: YH3

Runoff = 83.23 cfs @ 12.77 hrs, Volume= 13.469 af, Depth= 0.91"
Routed to Pond 17P : YH3 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.600	98	
	106.380	61	>75% Grass cover, Good, HSG B
	26.310	74	>75% Grass cover, Good, HSG C
	31.110	48	Brush, Good, HSG B
	6.590	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	177.190	62	Weighted Average
	170.390		96.16% Pervious Area
	6.800		3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.5	2,916	Total			

Summary for Subcatchment 18S: YH4

Runoff = 11.51 cfs @ 12.35 hrs, Volume= 1.101 af, Depth= 1.08"
Routed to Pond 18P : YH4 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 19S: YH5

Runoff = 7.65 cfs @ 12.15 hrs, Volume= 0.414 af, Depth= 2.12"
Routed to Pond 19P : YH5 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
7.3	98	Total			

Summary for Subcatchment 20S: YH6A Pond

Runoff = 17.52 cfs @ 12.25 hrs, Volume= 1.311 af, Depth= 1.73"
Routed to Pond 20P : YH6-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.780	98	
	2.870	61	>75% Grass cover, Good, HSG B
	4.020	73	Brush, Good, HSG D
	1.400	98	Water Surface, HSG C
	9.070	75	Weighted Average
	6.890		75.96% Pervious Area
	2.180		24.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	150	0.0750	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
3.4	285	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
15.7	435	Total			

Summary for Subcatchment 21S: YH6-B

Runoff = 76.76 cfs @ 12.53 hrs, Volume= 9.444 af, Depth= 1.14"
Routed to Pond 21P : YH6B Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
54.330	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.610	65	Brush, Good, HSG C
26.640	73	Brush, Good, HSG D
6.480	98	Water Surface, HSG A
99.400	66	Weighted Average
92.920		93.48% Pervious Area
6.480		6.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 23S: C17-C25

Runoff = 52.09 cfs @ 12.50 hrs, Volume= 5.902 af, Depth= 1.88"
Routed to Link 21L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	12.460	98	
	16.840	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	7.960	80	>75% Grass cover, Good, HSG D
	37.620	77	Weighted Average
	25.160		66.88% Pervious Area
	12.460		33.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.8	318	0.0087	1.89		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	79	0.0830	4.32		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.6	341	0.0180	3.54	17.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.8 '/' Top.W=9.80' n= 0.035
0.5	150	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
14.6	1,367	0.0035	1.56	7.81	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035
34.5	2,534	Total			

Summary for Subcatchment 24S: C26

Runoff = 9.39 cfs @ 13.06 hrs, Volume= 1.790 af, Depth= 1.20"
Routed to Link 22L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.360	98	
	0.140	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	3.940	48	Brush, Good, HSG B
	1.810	65	Brush, Good, HSG C
	11.600	73	Brush, Good, HSG D
	17.890	67	Weighted Average
	17.530		97.99% Pervious Area
	0.360		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030
69.6	2,824	Total			

Summary for Subcatchment 25S: C27

Runoff = 18.95 cfs @ 12.50 hrs, Volume= 2.191 af, Depth= 1.52"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	3.827	98	impervious
	8.477	61	>75% Grass cover, Good, HSG B
	0.289	74	>75% Grass cover, Good, HSG C
	0.246	80	>75% Grass cover, Good, HSG D
*	3.840	70	Row crops, SR + CR, Good, HSG B
*	0.090	79	Row crops, SR + CR, Good, HSG C
	0.490	86	Fallow, bare soil, HSG B
	17.259	72	Weighted Average
	13.432		77.83% Pervious Area
	3.827		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.3	150	0.0140	1.06		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
10.3	482	0.0125	0.78		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.6	1,570	0.0125	3.45	18.44	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.7 '/' Top.W=10.70' n= 0.030
0.6	163	0.0800	4.24		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
34.3	2,515	Total			

Summary for Subcatchment 26S: C28A & C28B

Runoff = 14.80 cfs @ 12.57 hrs, Volume= 1.907 af, Depth= 1.08"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.598	98	impervious
	6.420	61	>75% Grass cover, Good, HSG B
	1.116	80	>75% Grass cover, Good, HSG D
	6.805	55	Woods, Good, HSG B
*	5.229	70	Row crops, SR + CR, Good, HSG B
	21.168	65	Weighted Average
	19.570		92.45% Pervious Area
	1.598		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	150	0.1070	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
1.2	150	0.1730	2.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.6	365	0.0360	1.71		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
5.3	651	0.0120	2.04	16.34	**Channel Flow,** Area= 8.0 sf Perim= 16.1' r= 0.50' n= 0.050
2.6	273	0.0390	1.78		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.8	1,714	0.0140	3.67	25.72	**Channel Flow,** Area= 7.0 sf Perim= 14.1' r= 0.50' n= 0.030
36.6	3,303	Total			

Summary for Subcatchment 27S: Salt Loading Area

Runoff = 0.94 cfs @ 12.13 hrs, Volume= 0.051 af, Depth= 3.00"
Routed to Pond 28P : Salt Shed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (sf)	CN	Description
*	4,694	98	
*	4,130	80	>75% Grass cover, Good, compacted, HSG C
	8,824	90	Weighted Average
	4,130		46.80% Pervious Area
	4,694		53.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 28S: Luds Lane

Runoff = 0.73 cfs @ 12.21 hrs, Volume= 0.054 af, Depth= 0.86"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
0.750	61	>75% Grass cover, Good, HSG B
0.750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	71	0.0210	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"

Summary for Subcatchment 51S: C4-B

Runoff = 8.22 cfs @ 12.33 hrs, Volume= 0.728 af, Depth= 1.88"
Routed to Pond 6P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.550	98	
	1.935	61	>75% Grass cover, Good, HSG B
	1.155	74	>75% Grass cover, Good, HSG C
	4.640	77	Weighted Average
	3.090		66.59% Pervious Area
	1.550		33.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	150	0.0330	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
1.7	129	0.0310	1.23		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	522	0.0082	2.69	16.15	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
22.0	801	Total			

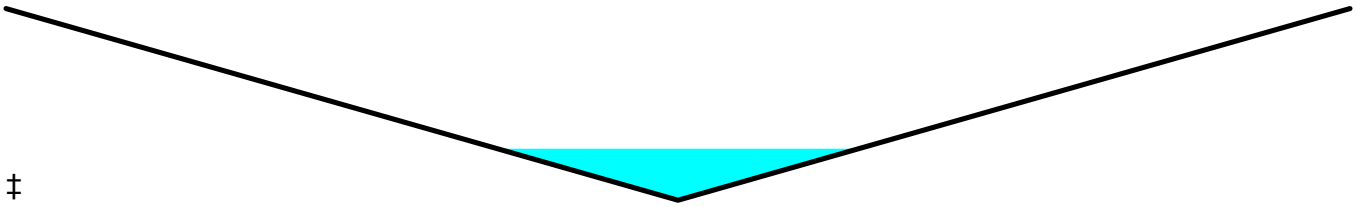
Summary for Reach 9R: Swale 1

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 1.76" for 10-yr event
Inflow = 26.28 cfs @ 13.76 hrs, Volume= 11.977 af
Outflow = 26.15 cfs @ 13.95 hrs, Volume= 11.968 af, Atten= 1%, Lag= 11.4 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.45 fps, Min. Travel Time= 13.0 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 24.1 min

Peak Storage= 20,440 cf @ 13.95 hrs
Average Depth at Peak Storage= 1.34' , Surface Width= 26.81'
Bank-Full Depth= 5.00' Flow Area= 250.0 sf, Capacity= 874.22 cfs

0.00' x 5.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 100.00'
Length= 1,137.0' Slope= 0.0041 '/'
Inlet Invert= 874.89', Outlet Invert= 870.22'



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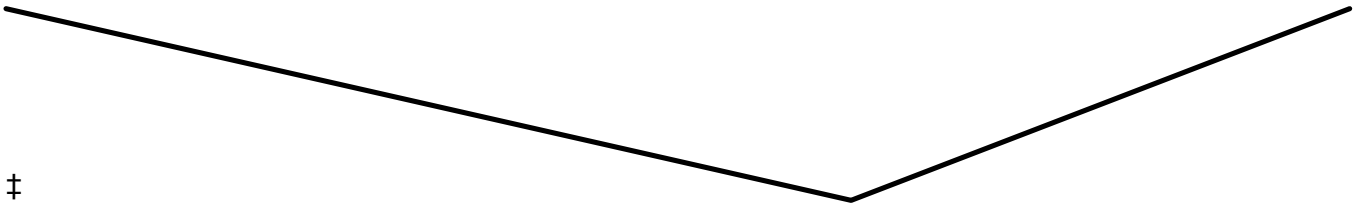
Summary for Reach 11R: Swale 4

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 55.8 sf, Capacity= 189.41 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 7.8 4.6 '/' Top Width= 37.20'
Length= 1,795.0' Slope= 0.0028 '/'
Inlet Invert= 868.00', Outlet Invert= 863.00'



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Summary for Reach 13R: Swale 2

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.93" for 10-yr event
Inflow = 3.23 cfs @ 20.16 hrs, Volume= 5.124 af
Outflow = 3.23 cfs @ 20.72 hrs, Volume= 5.008 af, Atten= 0%, Lag= 33.3 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.98 fps, Min. Travel Time= 44.0 min
Avg. Velocity = 0.89 fps, Avg. Travel Time= 48.5 min

Peak Storage= 8,529 cf @ 20.72 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 15.22'
Bank-Full Depth= 3.00' Flow Area= 120.0 sf, Capacity= 466.95 cfs

10.00' x 3.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 2,591.9' Slope= 0.0084 '/'
Inlet Invert= 892.00', Outlet Invert= 870.22'

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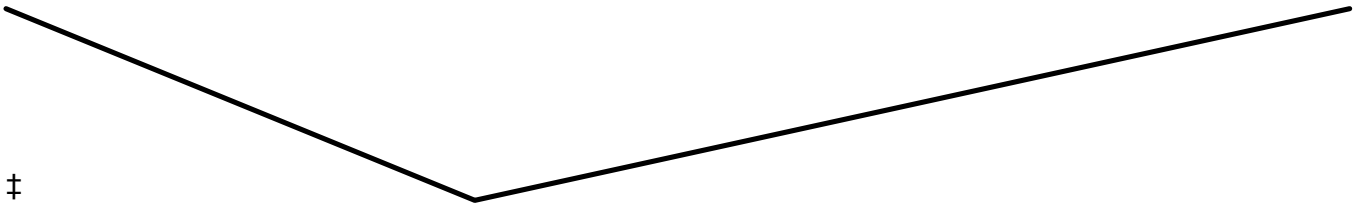
Summary for Reach 14R: Swale 3

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 58.1 sf, Capacity= 290.70 cfs

0.00' x 3.00' deep channel, n= 0.035
Side Slope Z-value= 4.5 8.4 '/' Top Width= 38.70'
Length= 1,492.0' Slope= 0.0082 '/'
Inlet Invert= 877.30', Outlet Invert= 865.00'



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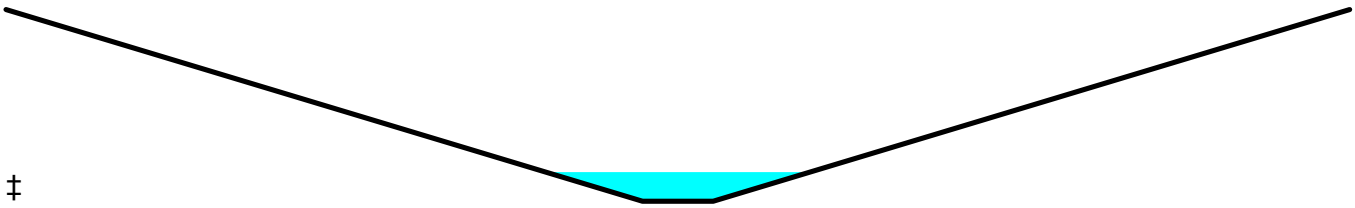
Summary for Reach 15R: Overland Flow

Inflow = 21.49 cfs @ 15.70 hrs, Volume= 5.737 af
Outflow = 19.93 cfs @ 16.12 hrs, Volume= 5.737 af, Atten= 7%, Lag= 24.9 min
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.85 fps, Min. Travel Time= 22.3 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 52.9 min

Peak Storage= 26,697 cf @ 16.12 hrs
Average Depth at Peak Storage= 0.46' , Surface Width= 37.34'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,718.10 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0073 '/'
Inlet Invert= 876.00', Outlet Invert= 858.00'



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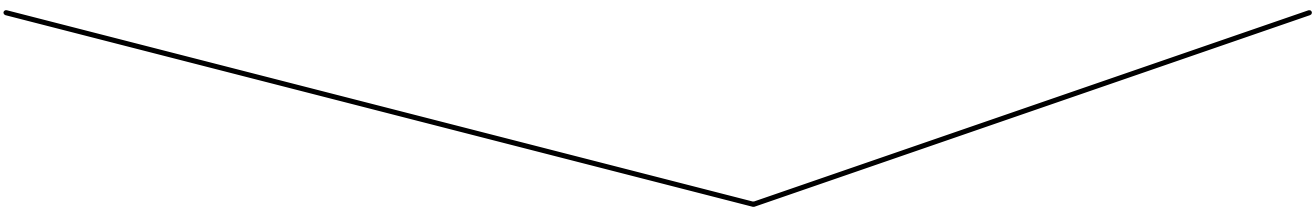
Summary for Reach 21R: Swale 5

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 22R : Swale 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 30.6 sf, Capacity= 111.43 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.9 2.9 '/' Top Width= 20.40'
Length= 690.6' Slope= 0.0033 '/'
Inlet Invert= 863.60', Outlet Invert= 861.30'



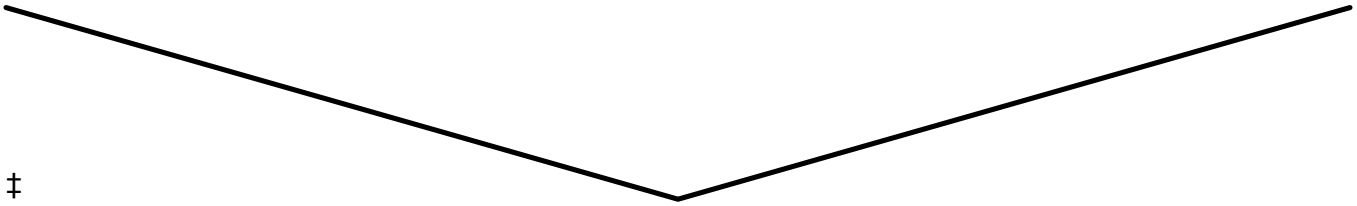
Summary for Reach 22R: Swale 6

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 21L : Ag. Ditch #4 Tributary

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 45.0 sf, Capacity= 168.82 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 1,370.6' Slope= 0.0034 '/'
Inlet Invert= 861.30', Outlet Invert= 856.60'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 2.81" for 10-yr event
Inflow = 20.65 cfs @ 12.13 hrs, Volume= 1.095 af
Outflow = 2.32 cfs @ 12.62 hrs, Volume= 1.093 af, Atten= 89%, Lag= 29.4 min
Primary = 2.32 cfs @ 12.62 hrs, Volume= 1.093 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 885.00' @ 12.62 hrs Surf.Area= 26,350 sf Storage= 22,620 cf

Plug-Flow detention time= 124.8 min calculated for 1.093 af (100% of inflow)
Center-of-Mass det. time= 124.1 min (919.9 - 795.8)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=2.32 cfs @ 12.62 hrs HW=885.00' TW=878.79' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 2.32 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 3.31" for 10-yr event
Inflow = 3.70 cfs @ 12.13 hrs, Volume= 0.205 af
Outflow = 1.17 cfs @ 12.29 hrs, Volume= 0.154 af, Atten= 68%, Lag= 9.8 min
Discarded = 0.02 cfs @ 12.29 hrs, Volume= 0.024 af
Primary = 1.15 cfs @ 12.29 hrs, Volume= 0.130 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.07' @ 12.29 hrs Surf.Area= 3,646 sf Storage= 4,574 cf

Plug-Flow detention time= 222.6 min calculated for 0.154 af (75% of inflow)
Center-of-Mass det. time= 149.2 min (927.4 - 778.2)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.29 hrs HW=881.07' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.15 cfs @ 12.29 hrs HW=881.07' TW=878.10' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.15 cfs of 3.91 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.80 cfs @ 3.19 fps)
  └**3=Orifice/Grate** (Weir Controls 0.35 cfs @ 0.84 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: County - Storm Pond 2

Inflow Area = 22.203 ac, 36.68% Impervious, Inflow Depth = 1.99" for 10-yr event
Inflow = 27.31 cfs @ 12.37 hrs, Volume= 3.688 af
Outflow = 10.30 cfs @ 12.97 hrs, Volume= 3.688 af, Atten= 62%, Lag= 35.6 min
Discarded = 0.13 cfs @ 10.00 hrs, Volume= 0.216 af
Primary = 10.17 cfs @ 12.97 hrs, Volume= 3.472 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.95' @ 12.97 hrs Surf.Area= 0.751 ac Storage= 1.075 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 90.3 min (954.7 - 864.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.829 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.253	0.000	0.000
877.37	0.258	0.043	0.043
877.38	0.577	0.004	0.048
878.00	0.620	0.371	0.419
879.00	0.757	0.688	1.107
880.00	0.850	0.803	1.911
881.00	0.986	0.918	2.829

Device	Routing	Invert	Outlet Devices
#1	Primary	877.12'	**15.0" Round Culvert X 2.00** L= 39.2' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.12' / 877.06' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.13 cfs Exfiltration at all elevations**
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.13 cfs @ 10.00 hrs HW=877.24' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=10.17 cfs @ 12.97 hrs HW=878.95' TW=877.65' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 10.17 cfs @ 4.14 fps)
  └**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 51.05 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 3.41" for 10-yr event
Inflow = 11.23 cfs @ 12.13 hrs, Volume= 0.631 af
Outflow = 10.37 cfs @ 12.16 hrs, Volume= 0.599 af, Atten= 8%, Lag= 1.5 min
Discarded = 0.04 cfs @ 12.16 hrs, Volume= 0.037 af
Primary = 10.34 cfs @ 12.16 hrs, Volume= 0.562 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.95' @ 12.16 hrs Surf.Area= 3,857 sf Storage= 5,666 cf

Plug-Flow detention time= 91.5 min calculated for 0.599 af (95% of inflow)
Center-of-Mass det. time= 64.6 min (838.4 - 773.8)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.04 cfs @ 12.16 hrs HW=881.94' (Free Discharge)
└**5=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=10.32 cfs @ 12.16 hrs HW=881.94' TW=879.36' (Dynamic Tailwater)
├**1=Culvert** (Passes 10.32 cfs of 10.33 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 1.18 cfs @ 4.74 fps)
│ └**3=Orifice/Grate** (Weir Controls 9.13 cfs @ 2.18 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: CNTY-Infiltration Basin #1

Inflow Area = 4.640 ac, 33.41% Impervious, Inflow Depth = 1.88" for 10-yr event
Inflow = 8.22 cfs @ 12.33 hrs, Volume= 0.728 af
Outflow = 3.11 cfs @ 12.73 hrs, Volume= 0.649 af, Atten= 62%, Lag= 23.9 min
Discarded = 0.09 cfs @ 12.73 hrs, Volume= 0.081 af
Primary = 3.01 cfs @ 12.73 hrs, Volume= 0.568 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.86' @ 12.73 hrs Surf.Area= 10,258 sf Storage= 13,198 cf

Plug-Flow detention time= 174.9 min calculated for 0.648 af (89% of inflow)
Center-of-Mass det. time= 126.5 min (965.3 - 838.8)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.09 cfs @ 12.73 hrs HW=882.86' (Free Discharge)
└**5=Exfiltration** (Controls 0.09 cfs)

Primary OutFlow Max=3.01 cfs @ 12.73 hrs HW=882.86' TW=879.24' (Dynamic Tailwater)
└**1=Culvert** (Passes 3.01 cfs of 4.47 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 1.88 cfs @ 3.76 fps)
└**3=Orifice/Grate** (Weir Controls 1.14 cfs @ 1.25 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 8P: County - Storm Pond 3

Inflow Area = 16.530 ac, 61.22% Impervious, Inflow Depth = 2.44" for 10-yr event
Inflow = 52.17 cfs @ 12.13 hrs, Volume= 3.367 af
Outflow = 20.61 cfs @ 12.28 hrs, Volume= 3.333 af, Atten= 60%, Lag= 8.5 min
Primary = 20.61 cfs @ 12.28 hrs, Volume= 3.333 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 879.60' @ 12.28 hrs Surf.Area= 23,280 sf Storage= 45,567 cf

Plug-Flow detention time= 99.8 min calculated for 3.333 af (99% of inflow)
Center-of-Mass det. time= 93.5 min (913.1 - 819.7)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=20.61 cfs @ 12.28 hrs HW=879.60' TW=876.58' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 20.61 cfs @ 5.83 fps)
  - **2=Special & User-Defined** (Passes < 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Passes < 44.69 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Storage at NE and SE corners of AB

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 1.77" for 10-yr event
Inflow = 52.44 cfs @ 12.54 hrs, Volume= 12.077 af
Outflow = 26.28 cfs @ 13.76 hrs, Volume= 11.977 af, Atten= 50%, Lag= 73.4 min
Primary = 26.28 cfs @ 13.76 hrs, Volume= 11.977 af
Routed to Reach 9R : Swale 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Starting Elev= 875.66' Surf.Area= 32,564 sf Storage= 19,458 cf
Peak Elev= 877.87' @ 13.76 hrs Surf.Area= 131,342 sf Storage= 165,910 cf (146,452 cf above start)

Plug-Flow detention time= 129.8 min calculated for 11.527 af (95% of inflow)
Center-of-Mass det. time= 92.5 min (998.6 - 906.1)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	640,022 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.00	26,400	0	0
876.00	35,739	31,070	31,070
877.00	63,982	49,861	80,930
878.00	141,395	102,689	183,619
879.00	231,121	186,258	369,877
880.00	309,169	270,145	640,022

Device	Routing	Invert	Outlet Devices
#1	Primary	875.66'	**36.0" Round Culvert** L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.66' / 874.89' S= 0.0077 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=26.28 cfs @ 13.76 hrs HW=877.87' TW=876.23' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 26.28 cfs @ 6.56 fps)

Summary for Pond 11P: Landfill Pond

Inflow Area = 28.500 ac, 1.16% Impervious, Inflow Depth = 2.12" for 10-yr event
Inflow = 79.92 cfs @ 12.19 hrs, Volume= 5.026 af
Outflow = 11.94 cfs @ 12.73 hrs, Volume= 4.614 af, Atten= 85%, Lag= 32.5 min
Primary = 11.94 cfs @ 12.73 hrs, Volume= 4.614 af
Routed to Pond 12P : Existing Depression 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.36' @ 12.73 hrs Surf.Area= 1.047 ac Storage= 2.443 af

Plug-Flow detention time= 257.6 min calculated for 4.614 af (92% of inflow)
Center-of-Mass det. time= 218.6 min (1,040.2 - 821.5)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=11.94 cfs @ 12.73 hrs HW=881.36' TW=875.36' (Dynamic Tailwater)
- **1=Culvert** (Passes 11.94 cfs of 15.42 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.37 cfs @ 9.62 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.40 cfs @ 9.19 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.43 cfs @ 8.74 fps)
  - **5=Orifice/Grate** (Orifice Controls 10.74 cfs @ 6.08 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 12P: Existing Depression 1

Inflow Area = 37.190 ac, 5.00% Impervious, Inflow Depth > 1.83" for 10-yr event
Inflow = 24.03 cfs @ 12.20 hrs, Volume= 5.669 af
Outflow = 9.43 cfs @ 12.64 hrs, Volume= 4.538 af, Atten= 61%, Lag= 25.9 min
Primary = 9.43 cfs @ 12.64 hrs, Volume= 4.538 af
Routed to Pond 15P : Existing Depression 2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 11R : Swale 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 877.19' @ 15.60 hrs Storage= 115,770 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 395.5 min (1,398.7 - 1,003.2)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	174,699 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
875.00	0
876.00	65,278
877.00	110,909
878.00	136,383
879.00	156,855
880.00	174,699

Device	Routing	Invert	Outlet Devices
#1	Primary	874.12'	**36.0" Round Culvert** L= 100.2' Ke= 0.200 Inlet / Outlet Invert= 874.12' / 873.48' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Secondary	878.00'	**Swale to West** Head (feet) 0.00 0.10 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.010 0.060 0.350 1.040 2.230 4.050 6.580 9.930 14.170 19.400 25.690

Primary OutFlow Max=9.26 cfs @ 12.64 hrs HW=875.33' TW=874.42' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 9.26 cfs @ 5.13 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=875.00' TW=868.00' (Dynamic Tailwater)
↑—**2=Swale to West** (Controls 0.00 cfs)

Summary for Pond 13P: YH1 Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 1.20" for 10-yr event
Inflow = 39.37 cfs @ 12.86 hrs, Volume= 6.643 af
Outflow = 3.44 cfs @ 14.83 hrs, Volume= 5.246 af, Atten= 91%, Lag= 118.5 min
Primary = 3.44 cfs @ 14.83 hrs, Volume= 5.246 af
Routed to Pond 14P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 896.70' @ 17.09 hrs Surf.Area= 142,178 sf Storage= 183,300 cf

Plug-Flow detention time= 567.1 min calculated for 5.245 af (79% of inflow)
Center-of-Mass det. time= 487.5 min (1,383.7 - 896.2)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=3.44 cfs @ 14.83 hrs HW=896.62' TW=895.00' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 3.44 cfs @ 4.38 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 14P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.95" for 10-yr event
Inflow = 3.44 cfs @ 14.83 hrs, Volume= 5.246 af
Outflow = 3.23 cfs @ 20.16 hrs, Volume= 5.124 af, Atten= 6%, Lag= 319.9 min
Primary = 3.23 cfs @ 20.16 hrs, Volume= 5.124 af
Routed to Reach 13R : Swale 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 895.23' @ 20.16 hrs Surf.Area= 18,860 sf Storage= 14,228 cf

Plug-Flow detention time= 68.1 min calculated for 5.124 af (98% of inflow)
Center-of-Mass det. time= 50.3 min (1,434.0 - 1,383.7)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=3.23 cfs @ 20.16 hrs HW=895.23' TW=892.26' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 3.23 cfs @ 4.11 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 15P: Existing Depression 2

Inflow Area = 248.992 ac, 13.10% Impervious, Inflow Depth > 1.30" for 10-yr event
Inflow = 52.12 cfs @ 12.80 hrs, Volume= 26.916 af
Outflow = 31.01 cfs @ 15.70 hrs, Volume= 24.555 af, Atten= 41%, Lag= 174.2 min
Primary = 9.54 cfs @ 15.22 hrs, Volume= 18.818 af
Routed to Pond 17P : YH3 Pond
Secondary = 21.49 cfs @ 15.70 hrs, Volume= 5.737 af
Routed to Reach 15R : Overland Flow
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 14R : Swale 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 877.17' @ 15.70 hrs Surf.Area= 222,902 sf Storage= 312,740 cf

Plug-Flow detention time= 288.2 min calculated for 24.555 af (91% of inflow)
Center-of-Mass det. time= 206.5 min (1,344.9 - 1,138.4)

Volume	Invert	Avail.Storage	Storage Description
#1	870.00'	530,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.00	1,053	0	0
873.00	9,397	15,675	15,675
874.00	20,404	14,901	30,576
875.00	42,009	31,207	61,782
876.00	89,975	65,992	127,774
877.00	205,811	147,893	275,667
878.00	304,631	255,221	530,888

Device	Routing	Invert	Outlet Devices
#1	Primary	870.22'	**18.0" Round Culvert** L= 2,314.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 870.22' / 858.00' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	877.00'	**120.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Tertiary	877.30'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.030 0.200 0.570 1.230 3.610 7.780 14.110

Primary OutFlow Max=9.54 cfs @ 15.22 hrs HW=877.14' TW=860.13' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.54 cfs @ 5.40 fps)

Secondary OutFlow Max=21.49 cfs @ 15.70 hrs HW=877.17' TW=876.43' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 21.49 cfs @ 1.04 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.00' TW=877.30' (Dynamic Tailwater)
3=Special & User-Defined (Controls 0.00 cfs)

Summary for Pond 17P: YH3 Pond

Inflow Area = 470.972 ac, 9.99% Impervious, Inflow Depth > 1.05" for 10-yr event
Inflow = 93.97 cfs @ 12.77 hrs, Volume= 41.128 af
Outflow = 30.99 cfs @ 17.76 hrs, Volume= 34.508 af, Atten= 67%, Lag= 299.3 min
Primary = 30.99 cfs @ 17.76 hrs, Volume= 34.508 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 860.55' @ 17.77 hrs Surf.Area= 273,175 sf Storage= 524,233 cf

Plug-Flow detention time= 317.1 min calculated for 34.508 af (84% of inflow)
Center-of-Mass det. time= 178.5 min (1,372.9 - 1,194.4)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=30.99 cfs @ 17.76 hrs HW=860.55' TW=857.01' (Dynamic Tailwater)
1=Culvert (Outlet Controls 27.14 cfs @ 5.70 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 3.85 cfs @ 0.60 fps)

Summary for Pond 18P: YH4 Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 1.08" for 10-yr event
Inflow = 11.51 cfs @ 12.35 hrs, Volume= 1.101 af
Outflow = 2.12 cfs @ 13.43 hrs, Volume= 1.024 af, Atten= 82%, Lag= 65.2 min
Primary = 2.12 cfs @ 13.43 hrs, Volume= 1.024 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 861.88' @ 13.43 hrs Surf.Area= 28,967 sf Storage= 22,301 cf

Plug-Flow detention time= 293.8 min calculated for 1.024 af (93% of inflow)
Center-of-Mass det. time= 259.8 min (1,127.9 - 868.1)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.12 cfs @ 13.43 hrs HW=861.88' TW=859.58' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.98 cfs @ 2.82 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 1.14 cfs @ 0.74 fps)

Summary for Pond 19P: YH5 Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 2.12" for 10-yr event
Inflow = 7.65 cfs @ 12.15 hrs, Volume= 0.414 af
Outflow = 0.24 cfs @ 15.09 hrs, Volume= 0.284 af, Atten= 97%, Lag= 176.4 min
Primary = 0.24 cfs @ 15.09 hrs, Volume= 0.284 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 865.31' @ 15.09 hrs Surf.Area= 40,593 sf Storage= 12,359 cf

Plug-Flow detention time= 544.6 min calculated for 0.284 af (69% of inflow)
Center-of-Mass det. time= 457.5 min (1,275.6 - 818.1)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.24 cfs @ 15.09 hrs HW=865.31' TW=860.11' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.24 cfs @ 2.19 fps)

Summary for Pond 20P: YH6-A

Inflow Area = 9.070 ac, 24.04% Impervious, Inflow Depth = 1.73" for 10-yr event
Inflow = 17.52 cfs @ 12.25 hrs, Volume= 1.311 af
Outflow = 2.51 cfs @ 12.37 hrs, Volume= 1.213 af, Atten= 86%, Lag= 7.0 min
Primary = 2.51 cfs @ 12.37 hrs, Volume= 1.213 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 60,840 sf Storage= 127,764 cf
Peak Elev= 857.07' @ 13.81 hrs Surf.Area= 65,271 sf Storage= 157,311 cf (29,547 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 344.3 min (1,182.0 - 837.6)

Volume	Invert	Avail.Storage	Storage Description
#1	854.50'	667,659 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.50	60,840	0	0
856.60	60,840	127,764	127,764
857.00	64,679	25,104	152,868
858.00	73,339	69,009	221,877
859.00	90,134	81,737	303,613
860.00	109,122	99,628	403,241
861.00	129,626	119,374	522,615
862.00	160,461	145,044	667,659

Device	Routing	Invert	Outlet Devices
#1	Primary	854.50'	**18.0" Round Culvert**
			L= 55.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.50' / 854.22' S= 0.0051 '/' Cc= 0.900
			n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=2.46 cfs @ 12.37 hrs HW=856.86' TW=856.70' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.46 cfs @ 1.39 fps)

Summary for Pond 21P: YH6B Pond

Inflow Area = 579.442 ac, 9.62% Impervious, Inflow Depth > 0.94" for 10-yr event
Inflow = 79.35 cfs @ 12.53 hrs, Volume= 45.164 af
Outflow = 33.75 cfs @ 13.48 hrs, Volume= 44.709 af, Atten= 57%, Lag= 56.6 min
Primary = 33.75 cfs @ 13.48 hrs, Volume= 44.709 af
Routed to Link 22L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 857.03' @ 13.48 hrs Surf.Area= 301,148 sf Storage= 683,139 cf (126,693 cf above start)

Plug-Flow detention time= 422.1 min calculated for 31.935 af (71% of inflow)
Center-of-Mass det. time= 44.4 min (1,308.6 - 1,264.2)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=33.75 cfs @ 13.48 hrs HW=857.03' TW=856.60' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 33.75 cfs @ 3.38 fps)

Summary for Pond 22P: Existing Depression 3

Inflow Area = 30.220 ac, 19.56% Impervious, Inflow Depth = 1.26" for 10-yr event
Inflow = 42.54 cfs @ 12.24 hrs, Volume= 3.179 af
Outflow = 1.60 cfs @ 15.99 hrs, Volume= 1.796 af, Atten= 96%, Lag= 224.9 min
Primary = 1.60 cfs @ 15.99 hrs, Volume= 1.796 af
Routed to Pond 17P : YH3 Pond
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 21R : Swale 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 863.52' @ 15.99 hrs Surf.Area= 1.930 ac Storage= 2.154 af

Plug-Flow detention time= 525.5 min calculated for 1.796 af (56% of inflow)
Center-of-Mass det. time= 415.3 min (1,268.7 - 853.4)

Volume	Invert	Avail.Storage	Storage Description
#1	860.00'	12.833 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
860.00	0.006	0.000	0.000
861.00	0.016	0.011	0.011
862.00	0.550	0.283	0.294
863.00	1.425	0.987	1.281
864.00	2.395	1.910	3.191
865.00	2.865	2.630	5.821
866.00	3.493	3.179	9.000
867.00	4.172	3.833	12.833

Device	Routing	Invert	Outlet Devices
#1	Primary	862.84'	**12.0" Round Culvert** L= 30.7' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 862.84' / 861.39' S= 0.0472 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	865.74'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#3	Secondary	863.60'	**Swale in ROW to West** Head (feet) 0.00 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 Disch. (cfs) 0.000 0.630 1.850 4.000 7.240 11.780 17.770 25.370 34.720 45.990 59.290 74.770

Primary OutFlow Max=1.60 cfs @ 15.99 hrs HW=863.52' TW=860.32' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.60 cfs @ 2.81 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=860.00' TW=863.60' (Dynamic Tailwater)
└─**3=Swale in ROW to West** (Controls 0.00 cfs)

Summary for Pond 28P: Salt Shed Basin

Inflow Area = 0.203 ac, 53.20% Impervious, Inflow Depth = 3.00" for 10-yr event
Inflow = 0.94 cfs @ 12.13 hrs, Volume= 0.051 af
Outflow = 0.73 cfs @ 12.18 hrs, Volume= 0.038 af, Atten= 23%, Lag= 2.8 min
Primary = 0.73 cfs @ 12.18 hrs, Volume= 0.038 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.05' @ 12.18 hrs Surf.Area= 802 sf Storage= 752 cf

Plug-Flow detention time= 123.9 min calculated for 0.038 af (74% of inflow)
Center-of-Mass det. time= 48.8 min (838.3 - 789.4)

Volume	Invert	Avail.Storage	Storage Description
#1	881.50'	1,163 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
881.50	212	0	0
882.00	363	144	144
883.00	781	572	716
883.50	1,009	448	1,163

Device	Routing	Invert	Outlet Devices
#1	Primary	881.50'	**6.0" Round Culvert** L= 134.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 881.50' / 880.80' S= 0.0052 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	882.80'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	883.00'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.72 cfs @ 12.18 hrs HW=883.05' TW=876.30' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 0.60 cfs @ 3.05 fps)
  - **2=Orifice/Grate** (Passes 0.60 cfs of 1.25 cfs potential flow)
- **3=Broad-Crested Rectangular Weir** (Weir Controls 0.13 cfs @ 0.55 fps)

Summary for Link 21L: Ag. Ditch #4 Tributary

Inflow Area = 37.620 ac, 33.12% Impervious, Inflow Depth = 1.88" for 10-yr event
Inflow = 52.09 cfs @ 12.50 hrs, Volume= 5.902 af
Primary = 52.08 cfs @ 12.76 hrs, Volume= 5.902 af, Atten= 0%, Lag= 15.7 min
Routed to Link 22L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 22L: Combined to Ag Ditch #4

Inflow Area = 634.952 ac, 10.79% Impervious, Inflow Depth > 0.99" for 10-yr event
Inflow = 89.77 cfs @ 12.80 hrs, Volume= 52.401 af
Primary = 89.77 cfs @ 12.80 hrs, Volume= 52.401 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 24L: Door Creek Combined

Inflow Area = 39.177 ac, 13.85% Impervious, Inflow Depth = 1.27" for 10-yr event
Inflow = 33.96 cfs @ 12.54 hrs, Volume= 4.152 af
Primary = 33.96 cfs @ 12.54 hrs, Volume= 4.152 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 25L: Combine

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 0.00% Impervious, Inflow Depth = 0.86" for 10-yr event
Inflow = 0.73 cfs @ 12.21 hrs, Volume= 0.054 af
Primary = 0.72 cfs @ 12.63 hrs, Volume= 0.054 af, Atten= 0%, Lag= 25.6 min
Routed to Link 24L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: C1

Runoff = 37.22 cfs @ 12.13 hrs, Volume= 2.048 af, Depth= 5.26"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 23.34 cfs @ 12.44 hrs, Volume= 2.467 af, Depth= 3.04"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.6	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 31.09 cfs @ 12.33 hrs, Volume= 2.892 af, Depth= 4.93"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.900	98	
*	3.870	74	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	7.043	85	Weighted Average
	3.870		54.95% Pervious Area
	3.173		45.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.9	68	0.0220	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 6.29 cfs @ 12.13 hrs, Volume= 0.362 af, Depth= 5.83"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.580	98	
*	0.165	74	>75% Grass cover, Good, HSG B
	0.745	93	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 18.91 cfs @ 12.13 hrs, Volume= 1.101 af, Depth= 5.95"
Routed to Pond 5P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7S: C4-C

Runoff = 4.84 cfs @ 12.13 hrs, Volume= 0.257 af, Depth= 4.60"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.230	98	
*	0.440	74	>75% Grass cover, Good, HSG B
	0.670	82	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 71.73 cfs @ 12.13 hrs, Volume= 3.948 af, Depth= 5.26"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	6.030	98	
	2.030	61	>75% Grass cover, Good, HSG B
*	0.640	74	>75% Grass cover, Good, HSG C
	0.300	98	Water Surface, HSG B
	9.000	88	Weighted Average
	2.670		29.67% Pervious Area
	6.330		70.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5

Runoff = 35.37 cfs @ 12.25 hrs, Volume= 2.679 af, Depth= 3.96"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.270	98	
	2.940	61	>75% Grass cover, Good, HSG B
	0.144	74	>75% Grass cover, Good, HSG C
*	2.277	70	Row crops, SR + CR, Good, HSG B
	0.494	86	Fallow, bare soil, HSG B
	8.125	76	Weighted Average
	5.855		72.06% Pervious Area
	2.270		27.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	220	0.0370	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
8.7	80	0.0260	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.5	188	0.0200	1.27		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
2.3	380	0.0090	2.70	59.39	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 30.0 '/' Top.W=40.00' n= 0.035
1.0	193	0.0010	3.23	22.85	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
16.4	1,061	Total			

Summary for Subcatchment 10S: C6

Runoff = 63.16 cfs @ 12.81 hrs, Volume= 9.630 af, Depth= 3.34"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.864	98	
	7.605	61	>75% Grass cover, Good, HSG B
	5.438	74	>75% Grass cover, Good, HSG C
	5.852	58	Woods/grass comb., Good, HSG B
*	9.844	70	Row crops, SR + CR, Good, HSG B
*	3.269	79	Row crops, SR + CR, Good, HSG C
	0.750	98	Water Surface, HSG B
	34.622	70	Weighted Average
	32.008		92.45% Pervious Area
	2.614		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	300	0.1190	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
6.6	395	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.5	218	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	688	0.0067	0.74		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0050	2.65	8.32	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.025
3.7	529	0.0060	2.41	38.62	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 16.0 '/' Top.W=32.00' n= 0.030
56.8	2,204	Total			

Summary for Subcatchment 11S: C7 - Landfill

Runoff = 162.98 cfs @ 12.18 hrs, Volume= 10.407 af, Depth= 4.38"
Routed to Pond 11P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG B
27.730	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.500	80	Weighted Average
28.170		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill's SWMP**

Summary for Subcatchment 12S: C8

Runoff = 41.85 cfs @ 12.17 hrs, Volume= 2.490 af, Depth= 3.44"
Routed to Pond 12P : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.380	98	
	4.420	61	>75% Grass cover, Good, HSG B
	0.200	74	>75% Grass cover, Good, HSG C
	2.540	72	Woods/grass comb., Good, HSG C
	0.150	98	Water Surface, HSG B
	8.690	71	Weighted Average
	7.160		82.39% Pervious Area
	1.530		17.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
1.7	168	0.0530	1.61		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	1,538	Total			

Summary for Subcatchment 13S: C9 and C10

Runoff = 13.88 cfs @ 12.13 hrs, Volume= 0.764 af, Depth= 5.26"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.215	98	
	0.366	61	>75% Grass cover, Good, HSG B
	0.160	74	>75% Grass cover, Good, HSG C
	1.741	88	Weighted Average
	0.526		30.21% Pervious Area
	1.215		69.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 14S: YH1

Runoff = 107.94 cfs @ 12.80 hrs, Volume= 16.811 af, Depth= 3.04"
Routed to Pond 13P : YH1 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 15S: YH2

Runoff = 92.31 cfs @ 12.74 hrs, Volume= 13.682 af, Depth= 2.65"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	4.098	98	
	19.840	61	>75% Grass cover, Good, HSG B
	10.130	74	>75% Grass cover, Good, HSG C
	4.830	58	Woods/grass comb., Good, HSG B
	12.800	48	Brush, Good, HSG B
	10.280	65	Brush, Good, HSG C
	61.978	63	Weighted Average
	57.880		93.39% Pervious Area
	4.098		6.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.8	591	0.0130	2.58	51.61	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
8.3	745	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.9	608	0.0080	2.09	36.53	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 & 5.0 '/' Top.W=25.00' n= 0.050
52.1	3,785	Total			

Summary for Subcatchment 16S: C11-16

Runoff = 110.79 cfs @ 12.23 hrs, Volume= 7.901 af, Depth= 3.14"
Routed to Pond 22P : Existing Depression 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	5.910	98	
	18.130	61	>75% Grass cover, Good, HSG B
	1.510	74	>75% Grass cover, Good, HSG C
	3.010	55	Woods, Good, HSG B
	0.570	70	Woods, Good, HSG C
	1.090	48	Brush, Good, HSG B
	30.220	68	Weighted Average
	24.310		80.44% Pervious Area
	5.910		19.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	23	0.0530	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
2.5	23	0.0920	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.6	64	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	1,807	0.0078	2.73	16.93	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.8 & 7.6 '/' Top.W=12.40' n= 0.030
14.4	1,917	Total			

Summary for Subcatchment 17S: YH3

Runoff = 264.78 cfs @ 12.67 hrs, Volume= 37.709 af, Depth= 2.55"
Routed to Pond 17P : YH3 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.600	98	
	106.380	61	>75% Grass cover, Good, HSG B
	26.310	74	>75% Grass cover, Good, HSG C
	31.110	48	Brush, Good, HSG B
	6.590	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	177.190	62	Weighted Average
	170.390		96.16% Pervious Area
	6.800		3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.5	2,916	Total			

Summary for Subcatchment 18S: YH4

Runoff = 33.00 cfs @ 12.32 hrs, Volume= 2.894 af, Depth= 2.84"
Routed to Pond 18P : YH4 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 19S: YH5

Runoff = 15.50 cfs @ 12.14 hrs, Volume= 0.858 af, Depth= 4.38"
Routed to Pond 19P : YH5 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
7.3	98	Total			

Summary for Subcatchment 20S: YH6A Pond

Runoff = 39.23 cfs @ 12.24 hrs, Volume= 2.911 af, Depth= 3.85"
Routed to Pond 20P : YH6-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.780	98	
	2.870	61	>75% Grass cover, Good, HSG B
	4.020	73	Brush, Good, HSG D
	1.400	98	Water Surface, HSG C
	9.070	75	Weighted Average
	6.890		75.96% Pervious Area
	2.180		24.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	150	0.0750	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
3.4	285	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
15.7	435	Total			

Summary for Subcatchment 21S: YH6-B

Runoff = 214.47 cfs @ 12.50 hrs, Volume= 24.350 af, Depth= 2.94"
Routed to Pond 21P : YH6B Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
54.330	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.610	65	Brush, Good, HSG C
26.640	73	Brush, Good, HSG D
6.480	98	Water Surface, HSG A
99.400	66	Weighted Average
92.920		93.48% Pervious Area
6.480		6.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 23S: C17-C25

Runoff = 113.56 cfs @ 12.46 hrs, Volume= 12.733 af, Depth= 4.06"
Routed to Link 21L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	12.460	98	
	16.840	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	7.960	80	>75% Grass cover, Good, HSG D
	37.620	77	Weighted Average
	25.160		66.88% Pervious Area
	12.460		33.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.8	318	0.0087	1.89		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	79	0.0830	4.32		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.6	341	0.0180	3.54	17.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.8 '/' Top.W=9.80' n= 0.035
0.5	150	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
14.6	1,367	0.0035	1.56	7.81	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035
34.5	2,534	Total			

Summary for Subcatchment 24S: C26

Runoff = 25.60 cfs @ 12.92 hrs, Volume= 4.529 af, Depth= 3.04"
Routed to Link 22L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.360	98	
	0.140	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	3.940	48	Brush, Good, HSG B
	1.810	65	Brush, Good, HSG C
	11.600	73	Brush, Good, HSG D
	17.890	67	Weighted Average
	17.530		97.99% Pervious Area
	0.360		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030
69.6	2,824	Total			

Summary for Subcatchment 25S: C27

Runoff = 45.53 cfs @ 12.47 hrs, Volume= 5.093 af, Depth= 3.54"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	3.827	98	impervious
	8.477	61	>75% Grass cover, Good, HSG B
	0.289	74	>75% Grass cover, Good, HSG C
	0.246	80	>75% Grass cover, Good, HSG D
*	3.840	70	Row crops, SR + CR, Good, HSG B
*	0.090	79	Row crops, SR + CR, Good, HSG C
	0.490	86	Fallow, bare soil, HSG B
	17.259	72	Weighted Average
	13.432		77.83% Pervious Area
	3.827		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.3	150	0.0140	1.06		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
10.3	482	0.0125	0.78		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.6	1,570	0.0125	3.45	18.44	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.7 '/' Top.W=10.70' n= 0.030
0.6	163	0.0800	4.24		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
34.3	2,515	Total			

Summary for Subcatchment 26S: C28A & C28B

Runoff = 42.46 cfs @ 12.53 hrs, Volume= 5.013 af, Depth= 2.84"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.598	98	impervious
	6.420	61	>75% Grass cover, Good, HSG B
	1.116	80	>75% Grass cover, Good, HSG D
	6.805	55	Woods, Good, HSG B
*	5.229	70	Row crops, SR + CR, Good, HSG B
	21.168	65	Weighted Average
	19.570		92.45% Pervious Area
	1.598		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	150	0.1070	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
1.2	150	0.1730	2.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.6	365	0.0360	1.71		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
5.3	651	0.0120	2.04	16.34	**Channel Flow,** Area= 8.0 sf Perim= 16.1' r= 0.50' n= 0.050
2.6	273	0.0390	1.78		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.8	1,714	0.0140	3.67	25.72	**Channel Flow,** Area= 7.0 sf Perim= 14.1' r= 0.50' n= 0.030
36.6	3,303	Total			

Summary for Subcatchment 27S: Salt Loading Area

Runoff = 1.66 cfs @ 12.13 hrs, Volume= 0.093 af, Depth= 5.49"
Routed to Pond 28P : Salt Shed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (sf)	CN	Description
*	4,694	98	
*	4,130	80	>75% Grass cover, Good, compacted, HSG C
	8,824	90	Weighted Average
	4,130		46.80% Pervious Area
	4,694		53.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 28S: Luds Lane

Runoff = 2.37 cfs @ 12.19 hrs, Volume= 0.154 af, Depth= 2.46"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
0.750	61	>75% Grass cover, Good, HSG B
0.750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	71	0.0210	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"

Summary for Subcatchment 51S: C4-B

Runoff = 17.81 cfs @ 12.32 hrs, Volume= 1.570 af, Depth= 4.06"
Routed to Pond 6P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.550	98	
	1.935	61	>75% Grass cover, Good, HSG B
	1.155	74	>75% Grass cover, Good, HSG C
	4.640	77	Weighted Average
	3.090		66.59% Pervious Area
	1.550		33.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	150	0.0330	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
1.7	129	0.0310	1.23		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	522	0.0082	2.69	16.15	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
22.0	801	Total			

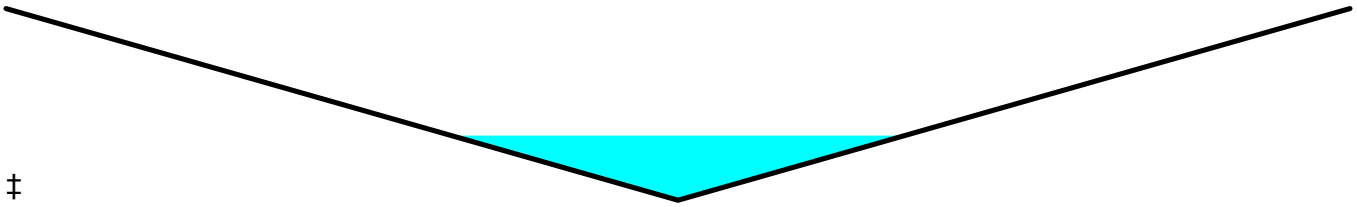
Summary for Reach 9R: Swale 1

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 3.86" for 100-yr event
Inflow = 48.20 cfs @ 13.74 hrs, Volume= 26.296 af
Outflow = 48.11 cfs @ 13.90 hrs, Volume= 26.286 af, Atten= 0%, Lag= 9.6 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.69 fps, Min. Travel Time= 11.2 min
Avg. Velocity = 0.90 fps, Avg. Travel Time= 21.1 min

Peak Storage= 32,294 cf @ 13.90 hrs
Average Depth at Peak Storage= 1.69' , Surface Width= 33.70'
Bank-Full Depth= 5.00' Flow Area= 250.0 sf, Capacity= 874.22 cfs

0.00' x 5.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 100.00'
Length= 1,137.0' Slope= 0.0041 '/'
Inlet Invert= 874.89', Outlet Invert= 870.22'



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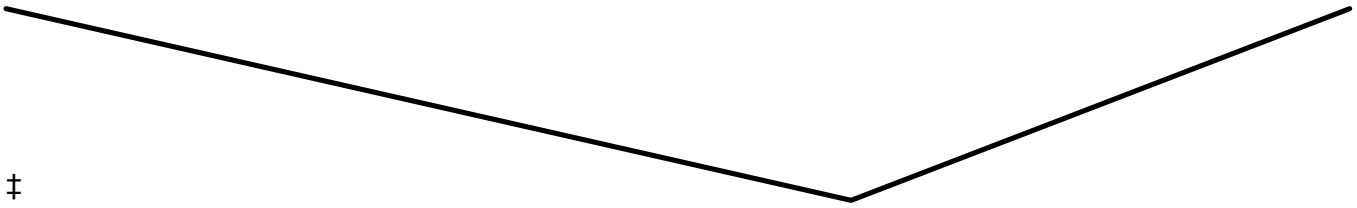
Summary for Reach 11R: Swale 4

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 55.8 sf, Capacity= 189.41 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 7.8 4.6 '/' Top Width= 37.20'
Length= 1,795.0' Slope= 0.0028 '/'
Inlet Invert= 868.00', Outlet Invert= 863.00'



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Summary for Reach 13R: Swale 2

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 2.52" for 100-yr event
Inflow = 24.30 cfs @ 14.37 hrs, Volume= 13.928 af
Outflow = 23.24 cfs @ 14.85 hrs, Volume= 13.743 af, Atten= 4%, Lag= 28.4 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.77 fps, Min. Travel Time= 24.4 min
Avg. Velocity = 1.15 fps, Avg. Travel Time= 37.7 min

Peak Storage= 34,039 cf @ 14.85 hrs
Average Depth at Peak Storage= 0.75' , Surface Width= 25.01'
Bank-Full Depth= 3.00' Flow Area= 120.0 sf, Capacity= 466.95 cfs

10.00' x 3.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 2,591.9' Slope= 0.0084 '/'
Inlet Invert= 892.00', Outlet Invert= 870.22'

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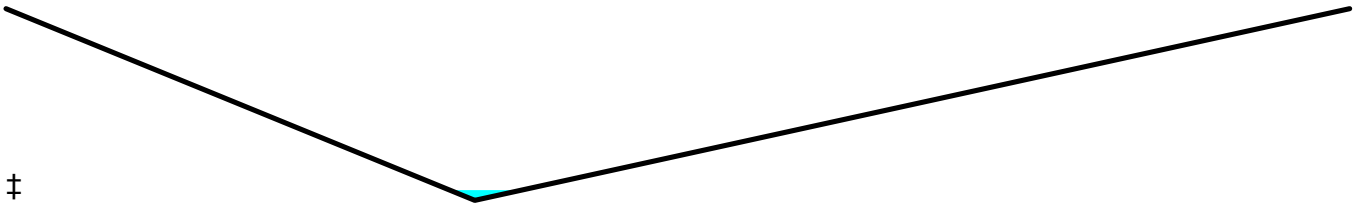
Summary for Reach 14R: Swale 3

Inflow = 0.16 cfs @ 13.55 hrs, Volume= 0.026 af
Outflow = 0.12 cfs @ 14.36 hrs, Volume= 0.026 af, Atten= 23%, Lag= 48.4 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.72 fps, Min. Travel Time= 34.6 min
Avg. Velocity = 0.36 fps, Avg. Travel Time= 68.6 min

Peak Storage= 250 cf @ 14.36 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 2.07'
Bank-Full Depth= 3.00' Flow Area= 58.1 sf, Capacity= 290.70 cfs

0.00' x 3.00' deep channel, n= 0.035
Side Slope Z-value= 4.5 8.4 '/' Top Width= 38.70'
Length= 1,492.0' Slope= 0.0082 '/'
Inlet Invert= 877.30', Outlet Invert= 865.00'



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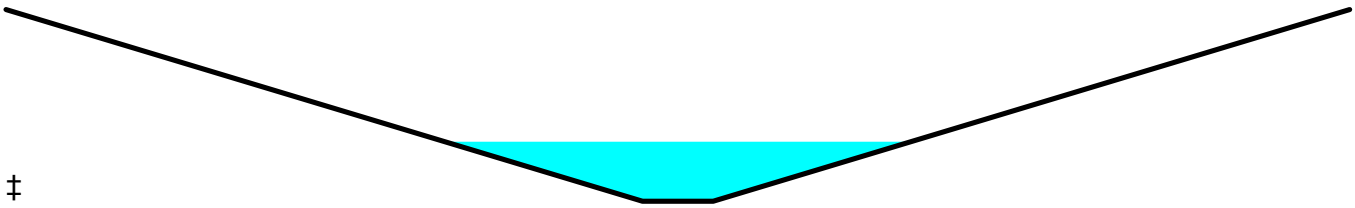
Summary for Reach 15R: Overland Flow

Inflow = 102.45 cfs @ 13.55 hrs, Volume= 42.601 af
Outflow = 98.68 cfs @ 13.96 hrs, Volume= 42.601 af, Atten= 4%, Lag= 24.6 min
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.79 fps, Min. Travel Time= 14.8 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 31.4 min

Peak Storage= 87,519 cf @ 13.96 hrs
Average Depth at Peak Storage= 0.93' , Surface Width= 65.92'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,718.10 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0073 '/'
Inlet Invert= 876.00', Outlet Invert= 858.00'



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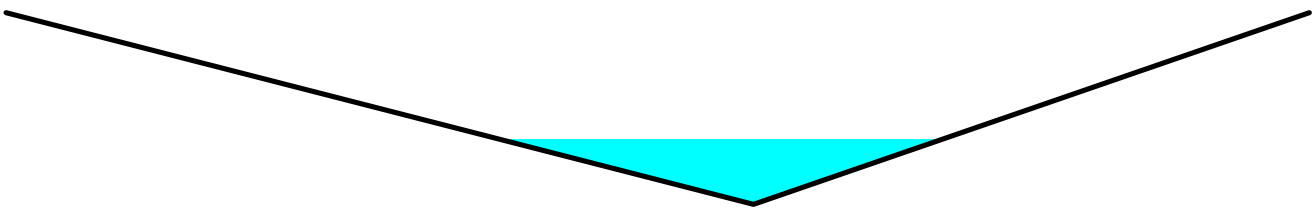
Summary for Reach 21R: Swale 5

Inflow = 6.34 cfs @ 13.54 hrs, Volume= 2.075 af
Outflow = 6.32 cfs @ 13.62 hrs, Volume= 2.075 af, Atten= 0%, Lag= 4.6 min
Routed to Reach 22R : Swale 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.78 fps, Min. Travel Time= 6.5 min
Avg. Velocity = 0.87 fps, Avg. Travel Time= 13.2 min

Peak Storage= 2,457 cf @ 13.62 hrs
Average Depth at Peak Storage= 1.02' , Surface Width= 6.96'
Bank-Full Depth= 3.00' Flow Area= 30.6 sf, Capacity= 111.43 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.9 2.9 '/' Top Width= 20.40'
Length= 690.6' Slope= 0.0033 '/'
Inlet Invert= 863.60', Outlet Invert= 861.30'



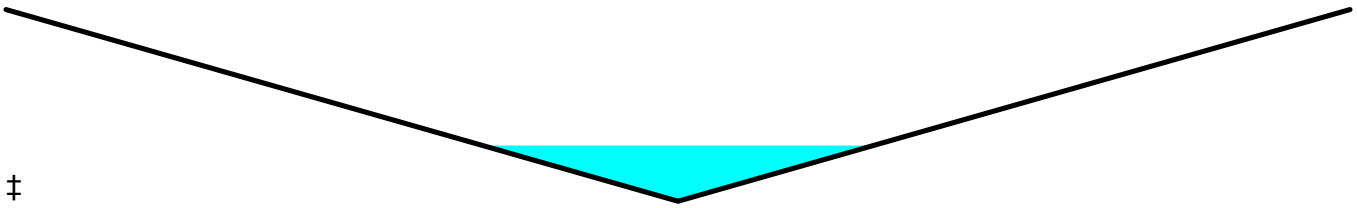
Summary for Reach 22R: Swale 6

Inflow = 6.32 cfs @ 13.62 hrs, Volume= 2.075 af
Outflow = 6.22 cfs @ 13.79 hrs, Volume= 2.075 af, Atten= 2%, Lag= 10.5 min
Routed to Link 21L : Ag. Ditch #4 Tributary

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.64 fps, Min. Travel Time= 13.9 min
Avg. Velocity = 0.72 fps, Avg. Travel Time= 31.7 min

Peak Storage= 5,185 cf @ 13.79 hrs
Average Depth at Peak Storage= 0.87' , Surface Width= 8.70'
Bank-Full Depth= 3.00' Flow Area= 45.0 sf, Capacity= 168.82 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 1,370.6' Slope= 0.0034 '/'
Inlet Invert= 861.30', Outlet Invert= 856.60'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 5.26" for 100-yr event
Inflow = 37.22 cfs @ 12.13 hrs, Volume= 2.048 af
Outflow = 5.07 cfs @ 12.55 hrs, Volume= 2.047 af, Atten= 86%, Lag= 25.4 min
Primary = 5.07 cfs @ 12.55 hrs, Volume= 2.047 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 885.68' @ 12.55 hrs Surf.Area= 33,753 sf Storage= 43,107 cf

Plug-Flow detention time= 145.0 min calculated for 2.047 af (100% of inflow)
Center-of-Mass det. time= 144.6 min (925.8 - 781.2)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=5.07 cfs @ 12.55 hrs HW=885.68' TW=880.17' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 3.26 cfs)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 1.81 cfs @ 1.03 fps)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 5.83" for 100-yr event
Inflow = 6.29 cfs @ 12.13 hrs, Volume= 0.362 af
Outflow = 4.45 cfs @ 12.18 hrs, Volume= 0.310 af, Atten= 29%, Lag= 3.3 min
Discarded = 0.02 cfs @ 12.18 hrs, Volume= 0.026 af
Primary = 4.42 cfs @ 12.18 hrs, Volume= 0.284 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.37' @ 12.18 hrs Surf.Area= 3,948 sf Storage= 5,718 cf

Plug-Flow detention time= 153.4 min calculated for 0.310 af (86% of inflow)
Center-of-Mass det. time= 97.1 min (863.0 - 765.9)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.18 hrs HW=881.37' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=4.42 cfs @ 12.18 hrs HW=881.37' TW=878.62' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 4.42 cfs @ 5.63 fps)
│ ├**2=Orifice/Grate** (Passes < 1.04 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 4.57 cfs potential flow)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 4P: County - Storm Pond 2

Inflow Area = 22.203 ac, 36.68% Impervious, Inflow Depth = 4.16" for 100-yr event
Inflow = 59.57 cfs @ 12.37 hrs, Volume= 7.691 af
Outflow = 31.20 cfs @ 12.73 hrs, Volume= 7.691 af, Atten= 48%, Lag= 21.6 min
Discarded = 0.13 cfs @ 7.85 hrs, Volume= 0.253 af
Primary = 31.07 cfs @ 12.73 hrs, Volume= 7.437 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.35' @ 12.74 hrs Surf.Area= 0.897 ac Storage= 2.230 af

Plug-Flow detention time= 93.0 min calculated for 7.689 af (100% of inflow)
Center-of-Mass det. time= 93.0 min (944.4 - 851.4)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.829 af	**Custom Stage Data (Prismatic)**Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.253	0.000	0.000
877.37	0.258	0.043	0.043
877.38	0.577	0.004	0.048
878.00	0.620	0.371	0.419
879.00	0.757	0.688	1.107
880.00	0.850	0.803	1.911
881.00	0.986	0.918	2.829

Device	Routing	Invert	Outlet Devices
#1	Primary	877.12'	**15.0" Round Culvert X 2.00** L= 39.2' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.12' / 877.06' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.13 cfs Exfiltration at all elevations**
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.13 cfs @ 7.85 hrs HW=877.24' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=31.00 cfs @ 12.73 hrs HW=880.35' TW=878.56' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 15.82 cfs @ 6.44 fps)
│ ├**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
│ └**3=Broad-Crested Rectangular Weir** (Passes < 267.84 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Weir Controls 15.18 cfs @ 1.46 fps)

Summary for Pond 5P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 5.95" for 100-yr event
Inflow = 18.91 cfs @ 12.13 hrs, Volume= 1.101 af
Outflow = 12.18 cfs @ 12.18 hrs, Volume= 1.068 af, Atten= 36%, Lag= 3.0 min
Discarded = 0.05 cfs @ 12.19 hrs, Volume= 0.042 af
Primary = 12.13 cfs @ 12.18 hrs, Volume= 1.026 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.52' @ 12.19 hrs Surf.Area= 4,910 sf Storage= 8,165 cf

Plug-Flow detention time= 65.5 min calculated for 1.068 af (97% of inflow)
Center-of-Mass det. time= 48.6 min (810.7 - 762.1)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.05 cfs @ 12.19 hrs HW=882.52' (Free Discharge)
└**5=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=12.05 cfs @ 12.18 hrs HW=882.51' TW=880.50' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 12.05 cfs @ 6.82 fps)
│ ├**2=Orifice/Grate** (Passes < 1.49 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 31.14 cfs potential flow)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 6P: CNTY-Infiltration Basin #1

Inflow Area = 4.640 ac, 33.41% Impervious, Inflow Depth = 4.06" for 100-yr event
Inflow = 17.81 cfs @ 12.32 hrs, Volume= 1.570 af
Outflow = 10.07 cfs @ 12.57 hrs, Volume= 1.489 af, Atten= 43%, Lag= 15.1 min
Discarded = 0.18 cfs @ 12.57 hrs, Volume= 0.101 af
Primary = 9.89 cfs @ 12.57 hrs, Volume= 1.388 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.68' @ 12.57 hrs Surf.Area= 17,007 sf Storage= 24,278 cf

Plug-Flow detention time= 109.5 min calculated for 1.489 af (95% of inflow)
Center-of-Mass det. time= 82.7 min (903.2 - 820.5)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.18 cfs @ 12.57 hrs HW=883.68' (Free Discharge)
└**5=Exfiltration** (Controls 0.18 cfs)

Primary OutFlow Max=9.89 cfs @ 12.57 hrs HW=883.68' TW=880.15' (Dynamic Tailwater)
├**1=Culvert** (Barrel Controls 5.53 cfs @ 7.04 fps)
│ ├**2=Orifice/Grate** (Passes < 2.91 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 14.93 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 4.36 cfs @ 1.12 fps)

Summary for Pond 8P: County - Storm Pond 3

Inflow Area = 16.530 ac, 61.22% Impervious, Inflow Depth = 4.80" for 100-yr event
Inflow = 89.45 cfs @ 12.13 hrs, Volume= 6.618 af
Outflow = 57.54 cfs @ 12.21 hrs, Volume= 6.580 af, Atten= 36%, Lag= 4.7 min
Primary = 57.54 cfs @ 12.21 hrs, Volume= 6.580 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.53' @ 12.21 hrs Surf.Area= 29,515 sf Storage= 69,531 cf

Plug-Flow detention time= 75.5 min calculated for 6.578 af (99% of inflow)
Center-of-Mass det. time= 71.8 min (876.6 - 804.8)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=57.54 cfs @ 12.21 hrs HW=880.53' TW=877.40' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 27.32 cfs @ 7.73 fps)
  - **2=Special & User-Defined** (Passes < 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Passes < 285.38 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 30.22 cfs @ 1.91 fps)

Summary for Pond 9P: Storage at NE and SE corners of AB

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 3.88" for 100-yr event
Inflow = 124.09 cfs @ 12.69 hrs, Volume= 26.406 af
Outflow = 48.20 cfs @ 13.74 hrs, Volume= 26.296 af, Atten= 61%, Lag= 63.3 min
Primary = 48.20 cfs @ 13.74 hrs, Volume= 26.296 af
Routed to Reach 9R : Swale 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Starting Elev= 875.66' Surf.Area= 32,564 sf Storage= 19,458 cf
Peak Elev= 879.17' @ 13.74 hrs Surf.Area= 244,053 sf Storage= 409,242 cf (389,784 cf above start)

Plug-Flow detention time= 127.9 min calculated for 25.842 af (98% of inflow)
Center-of-Mass det. time= 108.6 min (993.0 - 884.4)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	640,022 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.00	26,400	0	0
876.00	35,739	31,070	31,070
877.00	63,982	49,861	80,930
878.00	141,395	102,689	183,619
879.00	231,121	186,258	369,877
880.00	309,169	270,145	640,022

Device	Routing	Invert	Outlet Devices
#1	Primary	875.66'	**36.0" Round Culvert** L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.66' / 874.89' S= 0.0077 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=48.20 cfs @ 13.74 hrs HW=879.17' TW=876.57' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 48.20 cfs @ 6.82 fps)

Summary for Pond 11P: Landfill Pond

Inflow Area = 28.500 ac, 1.16% Impervious, Inflow Depth = 4.38" for 100-yr event
Inflow = 162.98 cfs @ 12.18 hrs, Volume= 10.407 af
Outflow = 34.15 cfs @ 12.58 hrs, Volume= 9.961 af, Atten= 79%, Lag= 23.6 min
Primary = 34.15 cfs @ 12.58 hrs, Volume= 9.961 af
Routed to Pond 12P : Existing Depression 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.38' @ 12.58 hrs Surf.Area= 1.567 ac Storage= 5.096 af

Plug-Flow detention time= 188.1 min calculated for 9.958 af (96% of inflow)
Center-of-Mass det. time= 165.5 min (969.8 - 804.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=34.15 cfs @ 12.58 hrs HW=883.38' TW=876.24' (Dynamic Tailwater)
- **1=Culvert** (Passes 17.66 cfs of 19.59 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.45 cfs @ 11.80 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.50 cfs @ 11.45 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.54 cfs @ 11.09 fps)
  - **5=Orifice/Grate** (Orifice Controls 16.17 cfs @ 9.15 fps)
- **6=Broad-Crested Rectangular Weir** (Weir Controls 16.48 cfs @ 2.29 fps)

Summary for Pond 12P: Existing Depression 1

Inflow Area = 37.190 ac, 5.00% Impervious, Inflow Depth > 4.02" for 100-yr event
Inflow = 55.84 cfs @ 12.17 hrs, Volume= 12.451 af
Outflow = 23.58 cfs @ 13.46 hrs, Volume= 10.765 af, Atten= 58%, Lag= 76.9 min
Primary = 23.58 cfs @ 13.46 hrs, Volume= 10.765 af
Routed to Pond 15P : Existing Depression 2
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 11R : Swale 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 877.79' @ 13.49 hrs Storage= 131,037 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 136.9 min (1,076.8 - 939.9)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	174,699 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
875.00	0
876.00	65,278
877.00	110,909
878.00	136,383
879.00	156,855
880.00	174,699

Device	Routing	Invert	Outlet Devices
#1	Primary	874.12'	**36.0" Round Culvert** L= 100.2' Ke= 0.200 Inlet / Outlet Invert= 874.12' / 873.48' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Secondary	878.00'	**Swale to West** Head (feet) 0.00 0.10 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.010 0.060 0.350 1.040 2.230 4.050 6.580 9.930 14.170 19.400 25.690

Primary OutFlow Max=23.56 cfs @ 13.46 hrs HW=877.79' TW=877.47' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 23.56 cfs @ 3.47 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=875.00' TW=868.00' (Dynamic Tailwater)
↑—**2=Swale to West** (Controls 0.00 cfs)

Summary for Pond 13P: YH1 Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 3.04" for 100-yr event
Inflow = 107.94 cfs @ 12.80 hrs, Volume= 16.811 af
Outflow = 24.45 cfs @ 14.22 hrs, Volume= 14.199 af, Atten= 77%, Lag= 85.2 min
Primary = 24.45 cfs @ 14.22 hrs, Volume= 14.199 af
Routed to Pond 14P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 897.85' @ 14.23 hrs Surf.Area= 242,958 sf Storage= 400,324 cf

Plug-Flow detention time= 375.5 min calculated for 14.196 af (84% of inflow)
Center-of-Mass det. time= 312.8 min (1,185.3 - 872.5)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=24.45 cfs @ 14.22 hrs HW=897.85' TW=895.94' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 3.73 cfs @ 4.75 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 20.72 cfs @ 2.43 fps)

Summary for Pond 14P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 2.57" for 100-yr event
Inflow = 24.45 cfs @ 14.22 hrs, Volume= 14.199 af
Outflow = 24.30 cfs @ 14.37 hrs, Volume= 13.928 af, Atten= 1%, Lag= 9.1 min
Primary = 24.30 cfs @ 14.37 hrs, Volume= 13.928 af
Routed to Reach 13R : Swale 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 895.95' @ 14.37 hrs Surf.Area= 31,282 sf Storage= 32,209 cf

Plug-Flow detention time= 45.7 min calculated for 13.928 af (98% of inflow)
Center-of-Mass det. time= 27.4 min (1,212.7 - 1,185.3)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=24.30 cfs @ 14.37 hrs HW=895.95' TW=892.72' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 4.09 cfs @ 5.21 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 20.21 cfs @ 1.81 fps)

Summary for Pond 15P: Existing Depression 2

Inflow Area = 248.992 ac, 13.10% Impervious, Inflow Depth > 3.14" for 100-yr event
Inflow = 136.10 cfs @ 12.94 hrs, Volume= 65.239 af
Outflow = 111.96 cfs @ 13.55 hrs, Volume= 61.921 af, Atten= 18%, Lag= 36.7 min
Primary = 9.52 cfs @ 30.20 hrs, Volume= 19.294 af
Routed to Pond 17P : YH3 Pond
Secondary = 102.45 cfs @ 13.55 hrs, Volume= 42.601 af
Routed to Reach 15R : Overland Flow
Tertiary = 0.16 cfs @ 13.55 hrs, Volume= 0.026 af
Routed to Reach 14R : Swale 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 877.47' @ 13.55 hrs Surf.Area= 252,700 sf Storage= 384,446 cf

Plug-Flow detention time= 133.9 min calculated for 61.921 af (95% of inflow)
Center-of-Mass det. time= 85.6 min (1,120.9 - 1,035.2)

Volume	Invert	Avail.Storage	Storage Description
#1	870.00'	530,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.00	1,053	0	0
873.00	9,397	15,675	15,675
874.00	20,404	14,901	30,576
875.00	42,009	31,207	61,782
876.00	89,975	65,992	127,774
877.00	205,811	147,893	275,667
878.00	304,631	255,221	530,888

Device	Routing	Invert	Outlet Devices
#1	Primary	870.22'	**18.0" Round Culvert** L= 2,314.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 870.22' / 858.00' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	877.00'	**120.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Tertiary	877.30'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.030 0.200 0.570 1.230 3.610 7.780 14.110

Primary OutFlow Max=9.52 cfs @ 30.20 hrs HW=876.76' TW=859.85' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.52 cfs @ 5.38 fps)

Secondary OutFlow Max=102.45 cfs @ 13.55 hrs HW=877.47' TW=876.88' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 102.45 cfs @ 1.80 fps)

Tertiary OutFlow Max=0.16 cfs @ 13.55 hrs HW=877.47' TW=877.42' (Dynamic Tailwater)
3=Special & User-Defined (Custom Controls 0.16 cfs)

Summary for Pond 17P: YH3 Pond

Inflow Area = 470.972 ac, 9.99% Impervious, Inflow Depth > 2.74" for 100-yr event
Inflow = 297.76 cfs @ 12.67 hrs, Volume= 107.441 af
Outflow = 199.68 cfs @ 13.64 hrs, Volume= 100.495 af, Atten= 33%, Lag= 58.3 min
Primary = 199.68 cfs @ 13.64 hrs, Volume= 100.495 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 861.14' @ 13.67 hrs Surf.Area= 365,292 sf Storage= 705,521 cf

Plug-Flow detention time= 141.3 min calculated for 100.495 af (94% of inflow)
Center-of-Mass det. time= 80.9 min (1,122.5 - 1,041.6)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=199.61 cfs @ 13.64 hrs HW=861.14' TW=858.91' (Dynamic Tailwater)
1=Culvert (Outlet Controls 27.81 cfs @ 4.67 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 171.81 cfs @ 2.15 fps)

Summary for Pond 18P: YH4 Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 2.84" for 100-yr event
Inflow = 33.00 cfs @ 12.32 hrs, Volume= 2.894 af
Outflow = 21.48 cfs @ 12.53 hrs, Volume= 2.802 af, Atten= 35%, Lag= 12.8 min
Primary = 21.48 cfs @ 12.53 hrs, Volume= 2.802 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 862.32' @ 12.53 hrs Surf.Area= 35,193 sf Storage= 36,445 cf

Plug-Flow detention time= 149.4 min calculated for 2.801 af (97% of inflow)
Center-of-Mass det. time= 132.3 min (975.0 - 842.8)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=21.48 cfs @ 12.53 hrs HW=862.32' TW=859.53' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 1.07 cfs @ 3.07 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 20.40 cfs @ 1.95 fps)

Summary for Pond 19P: YH5 Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 4.38" for 100-yr event
Inflow = 15.50 cfs @ 12.14 hrs, Volume= 0.858 af
Outflow = 0.73 cfs @ 13.60 hrs, Volume= 0.694 af, Atten= 95%, Lag= 87.4 min
Primary = 0.73 cfs @ 13.60 hrs, Volume= 0.694 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 865.61' @ 13.60 hrs Surf.Area= 42,467 sf Storage= 24,566 cf

Plug-Flow detention time= 464.2 min calculated for 0.694 af (81% of inflow)
Center-of-Mass det. time= 396.8 min (1,197.7 - 800.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.73 cfs @ 13.60 hrs HW=865.61' TW=861.14' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.73 cfs @ 2.87 fps)

Summary for Pond 20P: YH6-A

Inflow Area = 9.070 ac, 24.04% Impervious, Inflow Depth = 3.85" for 100-yr event
Inflow = 39.23 cfs @ 12.24 hrs, Volume= 2.911 af
Outflow = 4.34 cfs @ 24.34 hrs, Volume= 2.788 af, Atten= 89%, Lag= 725.9 min
Primary = 4.34 cfs @ 24.34 hrs, Volume= 2.788 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 60,840 sf Storage= 127,764 cf
Peak Elev= 858.23' @ 21.72 hrs Surf.Area= 77,228 sf Storage= 239,311 cf (111,547 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 666.1 min (1,484.6 - 818.5)

Volume	Invert	Avail.Storage	Storage Description
#1	854.50'	667,659 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.50	60,840	0	0
856.60	60,840	127,764	127,764
857.00	64,679	25,104	152,868
858.00	73,339	69,009	221,877
859.00	90,134	81,737	303,613
860.00	109,122	99,628	403,241
861.00	129,626	119,374	522,615
862.00	160,461	145,044	667,659

Device	Routing	Invert	Outlet Devices
#1	Primary	854.50'	**18.0" Round Culvert**
			L= 55.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.50' / 854.22' S= 0.0051 '/' Cc= 0.900
			n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=4.35 cfs @ 24.34 hrs HW=857.83' TW=857.33' (Dynamic Tailwater)
1=Culvert (Outlet Controls 4.35 cfs @ 2.46 fps)

Summary for Pond 21P: YH6B Pond

Inflow Area = 579.442 ac, 9.62% Impervious, Inflow Depth > 2.64" for 100-yr event
Inflow = 253.98 cfs @ 13.12 hrs, Volume= 127.634 af
Outflow = 128.37 cfs @ 16.12 hrs, Volume= 127.068 af, Atten= 49%, Lag= 179.9 min
Primary = 128.37 cfs @ 16.12 hrs, Volume= 127.068 af
Routed to Link 22L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 859.68' @ 16.12 hrs Surf.Area= 680,519 sf Storage= 1,799,913 cf (1,243,466 cf above start)

Plug-Flow detention time= 241.2 min calculated for 114.294 af (90% of inflow)
Center-of-Mass det. time= 109.2 min (1,188.2 - 1,079.0)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=128.37 cfs @ 16.12 hrs HW=859.68' TW=856.60' (Dynamic Tailwater)
1=Culvert (Inlet Controls 128.37 cfs @ 6.67 fps)

Summary for Pond 22P: Existing Depression 3

Inflow Area = 30.220 ac, 19.56% Impervious, Inflow Depth = 3.15" for 100-yr event
Inflow = 110.79 cfs @ 12.23 hrs, Volume= 7.926 af
Outflow = 10.49 cfs @ 13.54 hrs, Volume= 6.417 af, Atten= 91%, Lag= 78.6 min
Primary = 4.15 cfs @ 13.54 hrs, Volume= 4.342 af
Routed to Pond 17P : YH3 Pond
Secondary = 6.34 cfs @ 13.54 hrs, Volume= 2.075 af
Routed to Reach 21R : Swale 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 864.54' @ 13.54 hrs Surf.Area= 2.651 ac Storage= 4.565 af

Plug-Flow detention time= 365.4 min calculated for 6.415 af (81% of inflow)
Center-of-Mass det. time= 295.0 min (1,125.7 - 830.7)

Volume	Invert	Avail.Storage	Storage Description
#1	860.00'	12.833 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
860.00	0.006	0.000	0.000
861.00	0.016	0.011	0.011
862.00	0.550	0.283	0.294
863.00	1.425	0.987	1.281
864.00	2.395	1.910	3.191
865.00	2.865	2.630	5.821
866.00	3.493	3.179	9.000
867.00	4.172	3.833	12.833

Device	Routing	Invert	Outlet Devices
#1	Primary	862.84'	**12.0" Round Culvert** L= 30.7' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 862.84' / 861.39' S= 0.0472 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	865.74'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#3	Secondary	863.60'	**Swale in ROW to West** Head (feet) 0.00 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 Disch. (cfs) 0.000 0.630 1.850 4.000 7.240 11.780 17.770 25.370 34.720 45.990 59.290 74.770

Primary OutFlow Max=4.15 cfs @ 13.54 hrs HW=864.54' TW=861.14' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 4.15 cfs @ 5.28 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=6.34 cfs @ 13.54 hrs HW=864.54' TW=864.62' (Dynamic Tailwater)
└─**3=Swale in ROW to West** (Custom Controls 6.34 cfs)

Summary for Pond 28P: Salt Shed Basin

Inflow Area = 0.203 ac, 53.20% Impervious, Inflow Depth = 5.49" for 100-yr event
Inflow = 1.66 cfs @ 12.13 hrs, Volume= 0.093 af
Outflow = 1.54 cfs @ 12.15 hrs, Volume= 0.080 af, Atten= 7%, Lag= 1.5 min
Primary = 1.54 cfs @ 12.15 hrs, Volume= 0.080 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.17' @ 12.15 hrs Surf.Area= 860 sf Storage= 858 cf

Plug-Flow detention time= 92.0 min calculated for 0.080 af (86% of inflow)
Center-of-Mass det. time= 36.4 min (812.0 - 775.6)

Volume	Invert	Avail.Storage	Storage Description
#1	881.50'	1,163 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
881.50	212	0	0
882.00	363	144	144
883.00	781	572	716
883.50	1,009	448	1,163

Device	Routing	Invert	Outlet Devices
#1	Primary	881.50'	**6.0" Round Culvert** L= 134.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 881.50' / 880.80' S= 0.0052 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	882.80'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	883.00'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=1.53 cfs @ 12.15 hrs HW=883.17' TW=877.19' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 0.62 cfs @ 3.16 fps)
  - **2=Orifice/Grate** (Passes 0.62 cfs of 2.31 cfs potential flow)
- **3=Broad-Crested Rectangular Weir** (Weir Controls 0.91 cfs @ 1.06 fps)

Summary for Link 21L: Ag. Ditch #4 Tributary

Inflow Area = 37.620 ac, 33.12% Impervious, Inflow Depth = 4.72" for 100-yr event
Inflow = 113.60 cfs @ 12.46 hrs, Volume= 14.808 af
Primary = 113.51 cfs @ 12.73 hrs, Volume= 14.808 af, Atten= 0%, Lag= 16.0 min
Routed to Link 22L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 22L: Combined to Ag Ditch #4

Inflow Area = 634.952 ac, 10.79% Impervious, Inflow Depth > 2.77" for 100-yr event
Inflow = 210.27 cfs @ 12.80 hrs, Volume= 146.406 af
Primary = 210.27 cfs @ 12.80 hrs, Volume= 146.406 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 24L: Door Creek Combined

Inflow Area = 39.177 ac, 13.85% Impervious, Inflow Depth = 3.14" for 100-yr event
Inflow = 88.91 cfs @ 12.52 hrs, Volume= 10.260 af
Primary = 88.91 cfs @ 12.52 hrs, Volume= 10.260 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 25L: Combine

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 0.00% Impervious, Inflow Depth = 2.46" for 100-yr event
Inflow = 2.37 cfs @ 12.19 hrs, Volume= 0.154 af
Primary = 2.36 cfs @ 12.62 hrs, Volume= 0.154 af, Atten= 0%, Lag= 25.7 min
Routed to Link 24L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: C1

Runoff = 42.78 cfs @ 12.13 hrs, Volume= 2.378 af, Depth= 6.11"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 28.86 cfs @ 12.44 hrs, Volume= 3.033 af, Depth= 3.73"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.6	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 36.09 cfs @ 12.33 hrs, Volume= 3.381 af, Depth= 5.76"
Routed to Pond 4P : County - Storm Pond 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.900	98	
*	3.870	74	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	7.043	85	Weighted Average
	3.870		54.95% Pervious Area
	3.173		45.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.9	68	0.0220	1.25		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 7.16 cfs @ 12.13 hrs, Volume= 0.416 af, Depth= 6.70"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.580	98	
*	0.165	74	>75% Grass cover, Good, HSG B
	0.745	93	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 21.49 cfs @ 12.13 hrs, Volume= 1.261 af, Depth= 6.81"
Routed to Pond 5P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 7S: C4-C

Runoff = 5.65 cfs @ 12.13 hrs, Volume= 0.302 af, Depth= 5.41"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.230	98	
*	0.440	74	>75% Grass cover, Good, HSG B
	0.670	82	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 82.46 cfs @ 12.13 hrs, Volume= 4.582 af, Depth= 6.11"
Routed to Pond 8P : County - Storm Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	6.030	98	
	2.030	61	>75% Grass cover, Good, HSG B
*	0.640	74	>75% Grass cover, Good, HSG C
	0.300	98	Water Surface, HSG B
	9.000	88	Weighted Average
	2.670		29.67% Pervious Area
	6.330		70.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5

Runoff = 42.16 cfs @ 12.25 hrs, Volume= 3.204 af, Depth= 4.73"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.270	98	
	2.940	61	>75% Grass cover, Good, HSG B
	0.144	74	>75% Grass cover, Good, HSG C
*	2.277	70	Row crops, SR + CR, Good, HSG B
	0.494	86	Fallow, bare soil, HSG B
	8.125	76	Weighted Average
	5.855		72.06% Pervious Area
	2.270		27.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	220	0.0370	1.94		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
8.7	80	0.0260	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.5	188	0.0200	1.27		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
2.3	380	0.0090	2.70	59.39	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 30.0 '/' Top.W=40.00' n= 0.035
1.0	193	0.0010	3.23	22.85	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.012
16.4	1,061	Total			

Summary for Subcatchment 10S: C6

Runoff = 77.12 cfs @ 12.81 hrs, Volume= 11.723 af, Depth= 4.06"
Routed to Pond 9P : Storage at NE and SE corners of AB

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.864	98	
	7.605	61	>75% Grass cover, Good, HSG B
	5.438	74	>75% Grass cover, Good, HSG C
	5.852	58	Woods/grass comb., Good, HSG B
*	9.844	70	Row crops, SR + CR, Good, HSG B
*	3.269	79	Row crops, SR + CR, Good, HSG C
	0.750	98	Water Surface, HSG B
	34.622	70	Weighted Average
	32.008		92.45% Pervious Area
	2.614		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.9	300	0.1190	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
6.6	395	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.5	218	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	688	0.0067	0.74		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
0.5	74	0.0050	2.65	8.32	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.025
3.7	529	0.0060	2.41	38.62	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 16.0 '/' Top.W=32.00' n= 0.030
56.8	2,204	Total			

Summary for Subcatchment 11S: C7 - Landfill

Runoff = 191.59 cfs @ 12.18 hrs, Volume= 12.316 af, Depth= 5.19"
Routed to Pond 11P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG B
27.730	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.500	80	Weighted Average
28.170		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill's SWMP**

Summary for Subcatchment 12S: C8

Runoff = 50.69 cfs @ 12.17 hrs, Volume= 3.022 af, Depth= 4.17"
Routed to Pond 12P : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.380	98	
	4.420	61	>75% Grass cover, Good, HSG B
	0.200	74	>75% Grass cover, Good, HSG C
	2.540	72	Woods/grass comb., Good, HSG C
	0.150	98	Water Surface, HSG B
	8.690	71	Weighted Average
	7.160		82.39% Pervious Area
	1.530		17.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
1.7	168	0.0530	1.61		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
9.5	1,538	Total			

Summary for Subcatchment 13S: C9 and C10

Runoff = 15.95 cfs @ 12.13 hrs, Volume= 0.886 af, Depth= 6.11"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.215	98	
	0.366	61	>75% Grass cover, Good, HSG B
	0.160	74	>75% Grass cover, Good, HSG C
	1.741	88	Weighted Average
	0.526		30.21% Pervious Area
	1.215		69.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 14S: YH1

Runoff = 133.65 cfs @ 12.80 hrs, Volume= 20.664 af, Depth= 3.73"
Routed to Pond 13P : YH1 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 15S: YH2

Runoff = 116.47 cfs @ 12.74 hrs, Volume= 17.060 af, Depth= 3.30"
Routed to Pond 15P : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	4.098	98	
	19.840	61	>75% Grass cover, Good, HSG B
	10.130	74	>75% Grass cover, Good, HSG C
	4.830	58	Woods/grass comb., Good, HSG B
	12.800	48	Brush, Good, HSG B
	10.280	65	Brush, Good, HSG C
	61.978	63	Weighted Average
	57.880		93.39% Pervious Area
	4.098		6.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
3.8	591	0.0130	2.58	51.61	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
8.3	745	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.9	608	0.0080	2.09	36.53	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 & 5.0 '/' Top.W=25.00' n= 0.050
52.1	3,785	Total			

Summary for Subcatchment 16S: C11-16

Runoff = 136.03 cfs @ 12.23 hrs, Volume= 9.680 af, Depth= 3.84"
Routed to Pond 22P : Existing Depression 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	5.910	98	
	18.130	61	>75% Grass cover, Good, HSG B
	1.510	74	>75% Grass cover, Good, HSG C
	3.010	55	Woods, Good, HSG B
	0.570	70	Woods, Good, HSG C
	1.090	48	Brush, Good, HSG B
	30.220	68	Weighted Average
	24.310		80.44% Pervious Area
	5.910		19.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	23	0.0530	1.43		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
2.5	23	0.0920	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
0.6	64	0.0120	1.64		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
11.0	1,807	0.0078	2.73	16.93	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.8 & 7.6 '/' Top.W=12.40' n= 0.030
14.4	1,917	Total			

Summary for Subcatchment 17S: YH3

Runoff = 336.31 cfs @ 12.67 hrs, Volume= 47.199 af, Depth= 3.20"
Routed to Pond 17P : YH3 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.600	98	
	106.380	61	>75% Grass cover, Good, HSG B
	26.310	74	>75% Grass cover, Good, HSG C
	31.110	48	Brush, Good, HSG B
	6.590	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	177.190	62	Weighted Average
	170.390		96.16% Pervious Area
	6.800		3.84% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.8	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.5	2,916	Total			

Summary for Subcatchment 18S: YH4

Runoff = 41.18 cfs @ 12.31 hrs, Volume= 3.582 af, Depth= 3.52"
Routed to Pond 18P : YH4 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 19S: YH5

Runoff = 18.20 cfs @ 12.14 hrs, Volume= 1.016 af, Depth= 5.19"
Routed to Pond 19P : YH5 Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.84"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
7.3	98	Total			

Summary for Subcatchment 20S: YH6A Pond

Runoff = 46.93 cfs @ 12.24 hrs, Volume= 3.492 af, Depth= 4.62"
Routed to Pond 20P : YH6-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.780	98	
	2.870	61	>75% Grass cover, Good, HSG B
	4.020	73	Brush, Good, HSG D
	1.400	98	Water Surface, HSG C
	9.070	75	Weighted Average
	6.890		75.96% Pervious Area
	2.180		24.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	150	0.0750	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
3.4	285	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
15.7	435	Total			

Summary for Subcatchment 21S: YH6-B

Runoff = 266.41 cfs @ 12.49 hrs, Volume= 30.034 af, Depth= 3.63"
Routed to Pond 21P : YH6B Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
54.330	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.610	65	Brush, Good, HSG C
26.640	73	Brush, Good, HSG D
6.480	98	Water Surface, HSG A
99.400	66	Weighted Average
92.920		93.48% Pervious Area
6.480		6.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 23S: C17-C25

Runoff = 135.23 cfs @ 12.46 hrs, Volume= 15.189 af, Depth= 4.85"
Routed to Link 21L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	12.460	98	
	16.840	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	7.960	80	>75% Grass cover, Good, HSG D
	37.620	77	Weighted Average
	25.160		66.88% Pervious Area
	12.460		33.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.8	318	0.0087	1.89		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	79	0.0830	4.32		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.6	341	0.0180	3.54	17.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.8 '/' Top.W=9.80' n= 0.035
0.5	150	0.0050	5.52	17.33	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012
14.6	1,367	0.0035	1.56	7.81	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 5.0 '/' Top.W=10.00' n= 0.035
34.5	2,534	Total			

Summary for Subcatchment 24S: C26

Runoff = 31.77 cfs @ 12.92 hrs, Volume= 5.568 af, Depth= 3.73"
Routed to Link 22L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.360	98	
	0.140	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	3.940	48	Brush, Good, HSG B
	1.810	65	Brush, Good, HSG C
	11.600	73	Brush, Good, HSG D
	17.890	67	Weighted Average
	17.530		97.99% Pervious Area
	0.360		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030
69.6	2,824	Total			

Summary for Subcatchment 25S: C27

Runoff = 55.19 cfs @ 12.47 hrs, Volume= 6.162 af, Depth= 4.28"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	3.827	98	impervious
	8.477	61	>75% Grass cover, Good, HSG B
	0.289	74	>75% Grass cover, Good, HSG C
	0.246	80	>75% Grass cover, Good, HSG D
*	3.840	70	Row crops, SR + CR, Good, HSG B
*	0.090	79	Row crops, SR + CR, Good, HSG C
	0.490	86	Fallow, bare soil, HSG B
	17.259	72	Weighted Average
	13.432		77.83% Pervious Area
	3.827		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.5	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.84"
2.3	150	0.0140	1.06		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
10.3	482	0.0125	0.78		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.6	1,570	0.0125	3.45	18.44	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.7 '/' Top.W=10.70' n= 0.030
0.6	163	0.0800	4.24		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
34.3	2,515	Total			

Summary for Subcatchment 26S: C28A & C28B

Runoff = 52.99 cfs @ 12.52 hrs, Volume= 6.205 af, Depth= 3.52"
Routed to Link 24L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.598	98	impervious
	6.420	61	>75% Grass cover, Good, HSG B
	1.116	80	>75% Grass cover, Good, HSG D
	6.805	55	Woods, Good, HSG B
*	5.229	70	Row crops, SR + CR, Good, HSG B
	21.168	65	Weighted Average
	19.570		92.45% Pervious Area
	1.598		7.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	150	0.1070	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.84"
1.2	150	0.1730	2.08		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.6	365	0.0360	1.71		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
5.3	651	0.0120	2.04	16.34	**Channel Flow,** Area= 8.0 sf Perim= 16.1' r= 0.50' n= 0.050
2.6	273	0.0390	1.78		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
7.8	1,714	0.0140	3.67	25.72	**Channel Flow,** Area= 7.0 sf Perim= 14.1' r= 0.50' n= 0.030
36.6	3,303	Total			

Summary for Subcatchment 27S: Salt Loading Area

Runoff = 1.90 cfs @ 12.13 hrs, Volume= 0.107 af, Depth= 6.34"
Routed to Pond 28P : Salt Shed Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (sf)	CN	Description
*	4,694	98	
*	4,130	80	>75% Grass cover, Good, compacted, HSG C
	8,824	90	Weighted Average
	4,130		46.80% Pervious Area
	4,694		53.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 28S: Luds Lane

Runoff = 3.00 cfs @ 12.19 hrs, Volume= 0.193 af, Depth= 3.09"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
0.750	61	>75% Grass cover, Good, HSG B
0.750		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	71	0.0210	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"

Summary for Subcatchment 51S: C4-B

Runoff = 21.17 cfs @ 12.32 hrs, Volume= 1.873 af, Depth= 4.85"
Routed to Pond 6P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.550	98	
	1.935	61	>75% Grass cover, Good, HSG B
	1.155	74	>75% Grass cover, Good, HSG C
	4.640	77	Weighted Average
	3.090		66.59% Pervious Area
	1.550		33.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.1	150	0.0330	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.84"
1.7	129	0.0310	1.23		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.2	522	0.0082	2.69	16.15	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
22.0	801	Total			

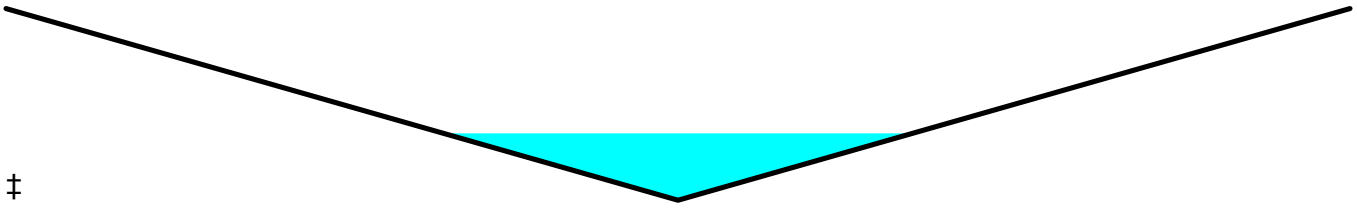
Summary for Reach 9R: Swale 1

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 4.63" for 200-yr event
Inflow = 53.07 cfs @ 13.75 hrs, Volume= 31.489 af
Outflow = 52.99 cfs @ 13.91 hrs, Volume= 31.478 af, Atten= 0%, Lag= 9.4 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.74 fps, Min. Travel Time= 10.9 min
Avg. Velocity = 0.94 fps, Avg. Travel Time= 20.2 min

Peak Storage= 34,724 cf @ 13.91 hrs
Average Depth at Peak Storage= 1.75' , Surface Width= 34.95'
Bank-Full Depth= 5.00' Flow Area= 250.0 sf, Capacity= 874.22 cfs

0.00' x 5.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 100.00'
Length= 1,137.0' Slope= 0.0041 '/'
Inlet Invert= 874.89', Outlet Invert= 870.22'



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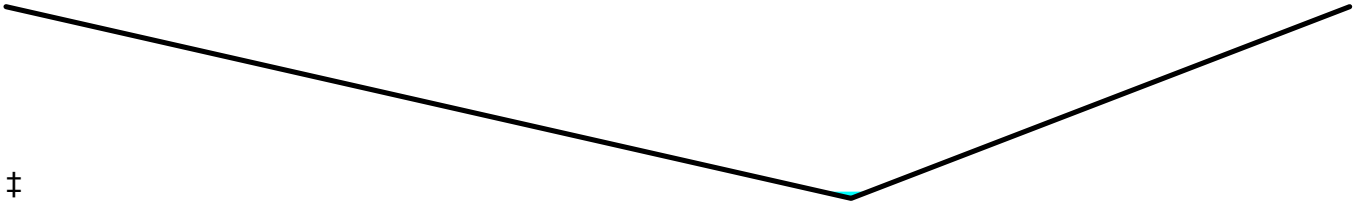
Summary for Reach 11R: Swale 4

Inflow = 0.13 cfs @ 13.21 hrs, Volume= 0.004 af
Outflow = 0.03 cfs @ 13.49 hrs, Volume= 0.004 af, Atten= 80%, Lag= 16.9 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.37 fps, Min. Travel Time= 80.5 min
Avg. Velocity = 0.19 fps, Avg. Travel Time= 160.6 min

Peak Storage= 125 cf @ 13.49 hrs
Average Depth at Peak Storage= 0.10' , Surface Width= 1.30'
Bank-Full Depth= 3.00' Flow Area= 55.8 sf, Capacity= 189.41 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 7.8 4.6 '/' Top Width= 37.20'
Length= 1,795.0' Slope= 0.0028 '/'
Inlet Invert= 868.00', Outlet Invert= 863.00'



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Summary for Reach 13R: Swale 2

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 3.19" for 200-yr event
Inflow = 100.52 cfs @ 13.48 hrs, Volume= 17.677 af
Outflow = 40.80 cfs @ 13.93 hrs, Volume= 17.491 af, Atten= 59%, Lag= 26.8 min
Routed to Pond 15P : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.07 fps, Min. Travel Time= 20.9 min
Avg. Velocity = 1.19 fps, Avg. Travel Time= 36.2 min

Peak Storage= 51,209 cf @ 13.93 hrs
Average Depth at Peak Storage= 0.99' , Surface Width= 29.84'
Bank-Full Depth= 3.00' Flow Area= 120.0 sf, Capacity= 466.95 cfs

10.00' x 3.00' deep channel, n= 0.050
Side Slope Z-value= 10.0 '/' Top Width= 70.00'
Length= 2,591.9' Slope= 0.0084 '/'
Inlet Invert= 892.00', Outlet Invert= 870.22'

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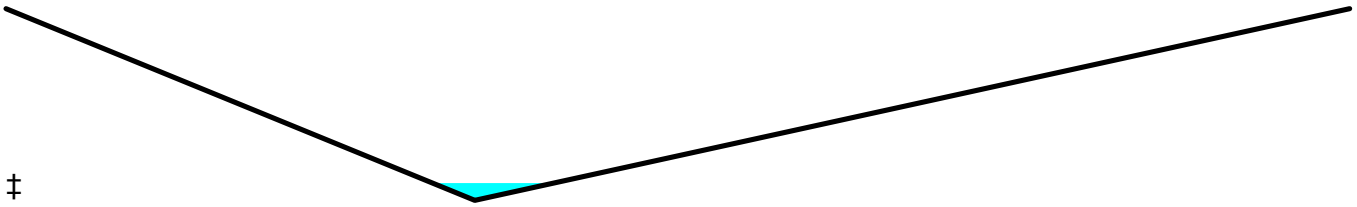
Summary for Reach 14R: Swale 3

Inflow = 0.52 cfs @ 13.84 hrs, Volume= 0.083 af
Outflow = 0.48 cfs @ 14.07 hrs, Volume= 0.083 af, Atten= 8%, Lag= 13.6 min
Routed to Pond 22P : Existing Depression 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.01 fps, Min. Travel Time= 24.6 min
Avg. Velocity = 0.43 fps, Avg. Travel Time= 58.2 min

Peak Storage= 707 cf @ 14.07 hrs
Average Depth at Peak Storage= 0.27' , Surface Width= 3.50'
Bank-Full Depth= 3.00' Flow Area= 58.1 sf, Capacity= 290.70 cfs

0.00' x 3.00' deep channel, n= 0.035
Side Slope Z-value= 4.5 8.4 '/' Top Width= 38.70'
Length= 1,492.0' Slope= 0.0082 '/'
Inlet Invert= 877.30', Outlet Invert= 865.00'



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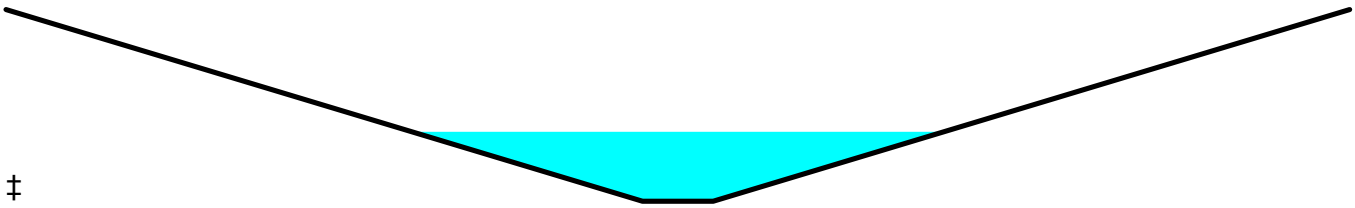
Summary for Reach 15R: Overland Flow

Inflow = 144.73 cfs @ 13.25 hrs, Volume= 57.040 af
Outflow = 140.85 cfs @ 13.95 hrs, Volume= 57.040 af, Atten= 3%, Lag= 42.0 min
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.05 fps, Min. Travel Time= 13.5 min
Avg. Velocity = 1.42 fps, Avg. Travel Time= 29.1 min

Peak Storage= 114,136 cf @ 13.95 hrs
Average Depth at Peak Storage= 1.08' , Surface Width= 75.07'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,718.10 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0073 '/'
Inlet Invert= 876.00', Outlet Invert= 858.00'



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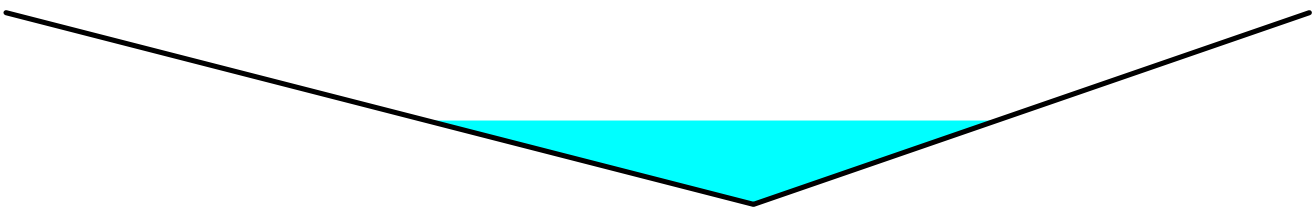
Summary for Reach 21R: Swale 5

Inflow = 12.25 cfs @ 13.18 hrs, Volume= 3.546 af
Outflow = 12.23 cfs @ 13.26 hrs, Volume= 3.546 af, Atten= 0%, Lag= 4.4 min
Routed to Reach 22R : Swale 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.10 fps, Min. Travel Time= 5.5 min
Avg. Velocity = 0.96 fps, Avg. Travel Time= 12.0 min

Peak Storage= 4,029 cf @ 13.26 hrs
Average Depth at Peak Storage= 1.31' , Surface Width= 8.91'
Bank-Full Depth= 3.00' Flow Area= 30.6 sf, Capacity= 111.43 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 3.9 2.9 '/' Top Width= 20.40'
Length= 690.6' Slope= 0.0033 '/'
Inlet Invert= 863.60', Outlet Invert= 861.30'



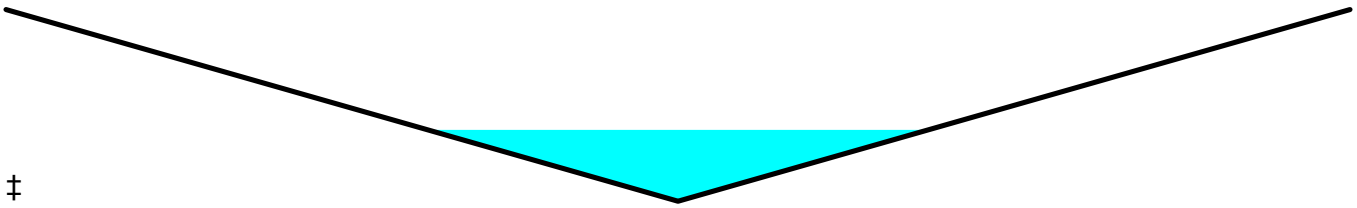
Summary for Reach 22R: Swale 6

Inflow = 12.23 cfs @ 13.26 hrs, Volume= 3.546 af
Outflow = 12.06 cfs @ 13.45 hrs, Volume= 3.546 af, Atten= 1%, Lag= 11.4 min
Routed to Link 21L : Ag. Ditch #4 Tributary

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.94 fps, Min. Travel Time= 11.8 min
Avg. Velocity = 0.81 fps, Avg. Travel Time= 28.3 min

Peak Storage= 8,522 cf @ 13.45 hrs
Average Depth at Peak Storage= 1.12' , Surface Width= 11.15'
Bank-Full Depth= 3.00' Flow Area= 45.0 sf, Capacity= 168.82 cfs

0.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 5.0 '/' Top Width= 30.00'
Length= 1,370.6' Slope= 0.0034 '/'
Inlet Invert= 861.30', Outlet Invert= 856.60'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 6.11" for 200-yr event
Inflow = 42.78 cfs @ 12.13 hrs, Volume= 2.378 af
Outflow = 7.79 cfs @ 12.45 hrs, Volume= 2.376 af, Atten= 82%, Lag= 19.4 min
Primary = 7.79 cfs @ 12.45 hrs, Volume= 2.376 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 885.82' @ 12.45 hrs Surf.Area= 35,286 sf Storage= 47,996 cf

Plug-Flow detention time= 137.8 min calculated for 2.376 af (100% of inflow)
Center-of-Mass det. time= 137.5 min (915.3 - 777.8)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=7.79 cfs @ 12.45 hrs HW=885.82' TW=880.30' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 3.26 cfs)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 4.53 cfs @ 1.42 fps)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 6.70" for 200-yr event
Inflow = 7.16 cfs @ 12.13 hrs, Volume= 0.416 af
Outflow = 4.61 cfs @ 12.19 hrs, Volume= 0.364 af, Atten= 36%, Lag= 3.9 min
Discarded = 0.02 cfs @ 12.19 hrs, Volume= 0.027 af
Primary = 4.58 cfs @ 12.19 hrs, Volume= 0.337 af
Routed to Pond 4P : County - Storm Pond 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 881.47' @ 12.19 hrs Surf.Area= 4,047 sf Storage= 6,116 cf

Plug-Flow detention time= 141.8 min calculated for 0.364 af (87% of inflow)
Center-of-Mass det. time= 89.7 min (852.8 - 763.1)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.19 hrs HW=881.47' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=4.58 cfs @ 12.19 hrs HW=881.47' TW=878.93' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 4.58 cfs @ 5.83 fps)
  └**2=Orifice/Grate** (Passes < 1.10 cfs potential flow)
  └**3=Orifice/Grate** (Passes < 6.55 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: County - Storm Pond 2

Inflow Area = 22.203 ac, 36.68% Impervious, Inflow Depth = 4.93" for 200-yr event
Inflow = 73.67 cfs @ 12.35 hrs, Volume= 9.127 af
Outflow = 49.11 cfs @ 12.62 hrs, Volume= 9.127 af, Atten= 33%, Lag= 15.9 min
Discarded = 0.13 cfs @ 7.28 hrs, Volume= 0.261 af
Primary = 48.98 cfs @ 12.62 hrs, Volume= 8.866 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.56' @ 12.63 hrs Surf.Area= 0.926 ac Storage= 2.420 af

Plug-Flow detention time= 91.6 min calculated for 9.124 af (100% of inflow)
Center-of-Mass det. time= 91.6 min (936.8 - 845.2)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.829 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.253	0.000	0.000
877.37	0.258	0.043	0.043
877.38	0.577	0.004	0.048
878.00	0.620	0.371	0.419
879.00	0.757	0.688	1.107
880.00	0.850	0.803	1.911
881.00	0.986	0.918	2.829

Device	Routing	Invert	Outlet Devices
#1	Primary	877.12'	**15.0" Round Culvert X 2.00** L= 39.2' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.12' / 877.06' S= 0.0015 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.13 cfs Exfiltration at all elevations**
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.13 cfs @ 7.28 hrs HW=877.24' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=48.88 cfs @ 12.62 hrs HW=880.55' TW=878.73' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 15.95 cfs @ 6.50 fps)
│ ├**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
│ └**3=Broad-Crested Rectangular Weir** (Passes < 311.86 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Weir Controls 32.93 cfs @ 1.98 fps)

Summary for Pond 5P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 6.81" for 200-yr event
Inflow = 21.49 cfs @ 12.13 hrs, Volume= 1.261 af
Outflow = 12.37 cfs @ 12.20 hrs, Volume= 1.228 af, Atten= 42%, Lag= 4.5 min
Discarded = 0.06 cfs @ 12.20 hrs, Volume= 0.044 af
Primary = 12.32 cfs @ 12.20 hrs, Volume= 1.184 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 882.76' @ 12.20 hrs Surf.Area= 5,370 sf Storage= 9,404 cf

Plug-Flow detention time= 60.6 min calculated for 1.227 af (97% of inflow)
Center-of-Mass det. time= 45.5 min (805.0 - 759.5)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.06 cfs @ 12.20 hrs HW=882.76' (Free Discharge)
└**5=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=12.32 cfs @ 12.20 hrs HW=882.76' TW=880.68' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 12.26 cfs @ 6.94 fps)
│ ├**2=Orifice/Grate** (Passes < 1.61 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 38.16 cfs potential flow)
└**4=Broad-Crested Rectangular Weir**(Weir Controls 0.05 cfs @ 0.31 fps)

Summary for Pond 6P: CNTY-Infiltration Basin #1

Inflow Area = 4.640 ac, 33.41% Impervious, Inflow Depth = 4.85" for 200-yr event
Inflow = 21.17 cfs @ 12.32 hrs, Volume= 1.873 af
Outflow = 14.57 cfs @ 12.50 hrs, Volume= 1.792 af, Atten= 31%, Lag= 11.1 min
Discarded = 0.20 cfs @ 12.50 hrs, Volume= 0.107 af
Primary = 14.37 cfs @ 12.50 hrs, Volume= 1.685 af
Routed to Pond 8P : County - Storm Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.80' @ 12.50 hrs Surf.Area= 18,001 sf Storage= 26,226 cf

Plug-Flow detention time= 98.2 min calculated for 1.791 af (96% of inflow)
Center-of-Mass det. time= 75.3 min (891.6 - 816.3)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.20 cfs @ 12.50 hrs HW=883.80' (Free Discharge)
└**5=Exfiltration** (Controls 0.20 cfs)

Primary OutFlow Max=14.37 cfs @ 12.50 hrs HW=883.80' TW=880.34' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 5.65 cfs @ 7.20 fps)
└**2=Orifice/Grate** (Passes < 3.02 cfs potential flow)
└**3=Orifice/Grate** (Passes < 15.76 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 8.71 cfs @ 1.42 fps)

Summary for Pond 8P: County - Storm Pond 3

Inflow Area = 16.530 ac, 61.22% Impervious, Inflow Depth = 5.63" for 200-yr event
Inflow = 102.89 cfs @ 12.13 hrs, Volume= 7.753 af
Outflow = 73.78 cfs @ 12.19 hrs, Volume= 7.714 af, Atten= 28%, Lag= 3.7 min
Primary = 73.78 cfs @ 12.19 hrs, Volume= 7.714 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 880.68' @ 12.19 hrs Surf.Area= 30,911 sf Storage= 74,255 cf

Plug-Flow detention time= 75.7 min calculated for 7.714 af (99% of inflow)
Center-of-Mass det. time= 72.3 min (873.2 - 801.0)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=73.69 cfs @ 12.19 hrs HW=880.68' TW=877.62' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 28.13 cfs @ 7.96 fps)
  - **2=Special & User-Defined** (Passes < 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Passes < 346.18 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 45.55 cfs @ 2.22 fps)

Summary for Pond 9P: Storage at NE and SE corners of AB

Inflow Area = 81.683 ac, 28.47% Impervious, Inflow Depth > 4.64" for 200-yr event
Inflow = 163.91 cfs @ 12.60 hrs, Volume= 31.601 af
Outflow = 53.07 cfs @ 13.75 hrs, Volume= 31.489 af, Atten= 68%, Lag= 69.0 min
Primary = 53.07 cfs @ 13.75 hrs, Volume= 31.489 af
Routed to Reach 9R : Swale 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Starting Elev= 875.66' Surf.Area= 32,564 sf Storage= 19,458 cf
Peak Elev= 879.59' @ 13.75 hrs Surf.Area= 277,268 sf Storage= 520,172 cf (500,714 cf above start)

Plug-Flow detention time= 136.1 min calculated for 31.034 af (98% of inflow)
Center-of-Mass det. time= 119.3 min (998.6 - 879.3)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	640,022 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.00	26,400	0	0
876.00	35,739	31,070	31,070
877.00	63,982	49,861	80,930
878.00	141,395	102,689	183,619
879.00	231,121	186,258	369,877
880.00	309,169	270,145	640,022

Device	Routing	Invert	Outlet Devices
#1	Primary	875.66'	**36.0" Round Culvert** L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.66' / 874.89' S= 0.0077 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 7.07 sf

Primary OutFlow Max=53.07 cfs @ 13.75 hrs HW=879.59' TW=876.64' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 53.07 cfs @ 7.51 fps)

Summary for Pond 11P: Landfill Pond

Inflow Area = 28.500 ac, 1.16% Impervious, Inflow Depth = 5.19" for 200-yr event
Inflow = 191.59 cfs @ 12.18 hrs, Volume= 12.316 af
Outflow = 50.72 cfs @ 12.50 hrs, Volume= 11.865 af, Atten= 74%, Lag= 19.0 min
Primary = 50.72 cfs @ 12.50 hrs, Volume= 11.865 af
Routed to Pond 12P : Existing Depression 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.79' @ 12.50 hrs Surf.Area= 1.652 ac Storage= 5.749 af

Plug-Flow detention time= 170.3 min calculated for 11.865 af (96% of inflow)
Center-of-Mass det. time= 150.3 min (950.6 - 800.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=50.72 cfs @ 12.50 hrs HW=883.79' TW=876.67' (Dynamic Tailwater)
- **1=Culvert** (Passes 18.60 cfs of 20.33 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.47 cfs @ 12.20 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.52 cfs @ 11.86 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.57 cfs @ 11.51 fps)
  - **5=Orifice/Grate** (Orifice Controls 17.05 cfs @ 9.65 fps)
- **6=Broad-Crested Rectangular Weir** (Weir Controls 32.12 cfs @ 2.85 fps)

Summary for Pond 12P: Existing Depression 1

Inflow Area = 37.190 ac, 5.00% Impervious, Inflow Depth > 4.80" for 200-yr event
Inflow = 66.09 cfs @ 12.17 hrs, Volume= 14.887 af
Outflow = 34.43 cfs @ 13.19 hrs, Volume= 13.154 af, Atten= 48%, Lag= 61.2 min
Primary = 34.30 cfs @ 13.19 hrs, Volume= 13.150 af
Routed to Pond 15P : Existing Depression 2
Secondary = 0.13 cfs @ 13.21 hrs, Volume= 0.004 af
Routed to Reach 11R : Swale 4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 878.25' @ 13.21 hrs Storage= 141,486 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 111.6 min (1,034.8 - 923.2)

Volume	Invert	Avail.Storage	Storage Description
#1	875.00'	174,699 cf	**Custom Stage Data** Listed below

Elevation (feet)	Cum.Store (cubic-feet)
875.00	0
876.00	65,278
877.00	110,909
878.00	136,383
879.00	156,855
880.00	174,699

Device	Routing	Invert	Outlet Devices
#1	Primary	874.12'	**36.0" Round Culvert** L= 100.2' Ke= 0.200 Inlet / Outlet Invert= 874.12' / 873.48' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Secondary	878.00'	**Swale to West** Head (feet) 0.00 0.10 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.010 0.060 0.350 1.040 2.230 4.050 6.580 9.930 14.170 19.400 25.690

Primary OutFlow Max=34.28 cfs @ 13.19 hrs HW=878.25' TW=877.58' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 34.28 cfs @ 4.85 fps)

Secondary OutFlow Max=0.13 cfs @ 13.21 hrs HW=878.25' TW=868.07' (Dynamic Tailwater)
↑—**2=Swale to West** (Custom Controls 0.13 cfs)

Summary for Pond 13P: YH1 Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 3.73" for 200-yr event
Inflow = 133.65 cfs @ 12.80 hrs, Volume= 20.664 af
Outflow = 95.87 cfs @ 13.47 hrs, Volume= 17.957 af, Atten= 28%, Lag= 40.2 min
Primary = 95.87 cfs @ 13.47 hrs, Volume= 17.957 af
Routed to Pond 14P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 899.29' @ 13.47 hrs Surf.Area= 257,486 sf Storage= 437,523 cf

Plug-Flow detention time= 320.4 min calculated for 17.957 af (87% of inflow)
Center-of-Mass det. time= 264.7 min (1,132.3 - 867.6)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=95.84 cfs @ 13.47 hrs HW=899.29' TW=896.00' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 4.90 cfs @ 6.24 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 90.94 cfs @ 3.98 fps)

Summary for Pond 14P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 3.25" for 200-yr event
Inflow = 95.87 cfs @ 13.47 hrs, Volume= 17.957 af
Outflow = 100.52 cfs @ 13.48 hrs, Volume= 17.677 af, Atten= 0%, Lag= 0.6 min
Primary = 100.52 cfs @ 13.48 hrs, Volume= 17.677 af
Routed to Reach 13R : Swale 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 896.78' @ 13.48 hrs Surf.Area= 32,190 sf Storage= 33,874 cf

Plug-Flow detention time= 37.9 min calculated for 17.677 af (98% of inflow)
Center-of-Mass det. time= 22.2 min (1,154.5 - 1,132.3)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=100.52 cfs @ 13.48 hrs HW=896.78' TW=892.47' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 4.64 cfs @ 5.91 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 95.88 cfs @ 2.99 fps)

Summary for Pond 15P: Existing Depression 2

Inflow Area = 248.992 ac, 13.10% Impervious, Inflow Depth > 3.86" for 200-yr event
Inflow = 188.90 cfs @ 12.80 hrs, Volume= 80.065 af
Outflow = 154.57 cfs @ 13.25 hrs, Volume= 76.629 af, Atten= 18%, Lag= 27.2 min
Primary = 9.51 cfs @ 30.65 hrs, Volume= 19.506 af
Routed to Pond 17P : YH3 Pond
Secondary = 144.73 cfs @ 13.25 hrs, Volume= 57.040 af
Routed to Reach 15R : Overland Flow
Tertiary = 0.52 cfs @ 13.84 hrs, Volume= 0.083 af
Routed to Reach 14R : Swale 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 877.59' @ 13.84 hrs Surf.Area= 263,803 sf Storage= 413,461 cf

Plug-Flow detention time= 111.8 min calculated for 76.608 af (96% of inflow)
Center-of-Mass det. time= 71.0 min (1,088.7 - 1,017.7)

Volume	Invert	Avail.Storage	Storage Description
#1	870.00'	530,888 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.00	1,053	0	0
873.00	9,397	15,675	15,675
874.00	20,404	14,901	30,576
875.00	42,009	31,207	61,782
876.00	89,975	65,992	127,774
877.00	205,811	147,893	275,667
878.00	304,631	255,221	530,888

Device	Routing	Invert	Outlet Devices
#1	Primary	870.22'	**18.0" Round Culvert** L= 2,314.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 870.22' / 858.00' S= 0.0053 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	877.00'	**120.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Tertiary	877.30'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.030 0.200 0.570 1.230 3.610 7.780 14.110

Primary OutFlow Max=9.51 cfs @ 30.65 hrs HW=876.75' TW=859.86' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.51 cfs @ 5.38 fps)

Secondary OutFlow Max=144.73 cfs @ 13.25 hrs HW=877.59' TW=877.00' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 144.73 cfs @ 2.06 fps)

Tertiary OutFlow Max=0.52 cfs @ 13.84 hrs HW=877.59' TW=877.56' (Dynamic Tailwater)
3=Special & User-Defined (Custom Controls 0.52 cfs)

Summary for Pond 17P: YH3 Pond

Inflow Area = 470.972 ac, 9.99% Impervious, Inflow Depth > 3.38" for 200-yr event
Inflow = 375.58 cfs @ 12.67 hrs, Volume= 132.763 af
Outflow = 300.76 cfs @ 14.38 hrs, Volume= 125.741 af, Atten= 20%, Lag= 102.9 min
Primary = 300.76 cfs @ 14.38 hrs, Volume= 125.741 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 861.39' @ 14.38 hrs Surf.Area= 445,382 sf Storage= 807,576 cf

Plug-Flow detention time= 120.6 min calculated for 125.706 af (95% of inflow)
Center-of-Mass det. time= 70.7 min (1,089.6 - 1,018.9)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=300.74 cfs @ 14.38 hrs HW=861.39' TW=860.00' (Dynamic Tailwater)
1=Culvert (Outlet Controls 23.56 cfs @ 3.69 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 277.18 cfs @ 2.49 fps)

Summary for Pond 18P: YH4 Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 3.52" for 200-yr event
Inflow = 41.18 cfs @ 12.31 hrs, Volume= 3.582 af
Outflow = 29.56 cfs @ 12.49 hrs, Volume= 3.487 af, Atten= 28%, Lag= 10.6 min
Primary = 29.56 cfs @ 12.49 hrs, Volume= 3.487 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 862.45' @ 12.49 hrs Surf.Area= 37,338 sf Storage= 41,240 cf

Plug-Flow detention time= 127.1 min calculated for 3.486 af (97% of inflow)
Center-of-Mass det. time= 112.6 min (950.1 - 837.6)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=29.55 cfs @ 12.49 hrs HW=862.45' TW=859.83' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 1.11 cfs @ 3.18 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 28.44 cfs @ 2.17 fps)

Summary for Pond 19P: YH5 Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 5.19" for 200-yr event
Inflow = 18.20 cfs @ 12.14 hrs, Volume= 1.016 af
Outflow = 0.89 cfs @ 13.59 hrs, Volume= 0.842 af, Atten= 95%, Lag= 86.5 min
Primary = 0.89 cfs @ 13.59 hrs, Volume= 0.842 af
Routed to Pond 17P : YH3 Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 865.71' @ 13.59 hrs Surf.Area= 43,136 sf Storage= 29,055 cf

Plug-Flow detention time= 453.8 min calculated for 0.841 af (83% of inflow)
Center-of-Mass det. time= 391.0 min (1,187.9 - 796.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.89 cfs @ 13.59 hrs HW=865.71' TW=861.36' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.89 cfs @ 2.97 fps)

Summary for Pond 20P: YH6-A

Inflow Area = 9.070 ac, 24.04% Impervious, Inflow Depth = 4.62" for 200-yr event
Inflow = 46.93 cfs @ 12.24 hrs, Volume= 3.492 af
Outflow = 5.14 cfs @ 25.53 hrs, Volume= 3.360 af, Atten= 89%, Lag= 797.6 min
Primary = 5.14 cfs @ 25.53 hrs, Volume= 3.360 af
Routed to Pond 21P : YH6B Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 60,840 sf Storage= 127,764 cf
Peak Elev= 858.54' @ 22.63 hrs Surf.Area= 82,453 sf Storage= 264,149 cf (136,385 cf above start)

Plug-Flow detention time= 1,255.7 min calculated for 0.427 af (12% of inflow)
Center-of-Mass det. time= 732.4 min (1,546.6 - 814.2)

Volume	Invert	Avail.Storage	Storage Description
#1	854.50'	667,659 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.50	60,840	0	0
856.60	60,840	127,764	127,764
857.00	64,679	25,104	152,868
858.00	73,339	69,009	221,877
859.00	90,134	81,737	303,613
860.00	109,122	99,628	403,241
861.00	129,626	119,374	522,615
862.00	160,461	145,044	667,659

Device	Routing	Invert	Outlet Devices
#1	Primary	854.50'	**18.0" Round Culvert**
			L= 55.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.50' / 854.22' S= 0.0051 '/' Cc= 0.900
			n= 0.024, Flow Area= 1.77 sf

Primary OutFlow Max=5.15 cfs @ 25.53 hrs HW=858.03' TW=857.33' (Dynamic Tailwater)
1=Culvert (Outlet Controls 5.15 cfs @ 2.92 fps)

Summary for Pond 21P: YH6B Pond

Inflow Area = 579.442 ac, 9.62% Impervious, Inflow Depth > 3.30" for 200-yr event
Inflow = 377.07 cfs @ 13.04 hrs, Volume= 159.136 af
Outflow = 474.21 cfs @ 14.33 hrs, Volume= 158.532 af, Atten= 0%, Lag= 77.2 min
Primary = 474.21 cfs @ 14.33 hrs, Volume= 158.532 af
Routed to Link 22L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 898.63' @ 14.33 hrs Surf.Area= 771,626 sf Storage= 2,032,289 cf (1,475,843 cf above start)

Plug-Flow detention time= 227.4 min calculated for 145.758 af (92% of inflow)
Center-of-Mass det. time= 120.1 min (1,173.7 - 1,053.6)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00** L= 28.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=474.19 cfs @ 14.33 hrs HW=898.63' TW=856.60' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 474.19 cfs @ 24.64 fps)

Summary for Pond 22P: Existing Depression 3

Inflow Area = 30.220 ac, 19.56% Impervious, Inflow Depth = 3.88" for 200-yr event
Inflow = 136.03 cfs @ 12.23 hrs, Volume= 9.766 af
Outflow = 16.85 cfs @ 13.18 hrs, Volume= 8.236 af, Atten= 88%, Lag= 57.2 min
Primary = 4.59 cfs @ 13.18 hrs, Volume= 4.690 af
Routed to Pond 17P : YH3 Pond
Secondary = 12.25 cfs @ 13.18 hrs, Volume= 3.546 af
Routed to Reach 21R : Swale 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 864.82' @ 13.18 hrs Surf.Area= 2.778 ac Storage= 5.302 af

Plug-Flow detention time= 321.1 min calculated for 8.233 af (84% of inflow)
Center-of-Mass det. time= 259.3 min (1,085.4 - 826.1)

Volume	Invert	Avail.Storage	Storage Description
#1	860.00'	12.833 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
860.00	0.006	0.000	0.000
861.00	0.016	0.011	0.011
862.00	0.550	0.283	0.294
863.00	1.425	0.987	1.281
864.00	2.395	1.910	3.191
865.00	2.865	2.630	5.821
866.00	3.493	3.179	9.000
867.00	4.172	3.833	12.833

Device	Routing	Invert	Outlet Devices
#1	Primary	862.84'	**12.0" Round Culvert** L= 30.7' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 862.84' / 861.39' S= 0.0472 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	865.74'	**50.0' long x 12.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#3	Secondary	863.60'	**Swale in ROW to West** Head (feet) 0.00 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 Disch. (cfs) 0.000 0.630 1.850 4.000 7.240 11.780 17.770 25.370 34.720 45.990 59.290 74.770

Primary OutFlow Max=4.59 cfs @ 13.18 hrs HW=864.82' TW=861.35' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 4.59 cfs @ 5.85 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=12.25 cfs @ 13.18 hrs HW=864.82' TW=864.91' (Dynamic Tailwater)
└─**3=Swale in ROW to West** (Custom Controls 12.25 cfs)

Summary for Pond 28P: Salt Shed Basin

Inflow Area = 0.203 ac, 53.20% Impervious, Inflow Depth = 6.34" for 200-yr event
Inflow = 1.90 cfs @ 12.13 hrs, Volume= 0.107 af
Outflow = 1.78 cfs @ 12.15 hrs, Volume= 0.094 af, Atten= 6%, Lag= 1.4 min
Primary = 1.78 cfs @ 12.15 hrs, Volume= 0.094 af
Routed to Pond 9P : Storage at NE and SE corners of AB

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 883.20' @ 12.15 hrs Surf.Area= 873 sf Storage= 883 cf

Plug-Flow detention time= 85.4 min calculated for 0.094 af (88% of inflow)
Center-of-Mass det. time= 34.6 min (807.0 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1	881.50'	1,163 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
881.50	212	0	0
882.00	363	144	144
883.00	781	572	716
883.50	1,009	448	1,163

Device	Routing	Invert	Outlet Devices
#1	Primary	881.50'	**6.0" Round Culvert** L= 134.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 881.50' / 880.80' S= 0.0052 '/' Cc= 0.900 n= 0.013, Flow Area= 0.20 sf
#2	Device 1	882.80'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	883.00'	**5.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=1.78 cfs @ 12.15 hrs HW=883.20' TW=877.45' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 0.62 cfs @ 3.18 fps)
  - **2=Orifice/Grate** (Passes 0.62 cfs of 2.40 cfs potential flow)
- **3=Broad-Crested Rectangular Weir** (Weir Controls 1.15 cfs @ 1.14 fps)

Summary for Link 21L: Ag. Ditch #4 Tributary

Inflow Area = 37.620 ac, 33.12% Impervious, Inflow Depth = 5.98" for 200-yr event
Inflow = 135.72 cfs @ 12.46 hrs, Volume= 18.735 af
Primary = 135.64 cfs @ 12.73 hrs, Volume= 18.735 af, Atten= 0%, Lag= 16.1 min
Routed to Link 22L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 22L: Combined to Ag Ditch #4

Inflow Area = 634.952 ac, 10.79% Impervious, Inflow Depth > 3.46" for 200-yr event
Inflow = 508.42 cfs @ 14.27 hrs, Volume= 182.835 af
Primary = 508.42 cfs @ 14.27 hrs, Volume= 182.835 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 24L: Door Creek Combined

Inflow Area = 39.177 ac, 13.85% Impervious, Inflow Depth = 3.85" for 200-yr event
Inflow = 109.38 cfs @ 12.50 hrs, Volume= 12.561 af
Primary = 109.38 cfs @ 12.50 hrs, Volume= 12.561 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 25L: Combine

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

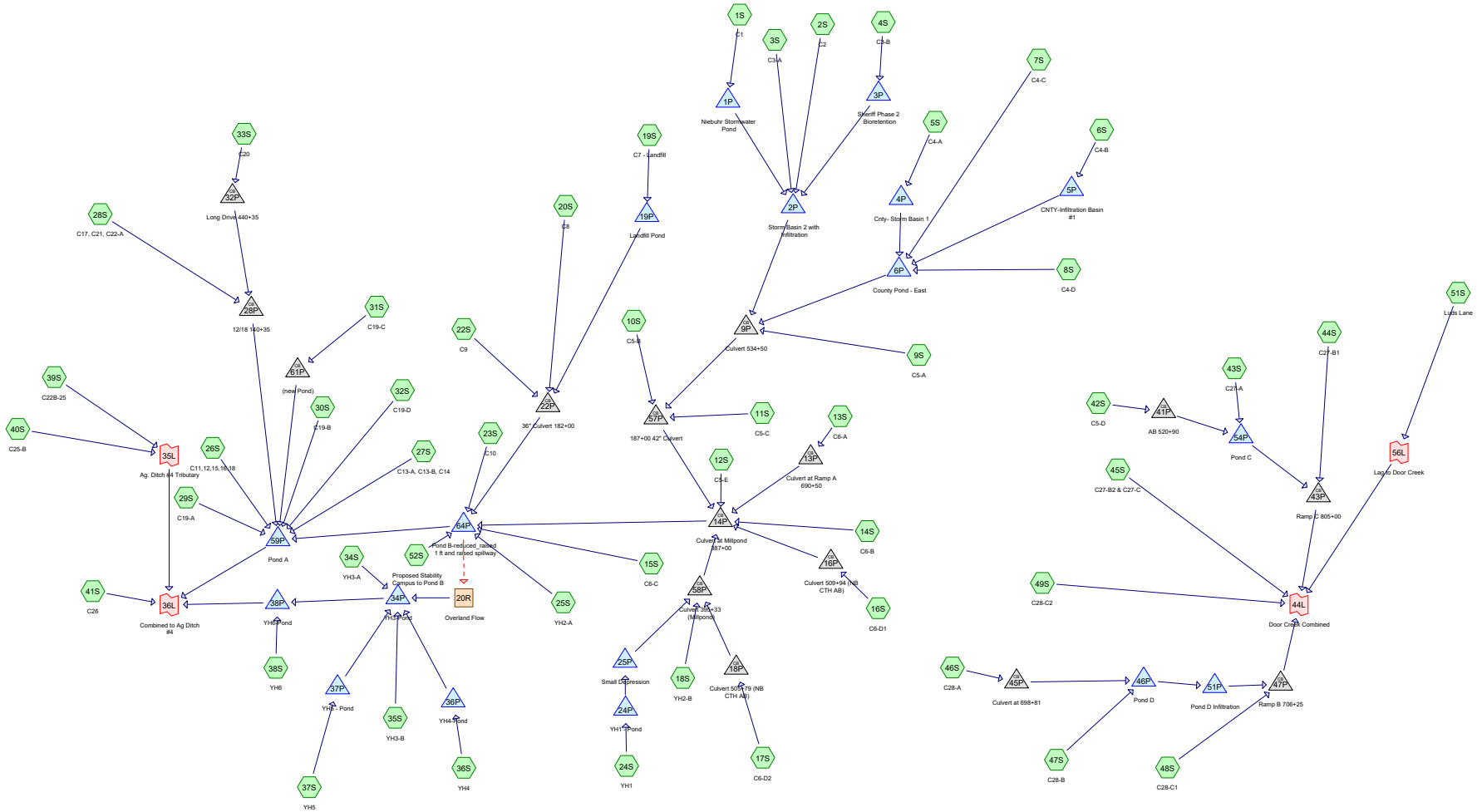
Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 0.00% Impervious, Inflow Depth = 3.09" for 200-yr event
Inflow = 3.00 cfs @ 12.19 hrs, Volume= 0.193 af
Primary = 3.00 cfs @ 12.62 hrs, Volume= 0.193 af, Atten= 0%, Lag= 25.6 min
Routed to Link 24L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

HydroCAD Output Files

- Post-Development Conditions Model



Routing Diagram for 02_Post-DevelopmentConditions_WisDOT_PondEval

Prepared by SCS Engineers, Printed 9/27/2023

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	MSE 24-hr	4	Default	24.00	1	2.49	2
2	2-yr	MSE 24-hr	4	Default	24.00	1	2.84	2
3	5-yr	MSE 24-hr	4	Default	24.00	1	3.45	2
4	10-yr	MSE 24-hr	4	Default	24.00	1	4.09	2
5	100-yr	MSE 24-hr	4	Default	24.00	1	6.66	2
6	200-yr	MSE 24-hr	4	Default	24.00	1	7.53	2
7	500-yr	MSE 24-hr	4	Default	24.00	1	8.94	2

Summary for Subcatchment 1S: C1

Runoff = 9.99 cfs @ 12.13 hrs, Volume= 0.534 af, Depth= 1.37"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 1.89 cfs @ 12.55 hrs, Volume= 0.286 af, Depth= 0.35"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 4.59 cfs @ 12.37 hrs, Volume= 0.443 af, Depth= 0.78"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 1.75 cfs @ 12.13 hrs, Volume= 0.094 af, Depth= 1.52"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 6.14 cfs @ 12.13 hrs, Volume= 0.344 af, Depth= 1.86"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 3.02 cfs @ 12.32 hrs, Volume= 0.271 af, Depth= 0.78"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 0.59 cfs @ 12.14 hrs, Volume= 0.034 af, Depth= 0.60"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 19.55 cfs @ 12.13 hrs, Volume= 1.055 af, Depth= 1.52"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 0.33 cfs @ 12.16 hrs, Volume= 0.029 af, Depth= 0.27"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 2.14 cfs @ 12.13 hrs, Volume= 0.131 af, Depth= 2.26"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 4.44 cfs @ 12.17 hrs, Volume= 0.272 af, Depth= 0.73"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 1.77 cfs @ 12.16 hrs, Volume= 0.104 af, Depth= 0.83"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 2.68 cfs @ 12.17 hrs, Volume= 0.171 af, Depth= 0.60"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 7.43 cfs @ 12.38 hrs, Volume= 0.753 af, Depth= 0.64"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 6.75 cfs @ 12.13 hrs, Volume= 0.384 af, Depth= 1.95"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 0.41 cfs @ 12.50 hrs, Volume= 0.071 af, Depth= 0.24"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 2.58 cfs @ 12.61 hrs, Volume= 0.418 af, Depth= 0.35"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 3.76 cfs @ 12.72 hrs, Volume= 0.755 af, Depth= 0.27"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 32.01 cfs @ 12.20 hrs, Volume= 2.089 af, Depth= 0.88"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 7.43 cfs @ 12.23 hrs, Volume= 0.550 af, Depth= 0.78"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 1.21 cfs @ 12.17 hrs, Volume= 0.073 af, Depth= 0.83"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 1.14 cfs @ 12.15 hrs, Volume= 0.064 af, Depth= 0.83"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 8.90 cfs @ 12.97 hrs, Volume= 1.949 af, Depth= 0.35"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 5.79 cfs @ 12.47 hrs, Volume= 0.713 af, Depth= 0.49"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 18.43 cfs @ 12.13 hrs, Volume= 0.979 af, Depth= 1.17"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 7.67 cfs @ 12.28 hrs, Volume= 0.717 af, Depth= 0.45"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 3.71 cfs @ 12.21 hrs, Volume= 0.265 af, Depth= 0.64"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 3.69 cfs @ 12.28 hrs, Volume= 0.311 af, Depth= 0.69"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 0.06 cfs @ 12.20 hrs, Volume= 0.009 af, Depth= 0.19"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 4.37 cfs @ 12.13 hrs, Volume= 0.233 af, Depth= 1.30"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 17.21 cfs @ 12.19 hrs, Volume= 1.117 af, Depth= 1.45"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 1.07 cfs @ 12.31 hrs, Volume= 0.123 af, Depth= 0.32"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 0.91 cfs @ 12.22 hrs, Volume= 0.085 af, Depth= 0.32"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 12.87 cfs @ 12.92 hrs, Volume= 3.356 af, Depth= 0.22"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 2.08 cfs @ 12.42 hrs, Volume= 0.299 af, Depth= 0.29"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 3.08 cfs @ 12.15 hrs, Volume= 0.173 af, Depth= 0.88"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 15.81 cfs @ 12.62 hrs, Volume= 2.677 af, Depth= 0.32"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 18.01 cfs @ 12.24 hrs, Volume= 1.340 af, Depth= 0.88"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.067 af, Depth= 0.83"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.480	98	
*	0.490	61	
	0.970	79	Weighted Average
	0.490		50.52% Pervious Area
	0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 1.80 cfs @ 13.19 hrs, Volume= 0.460 af, Depth= 0.32"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 1.66 cfs @ 12.19 hrs, Volume= 0.122 af, Depth= 0.45"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
* 0.700	98	
2.260	61	>75% Grass cover, Good, HSG B
0.290	74	>75% Grass cover, Good, HSG C
3.250	70	Weighted Average
2.550		78.46% Pervious Area
0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 5.27 cfs @ 12.14 hrs, Volume= 0.283 af, Depth= 0.88"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
* 1.626	98	
1.828	61	>75% Grass cover, Good, HSG B
0.390	98	Water Surface, 0% imp, HSG B
3.844	80	Weighted Average
2.218		57.70% Pervious Area
1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 0.60 cfs @ 12.15 hrs, Volume= 0.036 af, Depth= 0.49"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 3.68 cfs @ 12.48 hrs, Volume= 0.460 af, Depth= 0.49"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 1.94 cfs @ 12.30 hrs, Volume= 0.233 af, Depth= 0.29"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 4.10 cfs @ 12.14 hrs, Volume= 0.225 af, Depth= 0.73"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 0.77 cfs @ 12.15 hrs, Volume= 0.047 af, Depth= 0.49"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 3.60 cfs @ 12.24 hrs, Volume= 0.288 af, Depth= 0.56"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 0.57 cfs @ 12.47 hrs, Volume= 0.062 af, Depth= 0.99"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 14.20 cfs @ 12.05 hrs, Volume= 0.667 af, Depth= 1.60"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 1-yr Rainfall=2.49"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

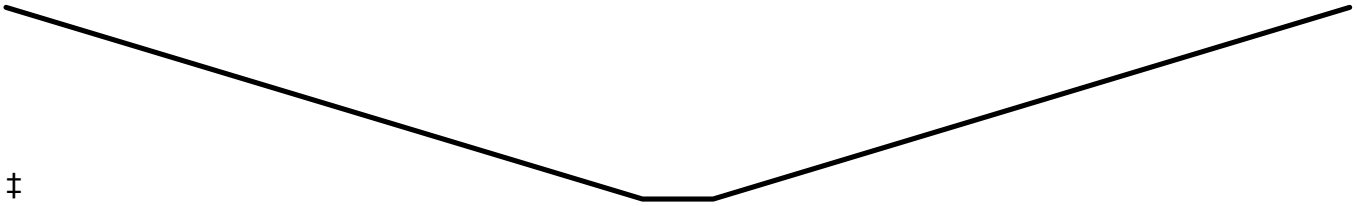
Summary for Reach 20R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 1.37" for 1-yr event
Inflow = 9.99 cfs @ 12.13 hrs, Volume= 0.534 af
Outflow = 1.39 cfs @ 12.59 hrs, Volume= 0.533 af, Atten= 86%, Lag= 27.4 min
Primary = 1.39 cfs @ 12.59 hrs, Volume= 0.533 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.41' @ 12.59 hrs Surf.Area= 16,420 sf Storage= 10,197 cf

Plug-Flow detention time= 99.0 min calculated for 0.533 af (100% of inflow)
Center-of-Mass det. time= 97.0 min (909.8 - 812.8)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.39 cfs @ 12.59 hrs HW=884.41' TW=877.84' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 1.39 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 0.70" for 1-yr event
Inflow = 7.43 cfs @ 12.41 hrs, Volume= 1.283 af
Outflow = 3.06 cfs @ 13.31 hrs, Volume= 1.283 af, Atten= 59%, Lag= 54.0 min
Discarded = 0.25 cfs @ 13.31 hrs, Volume= 0.230 af
Primary = 2.81 cfs @ 13.31 hrs, Volume= 1.053 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.02' @ 13.31 hrs Surf.Area= 0.451 ac Storage= 0.303 af

Plug-Flow detention time= 69.3 min calculated for 1.282 af (100% of inflow)
Center-of-Mass det. time= 69.3 min (963.5 - 894.2)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.25 cfs @ 13.31 hrs HW=878.02' (Free Discharge)
└**4=Exfiltration** (Controls 0.25 cfs)

Primary OutFlow Max=2.81 cfs @ 13.31 hrs HW=878.02' TW=875.82' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.81 cfs of 4.30 cfs potential flow)
  └**2=Special & User-Defined** (Custom Controls 2.81 cfs)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 1.52" for 1-yr event
Inflow = 1.75 cfs @ 12.13 hrs, Volume= 0.094 af
Outflow = 0.08 cfs @ 13.62 hrs, Volume= 0.065 af, Atten= 96%, Lag= 89.2 min
Discarded = 0.01 cfs @ 13.62 hrs, Volume= 0.044 af
Primary = 0.06 cfs @ 13.62 hrs, Volume= 0.021 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 880.57' @ 13.62 hrs Surf.Area= 3,183 sf Storage= 2,892 cf

Plug-Flow detention time= 1,123.2 min calculated for 0.065 af (69% of inflow)
Center-of-Mass det. time= 1,039.7 min (1,845.2 - 805.5)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.01 cfs @ 13.62 hrs HW=880.57' (Free Discharge)
└**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.06 cfs @ 13.62 hrs HW=880.57' TW=878.01' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.06 cfs of 2.86 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.06 cfs @ 0.87 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 1.86" for 1-yr event
Inflow = 6.14 cfs @ 12.13 hrs, Volume= 0.344 af
Outflow = 5.22 cfs @ 12.17 hrs, Volume= 0.333 af, Atten= 15%, Lag= 2.7 min
Discarded = 0.03 cfs @ 12.17 hrs, Volume= 0.053 af
Primary = 5.18 cfs @ 12.17 hrs, Volume= 0.280 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.76' @ 12.17 hrs Surf.Area= 3,636 sf Storage= 4,982 cf

Plug-Flow detention time= 246.1 min calculated for 0.333 af (97% of inflow)
Center-of-Mass det. time= 230.2 min (1,017.9 - 787.7)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.17 hrs HW=881.75' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=4.92 cfs @ 12.17 hrs HW=881.75' TW=878.35' (Dynamic Tailwater)
├**1=Culvert** (Passes 4.92 cfs of 9.63 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 1.06 cfs @ 4.23 fps)
│ └**3=Orifice/Grate** (Weir Controls 3.86 cfs @ 1.64 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 0.78" for 1-yr event
Inflow = 3.02 cfs @ 12.32 hrs, Volume= 0.271 af
Outflow = 0.37 cfs @ 13.70 hrs, Volume= 0.240 af, Atten= 88%, Lag= 82.8 min
Discarded = 0.05 cfs @ 13.70 hrs, Volume= 0.111 af
Primary = 0.32 cfs @ 13.70 hrs, Volume= 0.129 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.05' @ 13.70 hrs Surf.Area= 6,764 sf Storage= 6,385 cf

Plug-Flow detention time= 678.2 min calculated for 0.240 af (89% of inflow)
Center-of-Mass det. time= 629.1 min (1,487.3 - 858.2)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.05 cfs @ 13.70 hrs HW=882.05' (Free Discharge)
└**5=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.32 cfs @ 13.70 hrs HW=882.05' TW=878.36' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.32 cfs of 3.14 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.32 cfs @ 1.88 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 1.17" for 1-yr event
Inflow = 24.71 cfs @ 12.14 hrs, Volume= 1.498 af
Outflow = 4.95 cfs @ 12.50 hrs, Volume= 1.490 af, Atten= 80%, Lag= 21.3 min
Primary = 4.95 cfs @ 12.50 hrs, Volume= 1.490 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.68' @ 12.50 hrs Surf.Area= 19,875 sf Storage= 25,793 cf

Plug-Flow detention time= 162.7 min calculated for 1.490 af (99% of inflow)
Center-of-Mass det. time= 159.3 min (986.7 - 827.4)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=4.95 cfs @ 12.50 hrs HW=878.68' TW=875.82' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.95 cfs of 12.16 cfs potential flow)
  - **2=Special & User-Defined** (Custom Controls 4.95 cfs)
  - **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth > 0.80" for 1-yr event
Inflow = 7.16 cfs @ 12.82 hrs, Volume= 2.573 af
Outflow = 7.16 cfs @ 12.82 hrs, Volume= 2.573 af, Atten= 0%, Lag= 0.0 min
Primary = 7.16 cfs @ 12.82 hrs, Volume= 2.573 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.85' @ 12.82 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=7.16 cfs @ 12.82 hrs HW=875.85' TW=873.83' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Barrel Controls 7.16 cfs @ 3.96 fps)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 0.60" for 1-yr event
Inflow = 2.68 cfs @ 12.17 hrs, Volume= 0.171 af
Outflow = 2.68 cfs @ 12.17 hrs, Volume= 0.171 af, Atten= 0%, Lag= 0.0 min
Primary = 2.68 cfs @ 12.17 hrs, Volume= 0.171 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.96' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.58 cfs @ 12.17 hrs HW=878.95' TW=872.49' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 2.58 cfs @ 3.28 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 0.46" for 1-yr event
Inflow = 21.55 cfs @ 12.46 hrs, Volume= 6.922 af
Outflow = 21.55 cfs @ 12.46 hrs, Volume= 6.922 af, Atten= 0%, Lag= 0.0 min
Primary = 21.55 cfs @ 12.46 hrs, Volume= 6.922 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 872.61' @ 19.42 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=21.53 cfs @ 12.46 hrs HW=872.61' TW=871.59' (Dynamic Tailwater)
1=Culvert (Barrel Controls 21.53 cfs @ 4.49 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 0.24" for 1-yr event
Inflow = 0.41 cfs @ 12.50 hrs, Volume= 0.071 af
Outflow = 0.41 cfs @ 12.50 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min
Primary = 0.41 cfs @ 12.50 hrs, Volume= 0.071 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.24' @ 12.50 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=0.41 cfs @ 12.50 hrs HW=878.24' TW=872.61' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.41 cfs @ 2.98 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 0.35" for 1-yr event
Inflow = 2.58 cfs @ 12.61 hrs, Volume= 0.418 af
Outflow = 2.58 cfs @ 12.61 hrs, Volume= 0.418 af, Atten= 0%, Lag= 0.0 min
Primary = 2.58 cfs @ 12.61 hrs, Volume= 0.418 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 878.59' @ 12.61 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=2.58 cfs @ 12.61 hrs HW=878.59' TW=876.90' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 2.58 cfs @ 4.10 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 0.88" for 1-yr event
Inflow = 32.01 cfs @ 12.20 hrs, Volume= 2.089 af
Outflow = 2.12 cfs @ 13.70 hrs, Volume= 2.074 af, Atten= 93%, Lag= 90.4 min
Primary = 2.12 cfs @ 13.70 hrs, Volume= 2.074 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.95' @ 13.70 hrs Surf.Area= 0.653 ac Storage= 1.242 af

Plug-Flow detention time= 684.6 min calculated for 2.074 af (99% of inflow)
Center-of-Mass det. time= 680.4 min (1,523.4 - 843.0)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.12 cfs @ 13.70 hrs HW=879.95' TW=874.63' (Dynamic Tailwater)
- **1=Culvert** (Passes 2.12 cfs of 11.64 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.30 cfs @ 7.73 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.31 cfs @ 7.19 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.32 cfs @ 6.60 fps)
  - **5=Orifice/Grate** (Weir Controls 1.19 cfs @ 1.39 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth > 0.85" for 1-yr event
Inflow = 9.05 cfs @ 12.22 hrs, Volume= 2.697 af
Outflow = 9.05 cfs @ 12.22 hrs, Volume= 2.697 af, Atten= 0%, Lag= 0.0 min
Primary = 9.05 cfs @ 12.22 hrs, Volume= 2.697 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.06' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=8.86 cfs @ 12.22 hrs HW=875.05' TW=871.35' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 8.86 cfs @ 5.98 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 0.35" for 1-yr event
Inflow = 8.90 cfs @ 12.97 hrs, Volume= 1.949 af
Outflow = 1.00 cfs @ 19.49 hrs, Volume= 1.691 af, Atten= 89%, Lag= 390.9 min
Primary = 1.00 cfs @ 19.49 hrs, Volume= 1.691 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 895.55' @ 19.49 hrs Surf.Area= 98,598 sf Storage= 53,558 cf

Plug-Flow detention time= 846.6 min calculated for 1.691 af (87% of inflow)
Center-of-Mass det. time= 788.5 min (1,724.2 - 935.7)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.00 cfs @ 19.49 hrs HW=895.55' TW=894.51' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.00 cfs @ 2.23 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.31" for 1-yr event
Inflow = 1.00 cfs @ 19.49 hrs, Volume= 1.691 af
Outflow = 0.99 cfs @ 20.43 hrs, Volume= 1.674 af, Atten= 1%, Lag= 56.5 min
Primary = 0.99 cfs @ 20.43 hrs, Volume= 1.674 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 894.51' @ 20.43 hrs Surf.Area= 10,465 sf Storage= 4,180 cf

Plug-Flow detention time= 91.8 min calculated for 1.673 af (99% of inflow)
Center-of-Mass det. time= 67.7 min (1,791.9 - 1,724.2)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.99 cfs @ 20.43 hrs HW=894.51' TW=876.40' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.99 cfs @ 2.44 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 0.49" for 1-yr event
Inflow = 4.51 cfs @ 12.23 hrs, Volume= 0.388 af
Outflow = 4.51 cfs @ 12.23 hrs, Volume= 0.388 af, Atten= 0%, Lag= 0.0 min
Primary = 4.51 cfs @ 12.23 hrs, Volume= 0.388 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.60' @ 12.23 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=4.44 cfs @ 12.23 hrs HW=861.60' TW=859.34' (Dynamic Tailwater)
1=RCP_Elliptical 45x29 (Barrel Controls 4.44 cfs @ 2.97 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 0.32" for 1-yr event
Inflow = 1.07 cfs @ 12.31 hrs, Volume= 0.123 af
Outflow = 1.07 cfs @ 12.31 hrs, Volume= 0.123 af, Atten= 0%, Lag= 0.0 min
Primary = 1.07 cfs @ 12.31 hrs, Volume= 0.123 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.97' @ 12.28 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.06 cfs @ 12.31 hrs HW=861.97' TW=861.54' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.06 cfs @ 2.89 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth > 0.23" for 1-yr event
Inflow = 13.21 cfs @ 12.92 hrs, Volume= 3.840 af
Outflow = 1.55 cfs @ 22.27 hrs, Volume= 2.948 af, Atten= 88%, Lag= 560.9 min
Primary = 1.55 cfs @ 22.27 hrs, Volume= 2.948 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 858.61' @ 22.27 hrs Surf.Area= 187,912 sf Storage= 113,814 cf

Plug-Flow detention time= 1,043.7 min calculated for 2.946 af (77% of inflow)
Center-of-Mass det. time= 906.5 min (1,930.7 - 1,024.3)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.55 cfs @ 22.27 hrs HW=858.61' TW=856.60' (Dynamic Tailwater)
↑ **1=Culvert** (Outlet Controls 1.55 cfs @ 2.25 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 0.29" for 1-yr event
Inflow = 2.08 cfs @ 12.42 hrs, Volume= 0.299 af
Outflow = 0.22 cfs @ 15.75 hrs, Volume= 0.277 af, Atten= 89%, Lag= 199.7 min
Primary = 0.22 cfs @ 15.75 hrs, Volume= 0.277 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.30' @ 15.75 hrs Surf.Area= 24,296 sf Storage= 6,856 cf

Plug-Flow detention time= 596.7 min calculated for 0.276 af (92% of inflow)
Center-of-Mass det. time= 563.1 min (1,476.0 - 912.9)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.22 cfs @ 15.75 hrs HW=861.30' TW=858.47' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.22 cfs @ 2.15 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 0.88" for 1-yr event
Inflow = 3.08 cfs @ 12.15 hrs, Volume= 0.173 af
Outflow = 0.05 cfs @ 19.54 hrs, Volume= 0.123 af, Atten= 98%, Lag= 443.5 min
Primary = 0.05 cfs @ 19.54 hrs, Volume= 0.123 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.15' @ 19.54 hrs Surf.Area= 39,537 sf Storage= 5,728 cf

Plug-Flow detention time= 1,176.9 min calculated for 0.123 af (71% of inflow)
Center-of-Mass det. time= 1,085.0 min (1,924.6 - 839.6)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.05 cfs @ 19.54 hrs HW=865.15' TW=858.59' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.05 cfs @ 1.44 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 0.22" for 1-yr event
Inflow = 15.81 cfs @ 12.62 hrs, Volume= 5.625 af
Outflow = 9.58 cfs @ 13.10 hrs, Volume= 5.625 af, Atten= 39%, Lag= 28.5 min
Primary = 9.58 cfs @ 13.10 hrs, Volume= 5.625 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 856.66' @ 13.10 hrs Surf.Area= 284,920 sf Storage= 572,454 cf (16,008 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 10.5 min (1,460.0 - 1,449.5)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=9.59 cfs @ 13.10 hrs HW=856.66' TW=856.60' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.59 cfs @ 1.20 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 0.45" for 1-yr event
Inflow = 1.66 cfs @ 12.19 hrs, Volume= 0.122 af
Outflow = 1.66 cfs @ 12.19 hrs, Volume= 0.122 af, Atten= 0%, Lag= 0.0 min
Primary = 1.66 cfs @ 12.19 hrs, Volume= 0.122 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.18' @ 12.19 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.63 cfs @ 12.19 hrs HW=876.17' TW=874.25' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 1.63 cfs @ 3.36 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 0.64" for 1-yr event
Inflow = 0.72 cfs @ 12.16 hrs, Volume= 0.428 af
Outflow = 0.72 cfs @ 12.16 hrs, Volume= 0.428 af, Atten= 0%, Lag= 0.0 min
Primary = 0.72 cfs @ 12.16 hrs, Volume= 0.428 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.69' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=0.70 cfs @ 12.16 hrs HW=873.68' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 0.70 cfs @ 2.52 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 0.29" for 1-yr event
Inflow = 1.94 cfs @ 12.30 hrs, Volume= 0.233 af
Outflow = 1.94 cfs @ 12.30 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min
Primary = 1.94 cfs @ 12.30 hrs, Volume= 0.233 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.55' @ 12.30 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=1.94 cfs @ 12.30 hrs HW=879.55' TW=876.33' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.94 cfs @ 3.63 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 0.42" for 1-yr event
Inflow = 4.81 cfs @ 12.16 hrs, Volume= 0.458 af
Outflow = 0.59 cfs @ 13.68 hrs, Volume= 0.452 af, Atten= 88%, Lag= 91.1 min
Primary = 0.59 cfs @ 13.68 hrs, Volume= 0.452 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.64' @ 13.68 hrs Surf.Area= 0.320 ac Storage= 0.199 af

Plug-Flow detention time= 286.5 min calculated for 0.452 af (99% of inflow)
Center-of-Mass det. time= 278.5 min (1,156.2 - 877.7)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.59 cfs @ 13.68 hrs HW=876.64' TW=875.62' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.59 cfs of 1.98 cfs potential flow)
│└**2=Orifice/Grate** (Orifice Controls 0.59 cfs @ 3.02 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 0.18" for 1-yr event
Inflow = 0.77 cfs @ 12.15 hrs, Volume= 0.216 af
Outflow = 0.77 cfs @ 12.15 hrs, Volume= 0.216 af, Atten= 0%, Lag= 0.0 min
Primary = 0.77 cfs @ 12.15 hrs, Volume= 0.216 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.07' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=0.76 cfs @ 12.15 hrs HW=874.07' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.76 cfs @ 2.39 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth > 0.41" for 1-yr event
Inflow = 0.59 cfs @ 13.68 hrs, Volume= 0.452 af
Outflow = 0.26 cfs @ 21.22 hrs, Volume= 0.452 af, Atten= 57%, Lag= 452.7 min
Discarded = 0.07 cfs @ 21.22 hrs, Volume= 0.282 af
Primary = 0.19 cfs @ 21.22 hrs, Volume= 0.169 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.02' @ 21.22 hrs Surf.Area= 19,720 sf Storage= 9,918 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 794.4 min (1,950.6 - 1,156.2)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.07 cfs @ 21.22 hrs HW=876.02' (Free Discharge)
└**5=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.19 cfs @ 21.22 hrs HW=876.02' TW=873.91' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.19 cfs of 0.68 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.19 cfs @ 1.76 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 0.68" for 1-yr event
Inflow = 6.74 cfs @ 12.15 hrs, Volume= 0.405 af
Outflow = 0.48 cfs @ 13.60 hrs, Volume= 0.392 af, Atten= 93%, Lag= 86.9 min
Primary = 0.48 cfs @ 13.60 hrs, Volume= 0.392 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.51' @ 13.60 hrs Surf.Area= 0.423 ac Storage= 0.208 af

Plug-Flow detention time= 385.5 min calculated for 0.392 af (97% of inflow)
Center-of-Mass det. time= 371.1 min (1,221.1 - 849.9)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.48 cfs @ 13.60 hrs HW=874.51' TW=873.63' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.48 cfs of 0.74 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.48 cfs @ 2.45 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth > 0.82" for 1-yr event
Inflow = 10.16 cfs @ 12.17 hrs, Volume= 2.975 af
Outflow = 10.16 cfs @ 12.17 hrs, Volume= 2.975 af, Atten= 0%, Lag= 0.0 min
Primary = 10.16 cfs @ 12.17 hrs, Volume= 2.975 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.95' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=9.85 cfs @ 12.17 hrs HW=873.94' TW=872.49' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 9.85 cfs @ 4.80 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 0.30" for 1-yr event
Inflow = 6.24 cfs @ 12.67 hrs, Volume= 2.847 af
Outflow = 6.24 cfs @ 12.67 hrs, Volume= 2.847 af, Atten= 0%, Lag= 0.0 min
Primary = 6.24 cfs @ 12.67 hrs, Volume= 2.847 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.92' @ 12.67 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=6.22 cfs @ 12.67 hrs HW=876.91' TW=872.55' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 6.22 cfs @ 4.03 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 0.54" for 1-yr event
Inflow = 48.87 cfs @ 12.17 hrs, Volume= 13.595 af
Outflow = 4.57 cfs @ 24.00 hrs, Volume= 11.570 af, Atten= 91%, Lag= 710.1 min
Primary = 4.57 cfs @ 24.00 hrs, Volume= 11.570 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 860.42' @ 24.00 hrs Surf.Area= 3.286 ac Storage= 4.565 af

Plug-Flow detention time= 819.7 min calculated for 11.562 af (85% of inflow)
Center-of-Mass det. time= 534.1 min (2,132.7 - 1,598.5)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.57 cfs @ 24.00 hrs HW=860.42' TW=856.60' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.57 cfs of 25.05 cfs potential flow)
  - **2=Custom Weir/Orifice** (Weir Controls 4.57 cfs @ 3.26 fps)
    - **3=Culvert** (Passes 4.57 cfs of 49.91 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **1=Culvert** (Controls 0.00 cfs)
  - **2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 1.30" for 1-yr event
Inflow = 4.37 cfs @ 12.13 hrs, Volume= 0.233 af
Outflow = 4.37 cfs @ 12.13 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min
Primary = 4.37 cfs @ 12.13 hrs, Volume= 0.233 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 860.68' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=4.19 cfs @ 12.13 hrs HW=860.65' TW=859.23' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 4.19 cfs @ 3.98 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)
↑—**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 0.56" for 1-yr event
Inflow = 38.78 cfs @ 12.20 hrs, Volume= 11.447 af
Outflow = 4.74 cfs @ 19.92 hrs, Volume= 9.840 af, Atten= 88%, Lag= 463.1 min
Primary = 4.74 cfs @ 19.92 hrs, Volume= 9.840 af
Routed to Pond 59P : Pond A
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 872.60' @ 19.92 hrs Surf.Area= 5.932 ac Storage= 5.894 af

Plug-Flow detention time= 937.7 min calculated for 9.840 af (86% of inflow)
Center-of-Mass det. time= 745.9 min (1,888.0 - 1,142.1)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.74 cfs @ 19.92 hrs HW=872.60' TW=860.32' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 4.74 cfs of 14.98 cfs potential flow)
↑—**2=Custom Weir/Orifice** (Weir Controls 4.74 cfs @ 2.81 fps)
↑—**3=Culvert** (Passes 4.74 cfs of 26.64 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.00' TW=872.00' (Dynamic Tailwater)
↑—**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 0.88" for 1-yr event
Inflow = 18.66 cfs @ 12.24 hrs, Volume= 1.407 af
Primary = 18.42 cfs @ 12.50 hrs, Volume= 1.407 af, Atten= 1%, Lag= 15.8 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 0.36" for 1-yr event
Inflow = 25.13 cfs @ 12.52 hrs, Volume= 19.061 af
Primary = 25.13 cfs @ 12.52 hrs, Volume= 19.061 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth > 0.43" for 1-yr event
Inflow = 6.70 cfs @ 12.35 hrs, Volume= 1.454 af
Primary = 6.70 cfs @ 12.35 hrs, Volume= 1.454 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 0.99" for 1-yr event
Inflow = 0.57 cfs @ 12.47 hrs, Volume= 0.062 af
Primary = 0.56 cfs @ 12.89 hrs, Volume= 0.062 af, Atten= 1%, Lag= 25.8 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1S: C1

Runoff = 12.14 cfs @ 12.13 hrs, Volume= 0.653 af, Depth= 1.68"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 3.06 cfs @ 12.52 hrs, Volume= 0.412 af, Depth= 0.51"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 6.10 cfs @ 12.36 hrs, Volume= 0.576 af, Depth= 1.02"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 2.10 cfs @ 12.13 hrs, Volume= 0.114 af, Depth= 1.84"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 7.17 cfs @ 12.13 hrs, Volume= 0.406 af, Depth= 2.20"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 4.02 cfs @ 12.32 hrs, Volume= 0.353 af, Depth= 1.02"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 0.82 cfs @ 12.14 hrs, Volume= 0.045 af, Depth= 0.81"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 23.42 cfs @ 12.13 hrs, Volume= 1.274 af, Depth= 1.84"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 0.63 cfs @ 12.15 hrs, Volume= 0.044 af, Depth= 0.40"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 2.45 cfs @ 12.13 hrs, Volume= 0.151 af, Depth= 2.61"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 5.94 cfs @ 12.17 hrs, Volume= 0.356 af, Depth= 0.96"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 2.31 cfs @ 12.16 hrs, Volume= 0.134 af, Depth= 1.07"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 3.73 cfs @ 12.17 hrs, Volume= 0.230 af, Depth= 0.81"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 10.29 cfs @ 12.37 hrs, Volume= 1.002 af, Depth= 0.86"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 7.84 cfs @ 12.13 hrs, Volume= 0.451 af, Depth= 2.29"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 0.77 cfs @ 12.45 hrs, Volume= 0.109 af, Depth= 0.37"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 4.18 cfs @ 12.57 hrs, Volume= 0.602 af, Depth= 0.51"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 6.63 cfs @ 12.67 hrs, Volume= 1.135 af, Depth= 0.40"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 41.53 cfs @ 12.19 hrs, Volume= 2.679 af, Depth= 1.13"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 9.86 cfs @ 12.23 hrs, Volume= 0.715 af, Depth= 1.02"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 1.59 cfs @ 12.16 hrs, Volume= 0.094 af, Depth= 1.07"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 1.48 cfs @ 12.15 hrs, Volume= 0.083 af, Depth= 1.07"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 14.17 cfs @ 12.93 hrs, Volume= 2.808 af, Depth= 0.51"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 8.57 cfs @ 12.45 hrs, Volume= 0.983 af, Depth= 0.67"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 22.86 cfs @ 12.13 hrs, Volume= 1.217 af, Depth= 1.45"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 11.71 cfs @ 12.27 hrs, Volume= 0.998 af, Depth= 0.63"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 5.10 cfs @ 12.21 hrs, Volume= 0.353 af, Depth= 0.86"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 5.05 cfs @ 12.27 hrs, Volume= 0.410 af, Depth= 0.91"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 0.16 cfs @ 12.16 hrs, Volume= 0.014 af, Depth= 0.31"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 5.34 cfs @ 12.13 hrs, Volume= 0.286 af, Depth= 1.60"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 20.80 cfs @ 12.19 hrs, Volume= 1.357 af, Depth= 1.76"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 1.83 cfs @ 12.29 hrs, Volume= 0.179 af, Depth= 0.47"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 1.57 cfs @ 12.21 hrs, Volume= 0.124 af, Depth= 0.47"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 24.18 cfs @ 12.86 hrs, Volume= 5.224 af, Depth= 0.34"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 3.66 cfs @ 12.39 hrs, Volume= 0.443 af, Depth= 0.43"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 3.99 cfs @ 12.15 hrs, Volume= 0.222 af, Depth= 1.13"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 26.26 cfs @ 12.59 hrs, Volume= 3.907 af, Depth= 0.47"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 23.41 cfs @ 12.24 hrs, Volume= 1.719 af, Depth= 1.13"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 1.62 cfs @ 12.14 hrs, Volume= 0.087 af, Depth= 1.07"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
* 0.480	98	
* 0.490	61	
0.970	79	Weighted Average
0.490		50.52% Pervious Area
0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 2.92 cfs @ 13.12 hrs, Volume= 0.672 af, Depth= 0.47"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 2.49 cfs @ 12.18 hrs, Volume= 0.170 af, Depth= 0.63"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
* 0.700	98	
2.260	61	>75% Grass cover, Good, HSG B
0.290	74	>75% Grass cover, Good, HSG C
3.250	70	Weighted Average
2.550		78.46% Pervious Area
0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 6.80 cfs @ 12.14 hrs, Volume= 0.362 af, Depth= 1.13"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
* 1.626	98	
1.828	61	>75% Grass cover, Good, HSG B
0.390	98	Water Surface, 0% imp, HSG B
3.844	80	Weighted Average
2.218		57.70% Pervious Area
1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 0.87 cfs @ 12.14 hrs, Volume= 0.050 af, Depth= 0.67"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 5.44 cfs @ 12.46 hrs, Volume= 0.634 af, Depth= 0.67"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 3.49 cfs @ 12.27 hrs, Volume= 0.345 af, Depth= 0.43"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 5.46 cfs @ 12.14 hrs, Volume= 0.295 af, Depth= 0.96"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 1.13 cfs @ 12.14 hrs, Volume= 0.064 af, Depth= 0.67"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 5.11 cfs @ 12.24 hrs, Volume= 0.389 af, Depth= 0.76"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 0.72 cfs @ 12.46 hrs, Volume= 0.078 af, Depth= 1.25"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 16.89 cfs @ 12.05 hrs, Volume= 0.801 af, Depth= 1.92"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 2-yr Rainfall=2.84"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

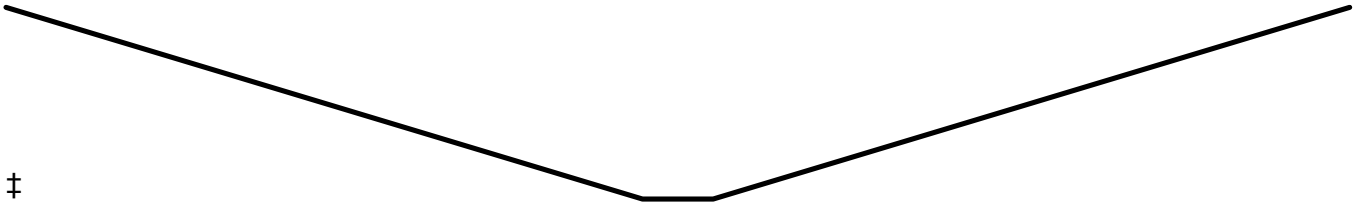
Summary for Reach 20R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 1.68" for 2-yr event
Inflow = 12.14 cfs @ 12.13 hrs, Volume= 0.653 af
Outflow = 1.61 cfs @ 12.60 hrs, Volume= 0.651 af, Atten= 87%, Lag= 28.1 min
Primary = 1.61 cfs @ 12.60 hrs, Volume= 0.651 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.56' @ 12.60 hrs Surf.Area= 18,900 sf Storage= 12,759 cf

Plug-Flow detention time= 104.7 min calculated for 0.651 af (100% of inflow)
Center-of-Mass det. time= 103.5 min (911.6 - 808.0)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.61 cfs @ 12.60 hrs HW=884.56' TW=878.05' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 1.61 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 0.92" for 2-yr event
Inflow = 10.29 cfs @ 12.41 hrs, Volume= 1.680 af
Outflow = 4.47 cfs @ 13.11 hrs, Volume= 1.680 af, Atten= 57%, Lag= 41.7 min
Discarded = 0.27 cfs @ 13.11 hrs, Volume= 0.253 af
Primary = 4.20 cfs @ 13.11 hrs, Volume= 1.427 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.23' @ 13.11 hrs Surf.Area= 0.476 ac Storage= 0.401 af

Plug-Flow detention time= 68.7 min calculated for 1.679 af (100% of inflow)
Center-of-Mass det. time= 68.8 min (957.2 - 888.5)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.27 cfs @ 13.11 hrs HW=878.23' (Free Discharge)
└**4=Exfiltration** (Controls 0.27 cfs)

Primary OutFlow Max=4.20 cfs @ 13.11 hrs HW=878.23' TW=876.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 4.20 cfs of 6.43 cfs potential flow)
  └**2=Special & User-Defined** (Custom Controls 3.79 cfs)
  └**3=Broad-Crested Rectangular Weir** (Weir Controls 0.41 cfs @ 0.44 fps)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 1.84" for 2-yr event
Inflow = 2.10 cfs @ 12.13 hrs, Volume= 0.114 af
Outflow = 0.18 cfs @ 13.07 hrs, Volume= 0.085 af, Atten= 92%, Lag= 56.6 min
Discarded = 0.01 cfs @ 13.07 hrs, Volume= 0.044 af
Primary = 0.16 cfs @ 13.07 hrs, Volume= 0.040 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 880.64' @ 13.07 hrs Surf.Area= 3,242 sf Storage= 3,094 cf

Plug-Flow detention time= 894.1 min calculated for 0.085 af (74% of inflow)
Center-of-Mass det. time= 817.0 min (1,618.0 - 801.0)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.01 cfs @ 13.07 hrs HW=880.64' (Free Discharge)
└**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.16 cfs @ 13.07 hrs HW=880.64' TW=878.23' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.16 cfs of 3.02 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.16 cfs @ 1.19 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 2.20" for 2-yr event
Inflow = 7.17 cfs @ 12.13 hrs, Volume= 0.406 af
Outflow = 6.42 cfs @ 12.16 hrs, Volume= 0.395 af, Atten= 10%, Lag= 2.1 min
Discarded = 0.03 cfs @ 12.16 hrs, Volume= 0.054 af
Primary = 6.39 cfs @ 12.16 hrs, Volume= 0.341 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.81' @ 12.16 hrs Surf.Area= 3,693 sf Storage= 5,153 cf

Plug-Flow detention time= 213.9 min calculated for 0.395 af (97% of inflow)
Center-of-Mass det. time= 200.3 min (984.2 - 783.8)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.16 hrs HW=881.80' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=6.19 cfs @ 12.16 hrs HW=881.80' TW=878.57' (Dynamic Tailwater)
└**1=Culvert** (Passes 6.19 cfs of 9.82 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.09 cfs @ 4.37 fps)
  └**3=Orifice/Grate** (Weir Controls 5.09 cfs @ 1.79 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 1.02" for 2-yr event
Inflow = 4.02 cfs @ 12.32 hrs, Volume= 0.353 af
Outflow = 0.66 cfs @ 13.35 hrs, Volume= 0.322 af, Atten= 84%, Lag= 61.8 min
Discarded = 0.06 cfs @ 13.35 hrs, Volume= 0.115 af
Primary = 0.60 cfs @ 13.35 hrs, Volume= 0.207 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.23' @ 13.35 hrs Surf.Area= 7,525 sf Storage= 7,630 cf

Plug-Flow detention time= 534.4 min calculated for 0.321 af (91% of inflow)
Center-of-Mass det. time= 494.8 min (1,346.1 - 851.3)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.06 cfs @ 13.35 hrs HW=882.23' (Free Discharge)
└**5=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.60 cfs @ 13.35 hrs HW=882.23' TW=878.66' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.60 cfs of 3.47 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.60 cfs @ 2.31 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 1.46" for 2-yr event
Inflow = 30.27 cfs @ 12.14 hrs, Volume= 1.867 af
Outflow = 6.55 cfs @ 12.46 hrs, Volume= 1.859 af, Atten= 78%, Lag= 19.3 min
Primary = 6.55 cfs @ 12.46 hrs, Volume= 1.859 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.95' @ 12.46 hrs Surf.Area= 20,811 sf Storage= 31,194 cf

Plug-Flow detention time= 147.2 min calculated for 1.859 af (100% of inflow)
Center-of-Mass det. time= 144.3 min (968.7 - 824.4)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=6.55 cfs @ 12.46 hrs HW=878.95' TW=875.96' (Dynamic Tailwater)
- **1=Culvert** (Passes 6.55 cfs of 15.00 cfs potential flow)
  - **2=Special & User-Defined** (Custom Controls 6.55 cfs)
  - **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth > 1.03" for 2-yr event
Inflow = 9.72 cfs @ 12.77 hrs, Volume= 3.330 af
Outflow = 9.72 cfs @ 12.77 hrs, Volume= 3.330 af, Atten= 0%, Lag= 0.0 min
Primary = 9.72 cfs @ 12.77 hrs, Volume= 3.330 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.01' @ 12.77 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=9.72 cfs @ 12.77 hrs HW=876.01' TW=874.05' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Barrel Controls 9.72 cfs @ 4.30 fps)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 0.81" for 2-yr event
Inflow = 3.73 cfs @ 12.17 hrs, Volume= 0.230 af
Outflow = 3.73 cfs @ 12.17 hrs, Volume= 0.230 af, Atten= 0%, Lag= 0.0 min
Primary = 3.73 cfs @ 12.17 hrs, Volume= 0.230 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.08' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=3.60 cfs @ 12.17 hrs HW=879.06' TW=872.73' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 3.60 cfs @ 3.59 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 0.63" for 2-yr event
Inflow = 31.71 cfs @ 12.46 hrs, Volume= 9.565 af
Outflow = 31.71 cfs @ 12.46 hrs, Volume= 9.565 af, Atten= 0%, Lag= 0.0 min
Primary = 31.71 cfs @ 12.46 hrs, Volume= 9.565 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 872.91' @ 12.46 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=31.66 cfs @ 12.46 hrs HW=872.91' TW=871.81' (Dynamic Tailwater)
1=Culvert (Barrel Controls 31.66 cfs @ 4.96 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 0.37" for 2-yr event
Inflow = 0.77 cfs @ 12.45 hrs, Volume= 0.109 af
Outflow = 0.77 cfs @ 12.45 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min
Primary = 0.77 cfs @ 12.45 hrs, Volume= 0.109 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.32' @ 12.45 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=0.77 cfs @ 12.45 hrs HW=878.32' TW=872.91' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.77 cfs @ 3.58 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 0.51" for 2-yr event
Inflow = 4.18 cfs @ 12.57 hrs, Volume= 0.602 af
Outflow = 4.18 cfs @ 12.57 hrs, Volume= 0.602 af, Atten= 0%, Lag= 0.0 min
Primary = 4.18 cfs @ 12.57 hrs, Volume= 0.602 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 878.77' @ 12.57 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=4.16 cfs @ 12.57 hrs HW=878.77' TW=877.23' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 4.16 cfs @ 4.63 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 1.13" for 2-yr event
Inflow = 41.53 cfs @ 12.19 hrs, Volume= 2.679 af
Outflow = 4.95 cfs @ 13.16 hrs, Volume= 2.664 af, Atten= 88%, Lag= 57.7 min
Primary = 4.95 cfs @ 13.16 hrs, Volume= 2.664 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.17' @ 13.16 hrs Surf.Area= 0.712 ac Storage= 1.394 af

Plug-Flow detention time= 565.4 min calculated for 2.664 af (99% of inflow)
Center-of-Mass det. time= 562.0 min (1,398.7 - 836.7)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.95 cfs @ 13.16 hrs HW=880.17' TW=874.95' (Dynamic Tailwater)
- **1=Culvert** (Passes 4.95 cfs of 12.31 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 8.06 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.33 cfs @ 7.54 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.34 cfs @ 6.98 fps)
  - **5=Orifice/Grate** (Weir Controls 3.97 cfs @ 2.08 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth > 1.10" for 2-yr event
Inflow = 11.94 cfs @ 12.22 hrs, Volume= 3.473 af
Outflow = 11.94 cfs @ 12.22 hrs, Volume= 3.473 af, Atten= 0%, Lag= 0.0 min
Primary = 11.94 cfs @ 12.22 hrs, Volume= 3.473 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.23' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=11.69 cfs @ 12.22 hrs HW=875.22' TW=871.47' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 11.69 cfs @ 6.42 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 0.51" for 2-yr event
Inflow = 14.17 cfs @ 12.93 hrs, Volume= 2.808 af
Outflow = 1.65 cfs @ 17.28 hrs, Volume= 2.534 af, Atten= 88%, Lag= 261.0 min
Primary = 1.65 cfs @ 17.28 hrs, Volume= 2.534 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 895.75' @ 17.28 hrs Surf.Area= 99,908 sf Storage= 73,276 cf

Plug-Flow detention time= 745.0 min calculated for 2.532 af (90% of inflow)
Center-of-Mass det. time= 701.4 min (1,623.9 - 922.5)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.65 cfs @ 17.28 hrs HW=895.75' TW=894.68' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 1.65 cfs @ 2.61 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.46" for 2-yr event
Inflow = 1.65 cfs @ 17.28 hrs, Volume= 2.534 af
Outflow = 1.63 cfs @ 18.72 hrs, Volume= 2.517 af, Atten= 1%, Lag= 86.2 min
Primary = 1.63 cfs @ 18.72 hrs, Volume= 2.517 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 894.69' @ 18.72 hrs Surf.Area= 12,059 sf Storage= 6,162 cf

Plug-Flow detention time= 79.7 min calculated for 2.517 af (99% of inflow)
Center-of-Mass det. time= 61.8 min (1,685.7 - 1,623.9)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=1.63 cfs @ 18.72 hrs HW=894.69' TW=876.55' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.63 cfs @ 2.83 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 0.67" for 2-yr event
Inflow = 6.68 cfs @ 12.22 hrs, Volume= 0.532 af
Outflow = 6.68 cfs @ 12.22 hrs, Volume= 0.532 af, Atten= 0%, Lag= 0.0 min
Primary = 6.68 cfs @ 12.22 hrs, Volume= 0.532 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.78' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=6.52 cfs @ 12.22 hrs HW=861.77' TW=859.45' (Dynamic Tailwater)
1=RCP_Elliptical 45x29 (Barrel Controls 6.52 cfs @ 3.35 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 0.47" for 2-yr event
Inflow = 1.83 cfs @ 12.29 hrs, Volume= 0.179 af
Outflow = 1.83 cfs @ 12.29 hrs, Volume= 0.179 af, Atten= 0%, Lag= 0.0 min
Primary = 1.83 cfs @ 12.29 hrs, Volume= 0.179 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.15' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.81 cfs @ 12.29 hrs HW=862.13' TW=861.72' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.81 cfs @ 3.17 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth > 0.35" for 2-yr event
Inflow = 24.77 cfs @ 12.86 hrs, Volume= 5.935 af
Outflow = 3.03 cfs @ 20.11 hrs, Volume= 4.987 af, Atten= 88%, Lag= 434.9 min
Primary = 3.03 cfs @ 20.11 hrs, Volume= 4.987 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 858.84' @ 20.09 hrs Surf.Area= 189,731 sf Storage= 155,934 cf

Plug-Flow detention time= 854.5 min calculated for 4.983 af (84% of inflow)
Center-of-Mass det. time= 753.1 min (1,745.7 - 992.5)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=3.03 cfs @ 20.11 hrs HW=858.84' TW=856.61' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.03 cfs @ 2.82 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 0.43" for 2-yr event
Inflow = 3.66 cfs @ 12.39 hrs, Volume= 0.443 af
Outflow = 0.40 cfs @ 15.27 hrs, Volume= 0.420 af, Atten= 89%, Lag= 172.7 min
Primary = 0.40 cfs @ 15.27 hrs, Volume= 0.420 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.41' @ 15.27 hrs Surf.Area= 25,237 sf Storage= 9,750 cf

Plug-Flow detention time= 500.5 min calculated for 0.420 af (95% of inflow)
Center-of-Mass det. time= 474.6 min (1,372.1 - 897.5)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.40 cfs @ 15.27 hrs HW=861.41' TW=858.72' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 0.40 cfs @ 2.52 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 1.13" for 2-yr event
Inflow = 3.99 cfs @ 12.15 hrs, Volume= 0.222 af
Outflow = 0.08 cfs @ 17.87 hrs, Volume= 0.168 af, Atten= 98%, Lag= 343.5 min
Primary = 0.08 cfs @ 17.87 hrs, Volume= 0.168 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.18' @ 17.87 hrs Surf.Area= 39,750 sf Storage= 7,048 cf

Plug-Flow detention time= 1,079.9 min calculated for 0.168 af (76% of inflow)
Center-of-Mass det. time= 997.8 min (1,831.1 - 833.3)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.08 cfs @ 17.87 hrs HW=865.18' TW=858.82' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.08 cfs @ 1.62 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 0.35" for 2-yr event
Inflow = 26.28 cfs @ 12.59 hrs, Volume= 8.894 af
Outflow = 13.84 cfs @ 13.13 hrs, Volume= 8.894 af, Atten= 47%, Lag= 32.3 min
Primary = 13.84 cfs @ 13.13 hrs, Volume= 8.894 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 856.71' @ 13.13 hrs Surf.Area= 287,226 sf Storage= 587,589 cf (31,143 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 16.4 min (1,392.9 - 1,376.4)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=13.84 cfs @ 13.13 hrs HW=856.71' TW=856.60' (Dynamic Tailwater)
1=Culvert (Outlet Controls 13.84 cfs @ 1.67 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 0.63" for 2-yr event
Inflow = 2.49 cfs @ 12.18 hrs, Volume= 0.170 af
Outflow = 2.49 cfs @ 12.18 hrs, Volume= 0.170 af, Atten= 0%, Lag= 0.0 min
Primary = 2.49 cfs @ 12.18 hrs, Volume= 0.170 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.31' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.43 cfs @ 12.18 hrs HW=876.30' TW=874.35' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 2.43 cfs @ 3.75 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 0.86" for 2-yr event
Inflow = 1.10 cfs @ 12.16 hrs, Volume= 0.569 af
Outflow = 1.10 cfs @ 12.16 hrs, Volume= 0.569 af, Atten= 0%, Lag= 0.0 min
Primary = 1.10 cfs @ 12.16 hrs, Volume= 0.569 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.78' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.08 cfs @ 12.16 hrs HW=873.78' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 1.08 cfs @ 2.83 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 0.43" for 2-yr event
Inflow = 3.49 cfs @ 12.27 hrs, Volume= 0.345 af
Outflow = 3.49 cfs @ 12.27 hrs, Volume= 0.345 af, Atten= 0%, Lag= 0.0 min
Primary = 3.49 cfs @ 12.27 hrs, Volume= 0.345 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.75' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=3.42 cfs @ 12.27 hrs HW=879.74' TW=876.47' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 3.42 cfs @ 4.22 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 0.58" for 2-yr event
Inflow = 7.25 cfs @ 12.16 hrs, Volume= 0.640 af
Outflow = 0.79 cfs @ 13.69 hrs, Volume= 0.633 af, Atten= 89%, Lag= 91.3 min
Primary = 0.79 cfs @ 13.69 hrs, Volume= 0.633 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.94' @ 13.69 hrs Surf.Area= 0.329 ac Storage= 0.296 af

Plug-Flow detention time= 280.8 min calculated for 0.633 af (99% of inflow)
Center-of-Mass det. time= 274.8 min (1,142.7 - 867.9)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.79 cfs @ 13.69 hrs HW=876.94' TW=875.68' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.79 cfs of 3.75 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.79 cfs @ 4.01 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 0.34" for 2-yr event
Inflow = 1.13 cfs @ 12.14 hrs, Volume= 0.402 af
Outflow = 1.13 cfs @ 12.14 hrs, Volume= 0.402 af, Atten= 0%, Lag= 0.0 min
Primary = 1.13 cfs @ 12.14 hrs, Volume= 0.402 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.14' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.10 cfs @ 12.14 hrs HW=874.13' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.10 cfs @ 2.63 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth > 0.58" for 2-yr event
Inflow = 0.79 cfs @ 13.69 hrs, Volume= 0.633 af
Outflow = 0.44 cfs @ 20.79 hrs, Volume= 0.633 af, Atten= 45%, Lag= 426.4 min
Discarded = 0.07 cfs @ 20.79 hrs, Volume= 0.296 af
Primary = 0.36 cfs @ 20.79 hrs, Volume= 0.338 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.15' @ 20.79 hrs Surf.Area= 20,003 sf Storage= 12,578 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 674.8 min (1,817.6 - 1,142.7)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.07 cfs @ 20.79 hrs HW=876.15' (Free Discharge)
└**5=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.36 cfs @ 20.79 hrs HW=876.15' TW=873.97' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.36 cfs of 1.03 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.36 cfs @ 2.16 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 0.90" for 2-yr event
Inflow = 9.09 cfs @ 12.15 hrs, Volume= 0.532 af
Outflow = 0.62 cfs @ 13.59 hrs, Volume= 0.520 af, Atten= 93%, Lag= 86.5 min
Primary = 0.62 cfs @ 13.59 hrs, Volume= 0.520 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.68' @ 13.59 hrs Surf.Area= 0.432 ac Storage= 0.281 af

Plug-Flow detention time= 366.4 min calculated for 0.520 af (98% of inflow)
Center-of-Mass det. time= 353.6 min (1,196.5 - 842.9)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.62 cfs @ 13.59 hrs HW=874.68' TW=873.68' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.62 cfs of 1.23 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.62 cfs @ 3.16 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth = 1.05" for 2-yr event
Inflow = 13.75 cfs @ 12.17 hrs, Volume= 3.837 af
Outflow = 13.75 cfs @ 12.17 hrs, Volume= 3.837 af, Atten= 0%, Lag= 0.0 min
Primary = 13.75 cfs @ 12.17 hrs, Volume= 3.837 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.19' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=13.36 cfs @ 12.17 hrs HW=874.18' TW=872.73' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 13.36 cfs @ 5.12 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 0.45" for 2-yr event
Inflow = 10.66 cfs @ 12.63 hrs, Volume= 4.254 af
Outflow = 10.66 cfs @ 12.63 hrs, Volume= 4.254 af, Atten= 0%, Lag= 0.0 min
Primary = 10.66 cfs @ 12.63 hrs, Volume= 4.254 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.24' @ 12.63 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=10.63 cfs @ 12.63 hrs HW=877.24' TW=872.85' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 10.63 cfs @ 4.64 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 0.74" for 2-yr event
Inflow = 63.66 cfs @ 12.17 hrs, Volume= 18.498 af
Outflow = 8.03 cfs @ 21.55 hrs, Volume= 16.395 af, Atten= 87%, Lag= 562.7 min
Primary = 8.03 cfs @ 21.55 hrs, Volume= 16.395 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 860.81' @ 21.55 hrs Surf.Area= 3.327 ac Storage= 5.861 af

Plug-Flow detention time= 683.3 min calculated for 16.395 af (89% of inflow)
Center-of-Mass det. time= 455.9 min (1,961.9 - 1,506.0)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=8.03 cfs @ 21.55 hrs HW=860.81' TW=856.60' (Dynamic Tailwater)
└─**1=Culvert** (Passes 8.03 cfs of 32.79 cfs potential flow)
└─**2=Custom Weir/Orifice** (Weir Controls 8.03 cfs @ 3.65 fps)
└─**3=Culvert** (Passes 8.03 cfs of 58.70 cfs potential flow)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 1.60" for 2-yr event
Inflow = 5.34 cfs @ 12.13 hrs, Volume= 0.286 af
Outflow = 5.34 cfs @ 12.13 hrs, Volume= 0.286 af, Atten= 0%, Lag= 0.0 min
Primary = 5.34 cfs @ 12.13 hrs, Volume= 0.286 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 860.85' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=5.12 cfs @ 12.13 hrs HW=860.81' TW=859.31' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 5.12 cfs @ 4.18 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 0.75" for 2-yr event
Inflow = 52.85 cfs @ 12.21 hrs, Volume= 15.357 af
Outflow = 8.46 cfs @ 17.17 hrs, Volume= 13.682 af, Atten= 84%, Lag= 297.7 min
Primary = 8.46 cfs @ 17.17 hrs, Volume= 13.682 af
Routed to Pond 59P : Pond A
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 872.82' @ 17.17 hrs Surf.Area= 6.025 ac Storage= 7.222 af

Plug-Flow detention time= 789.0 min calculated for 13.673 af (89% of inflow)
Center-of-Mass det. time= 633.9 min (1,742.3 - 1,108.3)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=8.46 cfs @ 17.17 hrs HW=872.82' TW=860.59' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 8.46 cfs of 18.87 cfs potential flow)
↑—**2=Custom Weir/Orifice** (Weir Controls 8.46 cfs @ 2.81 fps)
↑—**3=Culvert** (Passes 8.46 cfs of 30.69 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.00' TW=872.00' (Dynamic Tailwater)
↑—**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 1.13" for 2-yr event
Inflow = 24.26 cfs @ 12.23 hrs, Volume= 1.805 af
Primary = 23.96 cfs @ 12.50 hrs, Volume= 1.805 af, Atten= 1%, Lag= 15.8 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 0.52" for 2-yr event
Inflow = 34.29 cfs @ 12.52 hrs, Volume= 27.766 af
Primary = 34.29 cfs @ 12.52 hrs, Volume= 27.766 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth > 0.61" for 2-yr event
Inflow = 9.85 cfs @ 12.32 hrs, Volume= 2.073 af
Primary = 9.85 cfs @ 12.32 hrs, Volume= 2.073 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 1.25" for 2-yr event
Inflow = 0.72 cfs @ 12.46 hrs, Volume= 0.078 af
Primary = 0.72 cfs @ 12.89 hrs, Volume= 0.078 af, Atten= 1%, Lag= 25.7 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1S: C1

Runoff = 15.91 cfs @ 12.13 hrs, Volume= 0.865 af, Depth= 2.22"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 5.55 cfs @ 12.49 hrs, Volume= 0.668 af, Depth= 0.82"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 8.95 cfs @ 12.35 hrs, Volume= 0.827 af, Depth= 1.46"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 2.70 cfs @ 12.13 hrs, Volume= 0.149 af, Depth= 2.40"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 8.96 cfs @ 12.13 hrs, Volume= 0.516 af, Depth= 2.79"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 5.89 cfs @ 12.31 hrs, Volume= 0.507 af, Depth= 1.46"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 1.25 cfs @ 12.14 hrs, Volume= 0.067 af, Depth= 1.21"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 30.20 cfs @ 12.13 hrs, Volume= 1.665 af, Depth= 2.40"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 1.25 cfs @ 12.15 hrs, Volume= 0.075 af, Depth= 0.68"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 2.99 cfs @ 12.13 hrs, Volume= 0.186 af, Depth= 3.22"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 8.76 cfs @ 12.16 hrs, Volume= 0.516 af, Depth= 1.39"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 3.32 cfs @ 12.16 hrs, Volume= 0.191 af, Depth= 1.53"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 5.75 cfs @ 12.16 hrs, Volume= 0.343 af, Depth= 1.21"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 15.74 cfs @ 12.36 hrs, Volume= 1.480 af, Depth= 1.27"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 9.73 cfs @ 12.13 hrs, Volume= 0.568 af, Depth= 2.89"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 1.63 cfs @ 12.41 hrs, Volume= 0.188 af, Depth= 0.64"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 7.57 cfs @ 12.54 hrs, Volume= 0.975 af, Depth= 0.82"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 13.10 cfs @ 12.63 hrs, Volume= 1.926 af, Depth= 0.68"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 59.09 cfs @ 12.19 hrs, Volume= 3.782 af, Depth= 1.60"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 14.40 cfs @ 12.23 hrs, Volume= 1.027 af, Depth= 1.46"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 2.28 cfs @ 12.16 hrs, Volume= 0.134 af, Depth= 1.53"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 2.13 cfs @ 12.15 hrs, Volume= 0.118 af, Depth= 1.53"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 25.42 cfs @ 12.88 hrs, Volume= 4.549 af, Depth= 0.82"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 14.08 cfs @ 12.43 hrs, Volume= 1.515 af, Depth= 1.03"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 30.79 cfs @ 12.13 hrs, Volume= 1.651 af, Depth= 1.97"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 19.60 cfs @ 12.26 hrs, Volume= 1.556 af, Depth= 0.98"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 7.75 cfs @ 12.21 hrs, Volume= 0.521 af, Depth= 1.27"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 7.60 cfs @ 12.27 hrs, Volume= 0.600 af, Depth= 1.33"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 0.39 cfs @ 12.15 hrs, Volume= 0.026 af, Depth= 0.55"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 7.07 cfs @ 12.13 hrs, Volume= 0.382 af, Depth= 2.14"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 27.12 cfs @ 12.19 hrs, Volume= 1.786 af, Depth= 2.31"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 3.46 cfs @ 12.27 hrs, Volume= 0.295 af, Depth= 0.77"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 2.92 cfs @ 12.20 hrs, Volume= 0.203 af, Depth= 0.77"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 51.08 cfs @ 12.79 hrs, Volume= 9.193 af, Depth= 0.59"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 7.15 cfs @ 12.36 hrs, Volume= 0.739 af, Depth= 0.73"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 5.66 cfs @ 12.15 hrs, Volume= 0.313 af, Depth= 1.60"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 48.86 cfs @ 12.55 hrs, Volume= 6.422 af, Depth= 0.77"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 33.39 cfs @ 12.23 hrs, Volume= 2.426 af, Depth= 1.60"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 2.32 cfs @ 12.14 hrs, Volume= 0.123 af, Depth= 1.53"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.480	98	
*	0.490	61	
	0.970	79	Weighted Average
	0.490		50.52% Pervious Area
	0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 5.34 cfs @ 13.07 hrs, Volume= 1.104 af, Depth= 0.77"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 4.13 cfs @ 12.18 hrs, Volume= 0.265 af, Depth= 0.98"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
* 0.700	98	
2.260	61	>75% Grass cover, Good, HSG B
0.290	74	>75% Grass cover, Good, HSG C
3.250	70	Weighted Average
2.550		78.46% Pervious Area
0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 9.63 cfs @ 12.13 hrs, Volume= 0.512 af, Depth= 1.60"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
* 1.626	98	
1.828	61	>75% Grass cover, Good, HSG B
0.390	98	Water Surface, 0% imp, HSG B
3.844	80	Weighted Average
2.218		57.70% Pervious Area
1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 1.40 cfs @ 12.14 hrs, Volume= 0.076 af, Depth= 1.03"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 8.94 cfs @ 12.45 hrs, Volume= 0.977 af, Depth= 1.03"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 6.83 cfs @ 12.26 hrs, Volume= 0.576 af, Depth= 0.73"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 8.01 cfs @ 12.14 hrs, Volume= 0.427 af, Depth= 1.39"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 1.81 cfs @ 12.14 hrs, Volume= 0.099 af, Depth= 1.03"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 8.03 cfs @ 12.23 hrs, Volume= 0.586 af, Depth= 1.15"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 1.01 cfs @ 12.45 hrs, Volume= 0.109 af, Depth= 1.74"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 21.58 cfs @ 12.05 hrs, Volume= 1.039 af, Depth= 2.49"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 5-yr Rainfall=3.45"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

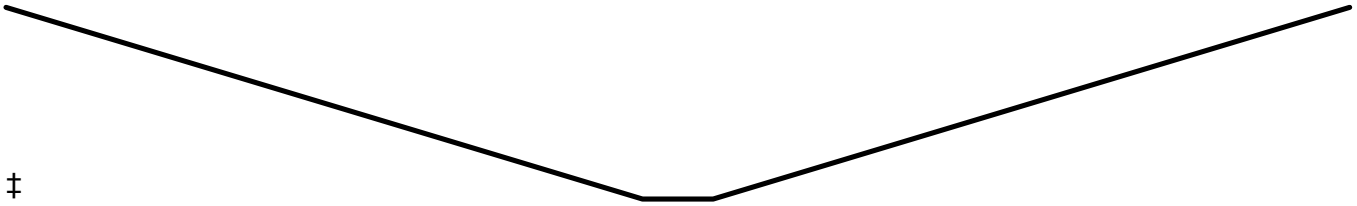
Summary for Reach 20R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 2.22" for 5-yr event
Inflow = 15.91 cfs @ 12.13 hrs, Volume= 0.865 af
Outflow = 1.97 cfs @ 12.62 hrs, Volume= 0.864 af, Atten= 88%, Lag= 29.1 min
Primary = 1.97 cfs @ 12.62 hrs, Volume= 0.864 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.79' @ 12.62 hrs Surf.Area= 22,758 sf Storage= 17,460 cf

Plug-Flow detention time= 115.2 min calculated for 0.864 af (100% of inflow)
Center-of-Mass det. time= 114.1 min (915.5 - 801.4)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=1.97 cfs @ 12.62 hrs HW=884.78' TW=878.40' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 1.97 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 1.33" for 5-yr event
Inflow = 16.23 cfs @ 12.40 hrs, Volume= 2.433 af
Outflow = 9.22 cfs @ 12.80 hrs, Volume= 2.434 af, Atten= 43%, Lag= 23.6 min
Discarded = 0.29 cfs @ 12.80 hrs, Volume= 0.282 af
Primary = 8.93 cfs @ 12.80 hrs, Volume= 2.152 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.46' @ 12.80 hrs Surf.Area= 0.503 ac Storage= 0.512 af

Plug-Flow detention time= 61.4 min calculated for 2.432 af (100% of inflow)
Center-of-Mass det. time= 61.4 min (942.5 - 881.1)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.29 cfs @ 12.80 hrs HW=878.46' (Free Discharge)
└**4=Exfiltration** (Controls 0.29 cfs)

Primary OutFlow Max=8.93 cfs @ 12.80 hrs HW=878.46' TW=876.37' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 8.93 cfs @ 3.82 fps)
  └**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 9.99 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 2.40" for 5-yr event
Inflow = 2.70 cfs @ 12.13 hrs, Volume= 0.149 af
Outflow = 0.47 cfs @ 12.49 hrs, Volume= 0.119 af, Atten= 83%, Lag= 21.8 min
Discarded = 0.01 cfs @ 12.49 hrs, Volume= 0.045 af
Primary = 0.46 cfs @ 12.49 hrs, Volume= 0.075 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 880.78' @ 12.49 hrs Surf.Area= 3,373 sf Storage= 3,563 cf

Plug-Flow detention time= 662.7 min calculated for 0.119 af (80% of inflow)
Center-of-Mass det. time= 594.8 min (1,389.5 - 794.7)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.01 cfs @ 12.49 hrs HW=880.78' (Free Discharge)
└**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.46 cfs @ 12.49 hrs HW=880.78' TW=878.27' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.46 cfs of 3.34 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.46 cfs @ 1.82 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 2.79" for 5-yr event
Inflow = 8.96 cfs @ 12.13 hrs, Volume= 0.516 af
Outflow = 8.21 cfs @ 12.16 hrs, Volume= 0.504 af, Atten= 8%, Lag= 1.8 min
Discarded = 0.03 cfs @ 12.16 hrs, Volume= 0.056 af
Primary = 8.17 cfs @ 12.16 hrs, Volume= 0.448 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.87' @ 12.16 hrs Surf.Area= 3,771 sf Storage= 5,393 cf

Plug-Flow detention time= 177.8 min calculated for 0.504 af (98% of inflow)
Center-of-Mass det. time= 165.2 min (943.6 - 778.4)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.16 hrs HW=881.87' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=8.02 cfs @ 12.16 hrs HW=881.87' TW=878.97' (Dynamic Tailwater)
├**1=Culvert** (Passes 8.02 cfs of 10.06 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 1.14 cfs @ 4.55 fps)
│ └**3=Orifice/Grate** (Weir Controls 6.88 cfs @ 1.98 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 1.46" for 5-yr event
Inflow = 5.89 cfs @ 12.31 hrs, Volume= 0.507 af
Outflow = 1.29 cfs @ 12.96 hrs, Volume= 0.475 af, Atten= 78%, Lag= 38.8 min
Discarded = 0.07 cfs @ 12.96 hrs, Volume= 0.122 af
Primary = 1.22 cfs @ 12.96 hrs, Volume= 0.354 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.54' @ 12.96 hrs Surf.Area= 8,895 sf Storage= 10,208 cf

Plug-Flow detention time= 393.8 min calculated for 0.475 af (94% of inflow)
Center-of-Mass det. time= 362.8 min (1,205.1 - 842.2)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.07 cfs @ 12.96 hrs HW=882.54' (Free Discharge)
└**5=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=1.22 cfs @ 12.96 hrs HW=882.54' TW=879.06' (Dynamic Tailwater)
├**1=Culvert** (Passes 1.22 cfs of 4.01 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 1.22 cfs @ 2.93 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 1.98" for 5-yr event
Inflow = 39.32 cfs @ 12.13 hrs, Volume= 2.534 af
Outflow = 13.94 cfs @ 12.32 hrs, Volume= 2.526 af, Atten= 65%, Lag= 11.1 min
Primary = 13.94 cfs @ 12.32 hrs, Volume= 2.526 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.30' @ 12.32 hrs Surf.Area= 22,150 sf Storage= 38,833 cf

Plug-Flow detention time= 125.4 min calculated for 2.524 af (100% of inflow)
Center-of-Mass det. time= 124.9 min (944.4 - 819.5)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=13.60 cfs @ 12.32 hrs HW=879.30' TW=876.34' (Dynamic Tailwater)
- **1=Culvert** (Passes 13.60 cfs of 17.56 cfs potential flow)
  - **2=Special & User-Defined** (Custom Controls 8.30 cfs)
  - **3=Broad-Crested Rectangular Weir** (Weir Controls 5.30 cfs @ 0.80 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth = 1.48" for 5-yr event
Inflow = 17.22 cfs @ 12.57 hrs, Volume= 4.752 af
Outflow = 17.22 cfs @ 12.57 hrs, Volume= 4.752 af, Atten= 0%, Lag= 0.0 min
Primary = 17.22 cfs @ 12.57 hrs, Volume= 4.752 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.39' @ 12.57 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=17.06 cfs @ 12.57 hrs HW=876.38' TW=874.64' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Barrel Controls 17.06 cfs @ 4.99 fps)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 1.21" for 5-yr event
Inflow = 5.75 cfs @ 12.16 hrs, Volume= 0.343 af
Outflow = 5.75 cfs @ 12.16 hrs, Volume= 0.343 af, Atten= 0%, Lag= 0.0 min
Primary = 5.75 cfs @ 12.16 hrs, Volume= 0.343 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.27' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.56 cfs @ 12.16 hrs HW=879.25' TW=873.14' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 5.56 cfs @ 4.04 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 0.98" for 5-yr event
Inflow = 54.94 cfs @ 12.40 hrs, Volume= 14.787 af
Outflow = 54.94 cfs @ 12.40 hrs, Volume= 14.787 af, Atten= 0%, Lag= 0.0 min
Primary = 54.94 cfs @ 12.40 hrs, Volume= 14.787 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.47' @ 12.40 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=54.91 cfs @ 12.40 hrs HW=873.47' TW=872.11' (Dynamic Tailwater)
1=Culvert (Barrel Controls 54.91 cfs @ 5.71 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 0.64" for 5-yr event
Inflow = 1.63 cfs @ 12.41 hrs, Volume= 0.188 af
Outflow = 1.63 cfs @ 12.41 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min
Primary = 1.63 cfs @ 12.41 hrs, Volume= 0.188 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.47' @ 12.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.62 cfs @ 12.41 hrs HW=878.47' TW=873.47' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.62 cfs @ 2.91 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 0.82" for 5-yr event
Inflow = 7.57 cfs @ 12.54 hrs, Volume= 0.975 af
Outflow = 7.57 cfs @ 12.54 hrs, Volume= 0.975 af, Atten= 0%, Lag= 0.0 min
Primary = 7.57 cfs @ 12.54 hrs, Volume= 0.975 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 879.07' @ 12.54 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=7.55 cfs @ 12.54 hrs HW=879.07' TW=877.80' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 7.55 cfs @ 5.33 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 1.60" for 5-yr event
Inflow = 59.09 cfs @ 12.19 hrs, Volume= 3.782 af
Outflow = 9.29 cfs @ 12.74 hrs, Volume= 3.765 af, Atten= 84%, Lag= 32.7 min
Primary = 9.29 cfs @ 12.74 hrs, Volume= 3.765 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.70' @ 12.74 hrs Surf.Area= 0.865 ac Storage= 1.808 af

Plug-Flow detention time= 432.0 min calculated for 3.765 af (100% of inflow)
Center-of-Mass det. time= 429.3 min (1,257.6 - 828.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=9.29 cfs @ 12.74 hrs HW=880.70' TW=875.33' (Dynamic Tailwater)
- **1=Culvert** (Passes 9.29 cfs of 13.77 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.34 cfs @ 8.78 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.36 cfs @ 8.31 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.38 cfs @ 7.81 fps)
  - **5=Orifice/Grate** (Orifice Controls 8.20 cfs @ 4.64 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth > 1.56" for 5-yr event
Inflow = 19.32 cfs @ 12.31 hrs, Volume= 4.926 af
Outflow = 19.32 cfs @ 12.31 hrs, Volume= 4.926 af, Atten= 0%, Lag= 0.0 min
Primary = 19.32 cfs @ 12.31 hrs, Volume= 4.926 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.61' @ 12.31 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=19.24 cfs @ 12.31 hrs HW=875.61' TW=871.93' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 19.24 cfs @ 7.24 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 0.82" for 5-yr event
Inflow = 25.42 cfs @ 12.88 hrs, Volume= 4.549 af
Outflow = 2.78 cfs @ 16.34 hrs, Volume= 4.250 af, Atten= 89%, Lag= 207.8 min
Primary = 2.78 cfs @ 16.34 hrs, Volume= 4.250 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 896.19' @ 16.34 hrs Surf.Area= 112,821 sf Storage= 119,009 cf

Plug-Flow detention time= 682.6 min calculated for 4.250 af (93% of inflow)
Center-of-Mass det. time= 650.1 min (1,557.2 - 907.1)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.78 cfs @ 16.34 hrs HW=896.19' TW=894.95' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 2.78 cfs @ 3.54 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 0.77" for 5-yr event
Inflow = 2.78 cfs @ 16.34 hrs, Volume= 4.250 af
Outflow = 2.70 cfs @ 19.06 hrs, Volume= 4.230 af, Atten= 3%, Lag= 162.8 min
Primary = 2.70 cfs @ 19.06 hrs, Volume= 4.230 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 895.01' @ 19.06 hrs Surf.Area= 15,063 sf Storage= 10,509 cf

Plug-Flow detention time= 71.6 min calculated for 4.230 af (100% of inflow)
Center-of-Mass det. time= 59.5 min (1,616.7 - 1,557.2)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.70 cfs @ 19.06 hrs HW=895.01' TW=876.71' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.70 cfs @ 3.44 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 1.03" for 5-yr event
Inflow = 10.89 cfs @ 12.22 hrs, Volume= 0.816 af
Outflow = 10.89 cfs @ 12.22 hrs, Volume= 0.816 af, Atten= 0%, Lag= 0.0 min
Primary = 10.89 cfs @ 12.22 hrs, Volume= 0.816 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.08' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=10.64 cfs @ 12.22 hrs HW=862.06' TW=859.67' (Dynamic Tailwater)
1=RCP_Elliptical 45x29 (Barrel Controls 10.64 cfs @ 3.90 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 0.77" for 5-yr event
Inflow = 3.46 cfs @ 12.27 hrs, Volume= 0.295 af
Outflow = 3.46 cfs @ 12.27 hrs, Volume= 0.295 af, Atten= 0%, Lag= 0.0 min
Primary = 3.46 cfs @ 12.27 hrs, Volume= 0.295 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.44' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=3.40 cfs @ 12.27 hrs HW=862.43' TW=862.02' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.40 cfs @ 3.51 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth > 0.61" for 5-yr event
Inflow = 52.28 cfs @ 12.80 hrs, Volume= 10.368 af
Outflow = 7.29 cfs @ 16.24 hrs, Volume= 9.366 af, Atten= 86%, Lag= 206.6 min
Primary = 7.29 cfs @ 16.24 hrs, Volume= 9.366 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.28' @ 16.13 hrs Surf.Area= 197,553 sf Storage= 240,447 cf

Plug-Flow detention time= 647.8 min calculated for 9.366 af (90% of inflow)
Center-of-Mass det. time= 579.3 min (1,538.4 - 959.0)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=7.29 cfs @ 16.24 hrs HW=859.27' TW=856.70' (Dynamic Tailwater)
1=Culvert (Outlet Controls 7.29 cfs @ 3.76 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 0.73" for 5-yr event
Inflow = 7.15 cfs @ 12.36 hrs, Volume= 0.739 af
Outflow = 0.80 cfs @ 14.07 hrs, Volume= 0.715 af, Atten= 89%, Lag= 102.5 min
Primary = 0.80 cfs @ 14.07 hrs, Volume= 0.715 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.65' @ 14.07 hrs Surf.Area= 27,111 sf Storage= 15,841 cf

Plug-Flow detention time= 405.4 min calculated for 0.715 af (97% of inflow)
Center-of-Mass det. time= 390.1 min (1,270.2 - 880.1)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.80 cfs @ 14.07 hrs HW=861.65' TW=859.11' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 0.80 cfs @ 2.94 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 1.60" for 5-yr event
Inflow = 5.66 cfs @ 12.15 hrs, Volume= 0.313 af
Outflow = 0.15 cfs @ 15.20 hrs, Volume= 0.256 af, Atten= 97%, Lag= 183.0 min
Primary = 0.15 cfs @ 15.20 hrs, Volume= 0.256 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.24' @ 15.20 hrs Surf.Area= 40,150 sf Storage= 9,560 cf

Plug-Flow detention time= 948.3 min calculated for 0.256 af (82% of inflow)
Center-of-Mass det. time= 881.0 min (1,705.9 - 824.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.15 cfs @ 15.20 hrs HW=865.24' TW=859.24' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.15 cfs @ 1.92 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 0.62" for 5-yr event
Inflow = 48.95 cfs @ 12.56 hrs, Volume= 15.789 af
Outflow = 22.20 cfs @ 13.20 hrs, Volume= 15.788 af, Atten= 55%, Lag= 38.8 min
Primary = 22.20 cfs @ 13.20 hrs, Volume= 15.788 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 856.84' @ 13.20 hrs Surf.Area= 292,812 sf Storage= 624,750 cf (68,304 cf above start)

Plug-Flow detention time= 1,582.4 min calculated for 3.014 af (19% of inflow)
Center-of-Mass det. time= 28.7 min (1,302.8 - 1,274.2)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=22.20 cfs @ 13.20 hrs HW=856.84' TW=856.60' (Dynamic Tailwater)
1=Culvert (Outlet Controls 22.20 cfs @ 2.48 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 0.98" for 5-yr event
Inflow = 4.13 cfs @ 12.18 hrs, Volume= 0.265 af
Outflow = 4.13 cfs @ 12.18 hrs, Volume= 0.265 af, Atten= 0%, Lag= 0.0 min
Primary = 4.13 cfs @ 12.18 hrs, Volume= 0.265 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.52' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=4.02 cfs @ 12.18 hrs HW=876.51' TW=874.54' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 4.02 cfs @ 4.30 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 1.26" for 5-yr event
Inflow = 1.85 cfs @ 12.15 hrs, Volume= 0.840 af
Outflow = 1.85 cfs @ 12.15 hrs, Volume= 0.840 af, Atten= 0%, Lag= 0.0 min
Primary = 1.85 cfs @ 12.15 hrs, Volume= 0.840 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.93' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.85 cfs @ 12.15 hrs HW=873.93' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 1.85 cfs @ 3.28 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 0.73" for 5-yr event
Inflow = 6.83 cfs @ 12.26 hrs, Volume= 0.576 af
Outflow = 6.83 cfs @ 12.26 hrs, Volume= 0.576 af, Atten= 0%, Lag= 0.0 min
Primary = 6.83 cfs @ 12.26 hrs, Volume= 0.576 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.07' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=6.75 cfs @ 12.26 hrs HW=880.06' TW=876.78' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 6.75 cfs @ 5.01 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 0.91" for 5-yr event
Inflow = 12.39 cfs @ 12.16 hrs, Volume= 1.003 af
Outflow = 1.09 cfs @ 13.73 hrs, Volume= 0.996 af, Atten= 91%, Lag= 94.1 min
Primary = 1.09 cfs @ 13.73 hrs, Volume= 0.996 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.57' @ 13.73 hrs Surf.Area= 0.350 ac Storage= 0.508 af

Plug-Flow detention time= 319.6 min calculated for 0.996 af (99% of inflow)
Center-of-Mass det. time= 315.4 min (1,170.9 - 855.6)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.09 cfs @ 13.73 hrs HW=877.57' TW=875.78' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.09 cfs of 7.70 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 1.09 cfs @ 5.53 fps)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 0.65" for 5-yr event
Inflow = 1.81 cfs @ 12.14 hrs, Volume= 0.772 af
Outflow = 1.81 cfs @ 12.14 hrs, Volume= 0.772 af, Atten= 0%, Lag= 0.0 min
Primary = 1.81 cfs @ 12.14 hrs, Volume= 0.772 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.25' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=1.75 cfs @ 12.14 hrs HW=874.24' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.75 cfs @ 2.97 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth > 0.91" for 5-yr event
Inflow = 1.09 cfs @ 13.73 hrs, Volume= 0.996 af
Outflow = 0.65 cfs @ 21.25 hrs, Volume= 0.996 af, Atten= 40%, Lag= 450.9 min
Discarded = 0.08 cfs @ 21.25 hrs, Volume= 0.323 af
Primary = 0.57 cfs @ 21.25 hrs, Volume= 0.673 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.37' @ 21.25 hrs Surf.Area= 20,464 sf Storage= 16,996 cf

Plug-Flow detention time= 569.6 min calculated for 0.995 af (100% of inflow)
Center-of-Mass det. time= 569.3 min (1,740.2 - 1,170.9)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.08 cfs @ 21.25 hrs HW=876.37' (Free Discharge)
└**5=Exfiltration** (Controls 0.08 cfs)

Primary OutFlow Max=0.57 cfs @ 21.25 hrs HW=876.37' TW=874.03' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.57 cfs of 1.66 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 0.57 cfs @ 2.92 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 1.31" for 5-yr event
Inflow = 13.51 cfs @ 12.14 hrs, Volume= 0.776 af
Outflow = 0.83 cfs @ 13.60 hrs, Volume= 0.763 af, Atten= 94%, Lag= 87.3 min
Primary = 0.83 cfs @ 13.60 hrs, Volume= 0.763 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.02' @ 13.60 hrs Surf.Area= 0.452 ac Storage= 0.432 af

Plug-Flow detention time= 367.7 min calculated for 0.763 af (98% of inflow)
Center-of-Mass det. time= 358.3 min (1,192.0 - 833.6)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.83 cfs @ 13.60 hrs HW=875.02' TW=873.74' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.83 cfs of 2.28 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.83 cfs @ 4.23 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth = 1.49" for 5-yr event
Inflow = 21.64 cfs @ 12.30 hrs, Volume= 5.454 af
Outflow = 21.64 cfs @ 12.30 hrs, Volume= 5.454 af, Atten= 0%, Lag= 0.0 min
Primary = 21.64 cfs @ 12.30 hrs, Volume= 5.454 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.73' @ 12.32 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=21.59 cfs @ 12.30 hrs HW=874.72' TW=873.41' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 21.59 cfs @ 5.40 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 0.75" for 5-yr event
Inflow = 20.47 cfs @ 12.60 hrs, Volume= 7.132 af
Outflow = 20.47 cfs @ 12.60 hrs, Volume= 7.132 af, Atten= 0%, Lag= 0.0 min
Primary = 20.47 cfs @ 12.60 hrs, Volume= 7.132 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.82' @ 12.60 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=20.44 cfs @ 12.60 hrs HW=877.82' TW=873.42' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 20.44 cfs @ 5.49 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 1.12" for 5-yr event
Inflow = 91.49 cfs @ 12.17 hrs, Volume= 27.998 af
Outflow = 16.25 cfs @ 18.54 hrs, Volume= 25.790 af, Atten= 82%, Lag= 382.4 min
Primary = 16.25 cfs @ 18.54 hrs, Volume= 25.790 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.45' @ 18.54 hrs Surf.Area= 3.393 ac Storage= 7.989 af

Plug-Flow detention time= 528.6 min calculated for 25.790 af (92% of inflow)
Center-of-Mass det. time= 361.8 min (1,752.9 - 1,391.1)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=16.25 cfs @ 18.54 hrs HW=861.45' TW=856.60' (Dynamic Tailwater)
└─**1=Culvert** (Passes 16.25 cfs of 46.15 cfs potential flow)
└─**2=Custom Weir/Orifice** (Weir Controls 16.25 cfs @ 4.21 fps)
└─**3=Culvert** (Passes 16.25 cfs of 71.07 cfs potential flow)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 2.14" for 5-yr event
Inflow = 7.07 cfs @ 12.13 hrs, Volume= 0.382 af
Outflow = 7.07 cfs @ 12.13 hrs, Volume= 0.382 af, Atten= 0%, Lag= 0.0 min
Primary = 7.07 cfs @ 12.13 hrs, Volume= 0.382 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 861.45' @ 18.54 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=6.77 cfs @ 12.13 hrs HW=861.10' TW=859.47' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 6.77 cfs @ 4.46 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 1.13" for 5-yr event
Inflow = 93.03 cfs @ 12.36 hrs, Volume= 22.953 af
Outflow = 17.94 cfs @ 15.27 hrs, Volume= 21.181 af, Atten= 81%, Lag= 174.8 min
Primary = 17.94 cfs @ 15.27 hrs, Volume= 21.181 af
Routed to Pond 59P : Pond A
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.22' @ 15.27 hrs Surf.Area= 6.161 ac Storage= 9.659 af

Plug-Flow detention time= 614.0 min calculated for 21.167 af (92% of inflow)
Center-of-Mass det. time= 496.6 min (1,572.5 - 1,075.9)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=17.94 cfs @ 15.27 hrs HW=873.22' TW=861.12' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 17.94 cfs of 26.47 cfs potential flow)
↑—**2=Custom Weir/Orifice** (Weir Controls 17.94 cfs @ 3.32 fps)
↑—**3=Culvert** (Passes 17.94 cfs of 38.21 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.00' TW=872.00' (Dynamic Tailwater)
↑—**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 1.59" for 5-yr event
Inflow = 34.61 cfs @ 12.23 hrs, Volume= 2.549 af
Primary = 34.18 cfs @ 12.49 hrs, Volume= 2.549 af, Atten= 1%, Lag= 15.9 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 0.85" for 5-yr event
Inflow = 52.13 cfs @ 12.52 hrs, Volume= 45.232 af
Primary = 52.13 cfs @ 12.52 hrs, Volume= 45.232 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth > 0.97" for 5-yr event
Inflow = 15.98 cfs @ 12.30 hrs, Volume= 3.284 af
Primary = 15.98 cfs @ 12.30 hrs, Volume= 3.284 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 1.74" for 5-yr event
Inflow = 1.01 cfs @ 12.45 hrs, Volume= 0.109 af
Primary = 1.01 cfs @ 12.88 hrs, Volume= 0.109 af, Atten= 1%, Lag= 25.7 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1S: C1

Runoff = 19.90 cfs @ 12.13 hrs, Volume= 1.095 af, Depth= 2.81"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 8.59 cfs @ 12.47 hrs, Volume= 0.975 af, Depth= 1.20"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 12.12 cfs @ 12.35 hrs, Volume= 1.110 af, Depth= 1.96"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 3.34 cfs @ 12.13 hrs, Volume= 0.187 af, Depth= 3.00"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 10.83 cfs @ 12.13 hrs, Volume= 0.631 af, Depth= 3.41"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 7.98 cfs @ 12.31 hrs, Volume= 0.680 af, Depth= 1.96"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 1.74 cfs @ 12.14 hrs, Volume= 0.093 af, Depth= 1.66"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 37.32 cfs @ 12.13 hrs, Volume= 2.083 af, Depth= 3.00"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 2.00 cfs @ 12.14 hrs, Volume= 0.113 af, Depth= 1.02"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 3.56 cfs @ 12.13 hrs, Volume= 0.223 af, Depth= 3.85"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 11.91 cfs @ 12.16 hrs, Volume= 0.697 af, Depth= 1.88"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 4.44 cfs @ 12.16 hrs, Volume= 0.255 af, Depth= 2.04"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 8.04 cfs @ 12.16 hrs, Volume= 0.472 af, Depth= 1.66"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 21.92 cfs @ 12.35 hrs, Volume= 2.026 af, Depth= 1.73"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 11.70 cfs @ 12.13 hrs, Volume= 0.692 af, Depth= 3.52"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 2.74 cfs @ 12.39 hrs, Volume= 0.287 af, Depth= 0.97"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 11.71 cfs @ 12.53 hrs, Volume= 1.424 af, Depth= 1.20"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 21.43 cfs @ 12.60 hrs, Volume= 2.899 af, Depth= 1.02"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 78.39 cfs @ 12.19 hrs, Volume= 5.012 af, Depth= 2.12"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 19.57 cfs @ 12.22 hrs, Volume= 1.378 af, Depth= 1.96"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 3.05 cfs @ 12.16 hrs, Volume= 0.178 af, Depth= 2.04"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 2.84 cfs @ 12.15 hrs, Volume= 0.158 af, Depth= 2.04"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 39.35 cfs @ 12.85 hrs, Volume= 6.643 af, Depth= 1.20"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 20.57 cfs @ 12.42 hrs, Volume= 2.137 af, Depth= 1.46"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 39.27 cfs @ 12.13 hrs, Volume= 2.124 af, Depth= 2.54"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 28.83 cfs @ 12.25 hrs, Volume= 2.213 af, Depth= 1.39"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 10.75 cfs @ 12.20 hrs, Volume= 0.714 af, Depth= 1.73"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 10.46 cfs @ 12.27 hrs, Volume= 0.817 af, Depth= 1.81"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 0.68 cfs @ 12.15 hrs, Volume= 0.040 af, Depth= 0.86"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 8.90 cfs @ 12.13 hrs, Volume= 0.486 af, Depth= 2.72"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 33.79 cfs @ 12.19 hrs, Volume= 2.247 af, Depth= 2.91"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 5.43 cfs @ 12.26 hrs, Volume= 0.434 af, Depth= 1.14"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 4.55 cfs @ 12.19 hrs, Volume= 0.300 af, Depth= 1.14"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 87.01 cfs @ 12.75 hrs, Volume= 14.160 af, Depth= 0.91"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 11.48 cfs @ 12.35 hrs, Volume= 1.101 af, Depth= 1.08"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 7.49 cfs @ 12.15 hrs, Volume= 0.414 af, Depth= 2.12"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 76.87 cfs @ 12.53 hrs, Volume= 9.468 af, Depth= 1.14"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 44.38 cfs @ 12.23 hrs, Volume= 3.215 af, Depth= 2.12"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 3.10 cfs @ 12.13 hrs, Volume= 0.165 af, Depth= 2.04"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.480	98	
*	0.490	61	
	0.970	79	Weighted Average
	0.490		50.52% Pervious Area
	0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 8.38 cfs @ 13.02 hrs, Volume= 1.628 af, Depth= 1.14"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 6.11 cfs @ 12.17 hrs, Volume= 0.376 af, Depth= 1.39"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.700	98	
	2.260	61	>75% Grass cover, Good, HSG B
	0.290	74	>75% Grass cover, Good, HSG C
	3.250	70	Weighted Average
	2.550		78.46% Pervious Area
	0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 12.73 cfs @ 12.13 hrs, Volume= 0.678 af, Depth= 2.12"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.626	98	
	1.828	61	>75% Grass cover, Good, HSG B
	0.390	98	Water Surface, 0% imp, HSG B
	3.844	80	Weighted Average
	2.218		57.70% Pervious Area
	1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 2.01 cfs @ 12.14 hrs, Volume= 0.108 af, Depth= 1.46"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 13.03 cfs @ 12.44 hrs, Volume= 1.379 af, Depth= 1.46"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 10.91 cfs @ 12.25 hrs, Volume= 0.858 af, Depth= 1.08"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 10.84 cfs @ 12.14 hrs, Volume= 0.577 af, Depth= 1.88"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 2.60 cfs @ 12.14 hrs, Volume= 0.140 af, Depth= 1.46"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 11.39 cfs @ 12.23 hrs, Volume= 0.815 af, Depth= 1.59"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 1.33 cfs @ 12.45 hrs, Volume= 0.143 af, Depth= 2.28"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 26.49 cfs @ 12.05 hrs, Volume= 1.293 af, Depth= 3.10"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 10-yr Rainfall=4.09"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

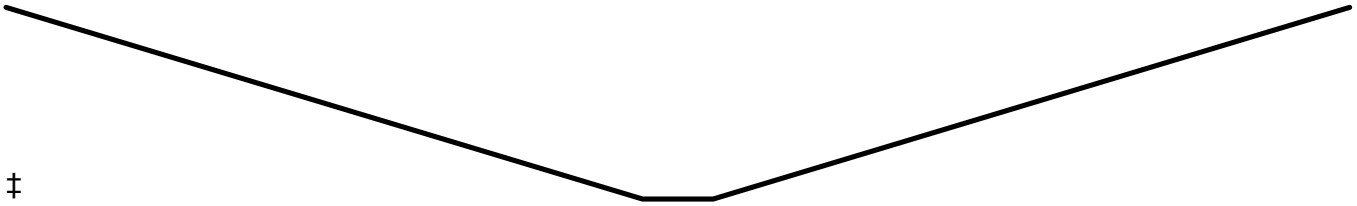
Summary for Reach 20R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 2.81" for 10-yr event
Inflow = 19.90 cfs @ 12.13 hrs, Volume= 1.095 af
Outflow = 2.32 cfs @ 12.63 hrs, Volume= 1.093 af, Atten= 88%, Lag= 30.0 min
Primary = 2.32 cfs @ 12.63 hrs, Volume= 1.093 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.99' @ 12.63 hrs Surf.Area= 26,344 sf Storage= 22,611 cf

Plug-Flow detention time= 125.0 min calculated for 1.093 af (100% of inflow)
Center-of-Mass det. time= 124.1 min (919.9 - 795.8)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=2.32 cfs @ 12.63 hrs HW=884.99' TW=878.74' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 2.32 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 1.80" for 10-yr event
Inflow = 22.88 cfs @ 12.40 hrs, Volume= 3.290 af
Outflow = 13.01 cfs @ 12.77 hrs, Volume= 3.290 af, Atten= 43%, Lag= 22.5 min
Discarded = 0.32 cfs @ 12.77 hrs, Volume= 0.307 af
Primary = 12.69 cfs @ 12.77 hrs, Volume= 2.983 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.79' @ 12.77 hrs Surf.Area= 0.543 ac Storage= 0.685 af

Plug-Flow detention time= 57.0 min calculated for 3.288 af (100% of inflow)
Center-of-Mass det. time= 57.1 min (932.8 - 875.7)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.32 cfs @ 12.77 hrs HW=878.79' (Free Discharge)
└**4=Exfiltration** (Controls 0.32 cfs)

Primary OutFlow Max=12.67 cfs @ 12.77 hrs HW=878.79' TW=876.59' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 12.67 cfs @ 4.22 fps)
  └**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 35.16 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 3.00" for 10-yr event
Inflow = 3.34 cfs @ 12.13 hrs, Volume= 0.187 af
Outflow = 0.72 cfs @ 12.42 hrs, Volume= 0.157 af, Atten= 78%, Lag= 17.2 min
Discarded = 0.02 cfs @ 12.42 hrs, Volume= 0.046 af
Primary = 0.71 cfs @ 12.42 hrs, Volume= 0.111 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 880.97' @ 12.42 hrs Surf.Area= 3,554 sf Storage= 4,237 cf

Plug-Flow detention time= 525.3 min calculated for 0.157 af (84% of inflow)
Center-of-Mass det. time= 467.2 min (1,256.7 - 789.4)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.42 hrs HW=880.97' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=0.71 cfs @ 12.42 hrs HW=880.97' TW=878.43' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.71 cfs of 3.73 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.71 cfs @ 2.82 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 3.41" for 10-yr event
Inflow = 10.83 cfs @ 12.13 hrs, Volume= 0.631 af
Outflow = 10.00 cfs @ 12.16 hrs, Volume= 0.620 af, Atten= 8%, Lag= 1.7 min
Discarded = 0.04 cfs @ 12.16 hrs, Volume= 0.058 af
Primary = 9.97 cfs @ 12.16 hrs, Volume= 0.562 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.93' @ 12.16 hrs Surf.Area= 3,843 sf Storage= 5,620 cf

Plug-Flow detention time= 149.7 min calculated for 0.620 af (98% of inflow)
Center-of-Mass det. time= 141.0 min (914.9 - 773.8)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.03 cfs @ 12.16 hrs HW=881.93' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=9.82 cfs @ 12.16 hrs HW=881.93' TW=879.32' (Dynamic Tailwater)
└**1=Culvert** (Passes 9.82 cfs of 10.28 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.18 cfs @ 4.70 fps)
  └**3=Orifice/Grate** (Weir Controls 8.64 cfs @ 2.14 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 1.96" for 10-yr event
Inflow = 7.98 cfs @ 12.31 hrs, Volume= 0.680 af
Outflow = 2.68 cfs @ 12.74 hrs, Volume= 0.648 af, Atten= 66%, Lag= 25.6 min
Discarded = 0.09 cfs @ 12.74 hrs, Volume= 0.127 af
Primary = 2.58 cfs @ 12.74 hrs, Volume= 0.521 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.82' @ 12.74 hrs Surf.Area= 10,110 sf Storage= 12,854 cf

Plug-Flow detention time= 309.4 min calculated for 0.648 af (95% of inflow)
Center-of-Mass det. time= 285.1 min (1,120.2 - 835.1)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.09 cfs @ 12.74 hrs HW=882.82' (Free Discharge)
└**5=Exfiltration** (Controls 0.09 cfs)

Primary OutFlow Max=2.58 cfs @ 12.74 hrs HW=882.82' TW=879.23' (Dynamic Tailwater)
├**1=Culvert** (Passes 2.58 cfs of 4.42 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 1.82 cfs @ 3.64 fps)
│ └**3=Orifice/Grate** (Weir Controls 0.76 cfs @ 1.09 fps)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 2.54" for 10-yr event
Inflow = 48.68 cfs @ 12.13 hrs, Volume= 3.259 af
Outflow = 20.32 cfs @ 12.28 hrs, Volume= 3.251 af, Atten= 58%, Lag= 8.7 min
Primary = 20.32 cfs @ 12.28 hrs, Volume= 3.251 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.57' @ 12.28 hrs Surf.Area= 23,165 sf Storage= 44,868 cf

Plug-Flow detention time= 110.7 min calculated for 3.251 af (100% of inflow)
Center-of-Mass det. time= 108.9 min (923.7 - 814.9)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=20.29 cfs @ 12.28 hrs HW=879.57' TW=876.69' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 20.29 cfs @ 5.74 fps)
  - **2=Special & User-Defined** (Passes < 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Passes < 38.95 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth = 1.97" for 10-yr event
Inflow = 29.54 cfs @ 12.48 hrs, Volume= 6.346 af
Outflow = 29.54 cfs @ 12.48 hrs, Volume= 6.346 af, Atten= 0%, Lag= 0.0 min
Primary = 29.54 cfs @ 12.48 hrs, Volume= 6.346 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.91' @ 12.48 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=29.21 cfs @ 12.48 hrs HW=876.89' TW=875.41' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Barrel Controls 29.21 cfs @ 5.71 fps)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 1.66" for 10-yr event
Inflow = 8.04 cfs @ 12.16 hrs, Volume= 0.472 af
Outflow = 8.04 cfs @ 12.16 hrs, Volume= 0.472 af, Atten= 0%, Lag= 0.0 min
Primary = 8.04 cfs @ 12.16 hrs, Volume= 0.472 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.46' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=7.81 cfs @ 12.16 hrs HW=879.44' TW=873.69' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 7.81 cfs @ 4.45 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 1.39" for 10-yr event
Inflow = 88.46 cfs @ 12.45 hrs, Volume= 20.909 af
Outflow = 88.46 cfs @ 12.45 hrs, Volume= 20.909 af, Atten= 0%, Lag= 0.0 min
Primary = 88.46 cfs @ 12.45 hrs, Volume= 20.909 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.16' @ 12.45 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=88.40 cfs @ 12.45 hrs HW=874.15' TW=872.58' (Dynamic Tailwater)
1=Culvert (Barrel Controls 88.40 cfs @ 6.46 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 0.97" for 10-yr event
Inflow = 2.74 cfs @ 12.39 hrs, Volume= 0.287 af
Outflow = 2.74 cfs @ 12.39 hrs, Volume= 0.287 af, Atten= 0%, Lag= 0.0 min
Primary = 2.74 cfs @ 12.39 hrs, Volume= 0.287 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.61' @ 12.39 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.72 cfs @ 12.39 hrs HW=878.61' TW=874.12' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.72 cfs @ 3.33 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 1.20" for 10-yr event
Inflow = 11.71 cfs @ 12.53 hrs, Volume= 1.424 af
Outflow = 11.71 cfs @ 12.53 hrs, Volume= 1.424 af, Atten= 0%, Lag= 0.0 min
Primary = 11.71 cfs @ 12.53 hrs, Volume= 1.424 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 879.47' @ 12.54 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=11.66 cfs @ 12.53 hrs HW=879.47' TW=878.40' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 11.66 cfs @ 5.46 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 2.12" for 10-yr event
Inflow = 78.39 cfs @ 12.19 hrs, Volume= 5.012 af
Outflow = 11.91 cfs @ 12.73 hrs, Volume= 4.995 af, Atten= 85%, Lag= 32.6 min
Primary = 11.91 cfs @ 12.73 hrs, Volume= 4.995 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.36' @ 12.73 hrs Surf.Area= 1.045 ac Storage= 2.435 af

Plug-Flow detention time= 355.4 min calculated for 4.995 af (100% of inflow)
Center-of-Mass det. time= 353.4 min (1,174.9 - 821.5)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=11.91 cfs @ 12.73 hrs HW=881.35' TW=875.57' (Dynamic Tailwater)
- **1=Culvert** (Passes 11.91 cfs of 15.40 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.37 cfs @ 9.61 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.40 cfs @ 9.18 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.43 cfs @ 8.72 fps)
  - **5=Orifice/Grate** (Orifice Controls 10.71 cfs @ 6.06 fps)
- **6=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth > 2.07" for 10-yr event
Inflow = 30.18 cfs @ 12.24 hrs, Volume= 6.552 af
Outflow = 30.18 cfs @ 12.24 hrs, Volume= 6.552 af, Atten= 0%, Lag= 0.0 min
Primary = 30.18 cfs @ 12.24 hrs, Volume= 6.552 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.10' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=29.94 cfs @ 12.24 hrs HW=876.09' TW=872.10' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 29.94 cfs @ 8.00 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 1.20" for 10-yr event
Inflow = 39.35 cfs @ 12.85 hrs, Volume= 6.643 af
Outflow = 3.44 cfs @ 14.82 hrs, Volume= 6.302 af, Atten= 91%, Lag= 118.7 min
Primary = 3.44 cfs @ 14.82 hrs, Volume= 6.302 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 896.70' @ 17.10 hrs Surf.Area= 142,180 sf Storage= 183,306 cf

Plug-Flow detention time= 748.4 min calculated for 6.298 af (95% of inflow)
Center-of-Mass det. time= 723.7 min (1,620.0 - 896.2)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=3.44 cfs @ 14.82 hrs HW=896.62' TW=895.00' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 3.44 cfs @ 4.38 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 1.14" for 10-yr event
Inflow = 3.44 cfs @ 14.82 hrs, Volume= 6.302 af
Outflow = 3.23 cfs @ 20.17 hrs, Volume= 6.280 af, Atten= 6%, Lag= 320.7 min
Primary = 3.23 cfs @ 20.17 hrs, Volume= 6.280 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 895.23' @ 20.17 hrs Surf.Area= 18,860 sf Storage= 14,227 cf

Plug-Flow detention time= 72.7 min calculated for 6.280 af (100% of inflow)
Center-of-Mass det. time= 63.4 min (1,683.4 - 1,620.0)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=3.23 cfs @ 20.17 hrs HW=895.23' TW=876.78' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 3.23 cfs @ 4.11 fps)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 1.45" for 10-yr event
Inflow = 15.79 cfs @ 12.22 hrs, Volume= 1.148 af
Outflow = 15.79 cfs @ 12.22 hrs, Volume= 1.148 af, Atten= 0%, Lag= 0.0 min
Primary = 15.79 cfs @ 12.22 hrs, Volume= 1.148 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.37' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=15.45 cfs @ 12.22 hrs HW=862.35' TW=859.93' (Dynamic Tailwater)
└─**1=RCP_Elliptical 45x29** (Barrel Controls 15.45 cfs @ 4.36 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 1.14" for 10-yr event
Inflow = 5.43 cfs @ 12.26 hrs, Volume= 0.434 af
Outflow = 5.43 cfs @ 12.26 hrs, Volume= 0.434 af, Atten= 0%, Lag= 0.0 min
Primary = 5.43 cfs @ 12.26 hrs, Volume= 0.434 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.75' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.37 cfs @ 12.26 hrs HW=862.73' TW=862.31' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 5.37 cfs @ 3.79 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth > 0.93" for 10-yr event
Inflow = 88.93 cfs @ 12.75 hrs, Volume= 15.891 af
Outflow = 14.51 cfs @ 15.44 hrs, Volume= 14.858 af, Atten= 84%, Lag= 161.3 min
Primary = 14.51 cfs @ 15.44 hrs, Volume= 14.858 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 859.82' @ 15.37 hrs Surf.Area= 210,306 sf Storage= 350,652 cf

Plug-Flow detention time= 521.1 min calculated for 14.848 af (93% of inflow)
Center-of-Mass det. time= 473.4 min (1,410.5 - 937.2)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=14.51 cfs @ 15.44 hrs HW=859.82' TW=856.90' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 14.51 cfs @ 4.65 fps)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 1.08" for 10-yr event
Inflow = 11.48 cfs @ 12.35 hrs, Volume= 1.101 af
Outflow = 2.12 cfs @ 13.43 hrs, Volume= 1.076 af, Atten= 82%, Lag= 65.2 min
Primary = 2.12 cfs @ 13.43 hrs, Volume= 1.076 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.88' @ 13.43 hrs Surf.Area= 28,967 sf Storage= 22,302 cf

Plug-Flow detention time= 343.3 min calculated for 1.076 af (98% of inflow)
Center-of-Mass det. time= 332.9 min (1,201.0 - 868.1)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.12 cfs @ 13.43 hrs HW=861.88' TW=859.45' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.98 cfs @ 2.82 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 1.14 cfs @ 0.74 fps)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 2.12" for 10-yr event
Inflow = 7.49 cfs @ 12.15 hrs, Volume= 0.414 af
Outflow = 0.24 cfs @ 15.09 hrs, Volume= 0.355 af, Atten= 97%, Lag= 176.3 min
Primary = 0.24 cfs @ 15.09 hrs, Volume= 0.355 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.31' @ 15.09 hrs Surf.Area= 40,593 sf Storage= 12,358 cf

Plug-Flow detention time= 849.4 min calculated for 0.355 af (86% of inflow)
Center-of-Mass det. time= 792.3 min (1,610.4 - 818.1)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.24 cfs @ 15.09 hrs HW=865.31' TW=859.81' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.24 cfs @ 2.19 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 0.96" for 10-yr event
Inflow = 77.17 cfs @ 12.54 hrs, Volume= 24.326 af
Outflow = 32.63 cfs @ 13.34 hrs, Volume= 24.326 af, Atten= 58%, Lag= 48.5 min
Primary = 32.63 cfs @ 13.34 hrs, Volume= 24.326 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 857.01' @ 13.34 hrs Surf.Area= 300,438 sf Storage= 677,324 cf (120,878 cf above start)

Plug-Flow detention time= 785.2 min calculated for 11.552 af (47% of inflow)
Center-of-Mass det. time= 40.9 min (1,243.9 - 1,203.0)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=32.63 cfs @ 13.34 hrs HW=857.01' TW=856.60' (Dynamic Tailwater)
1=Culvert (Outlet Controls 32.63 cfs @ 3.30 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 1.39" for 10-yr event
Inflow = 6.11 cfs @ 12.17 hrs, Volume= 0.376 af
Outflow = 6.11 cfs @ 12.17 hrs, Volume= 0.376 af, Atten= 0%, Lag= 0.0 min
Primary = 6.11 cfs @ 12.17 hrs, Volume= 0.376 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.75' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.92 cfs @ 12.17 hrs HW=876.73' TW=874.77' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 5.92 cfs @ 4.75 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 1.73" for 10-yr event
Inflow = 2.63 cfs @ 12.14 hrs, Volume= 1.149 af
Outflow = 2.63 cfs @ 12.14 hrs, Volume= 1.149 af, Atten= 0%, Lag= 0.0 min
Primary = 2.63 cfs @ 12.14 hrs, Volume= 1.149 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.06' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.59 cfs @ 12.14 hrs HW=874.05' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 2.59 cfs @ 3.58 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 1.08" for 10-yr event
Inflow = 10.91 cfs @ 12.25 hrs, Volume= 0.858 af
Outflow = 10.91 cfs @ 12.25 hrs, Volume= 0.858 af, Atten= 0%, Lag= 0.0 min
Primary = 10.91 cfs @ 12.25 hrs, Volume= 0.858 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.39' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=10.91 cfs @ 12.25 hrs HW=880.39' TW=877.19' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 10.91 cfs @ 5.62 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 1.30" for 10-yr event
Inflow = 18.50 cfs @ 12.17 hrs, Volume= 1.435 af
Outflow = 1.71 cfs @ 13.64 hrs, Volume= 1.427 af, Atten= 91%, Lag= 88.4 min
Primary = 1.71 cfs @ 13.64 hrs, Volume= 1.427 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.30' @ 13.64 hrs Surf.Area= 0.376 ac Storage= 0.772 af

Plug-Flow detention time= 380.4 min calculated for 1.426 af (99% of inflow)
Center-of-Mass det. time= 378.7 min (1,225.1 - 846.5)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=1.70 cfs @ 13.64 hrs HW=878.30' TW=875.85' (Dynamic Tailwater)
├─**1=Culvert** (Passes 1.35 cfs of 10.58 cfs potential flow)
│ └─**2=Orifice/Grate** (Orifice Controls 1.35 cfs @ 6.89 fps)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 0.35 cfs @ 0.51 fps)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 1.01" for 10-yr event
Inflow = 2.60 cfs @ 12.14 hrs, Volume= 1.210 af
Outflow = 2.60 cfs @ 12.14 hrs, Volume= 1.210 af, Atten= 0%, Lag= 0.0 min
Primary = 2.60 cfs @ 12.14 hrs, Volume= 1.210 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.35' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.50 cfs @ 12.14 hrs HW=874.34' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.50 cfs @ 3.26 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth > 1.30" for 10-yr event
Inflow = 1.71 cfs @ 13.64 hrs, Volume= 1.427 af
Outflow = 0.82 cfs @ 22.19 hrs, Volume= 1.414 af, Atten= 52%, Lag= 513.0 min
Discarded = 0.08 cfs @ 22.19 hrs, Volume= 0.344 af
Primary = 0.73 cfs @ 22.19 hrs, Volume= 1.070 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.60' @ 22.19 hrs Surf.Area= 20,959 sf Storage= 21,851 cf

Plug-Flow detention time= 522.8 min calculated for 1.413 af (99% of inflow)
Center-of-Mass det. time= 504.6 min (1,729.8 - 1,225.1)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.08 cfs @ 22.19 hrs HW=876.60' (Free Discharge)
└**5=Exfiltration** (Controls 0.08 cfs)

Primary OutFlow Max=0.73 cfs @ 22.19 hrs HW=876.60' TW=874.07' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.73 cfs of 2.33 cfs potential flow)
│ ├**2=Orifice/Grate** (Orifice Controls 0.73 cfs @ 3.74 fps)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 1.78" for 10-yr event
Inflow = 18.47 cfs @ 12.14 hrs, Volume= 1.054 af
Outflow = 1.02 cfs @ 13.62 hrs, Volume= 1.041 af, Atten= 94%, Lag= 88.6 min
Primary = 1.02 cfs @ 13.62 hrs, Volume= 1.041 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.41' @ 13.62 hrs Surf.Area= 0.475 ac Storage= 0.612 af

Plug-Flow detention time= 389.7 min calculated for 1.040 af (99% of inflow)
Center-of-Mass det. time= 384.0 min (1,210.4 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.02 cfs @ 13.62 hrs HW=875.41' TW=873.79' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.02 cfs of 3.06 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.02 cfs @ 5.19 fps)
  - **3=Orifice/Grate** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth = 1.99" for 10-yr event
Inflow = 35.97 cfs @ 12.20 hrs, Volume= 7.266 af
Outflow = 35.97 cfs @ 12.20 hrs, Volume= 7.266 af, Atten= 0%, Lag= 0.0 min
Primary = 35.97 cfs @ 12.20 hrs, Volume= 7.266 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 875.42' @ 12.43 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=35.82 cfs @ 12.20 hrs HW=875.38' TW=873.84' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 35.82 cfs @ 6.25 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 1.11" for 10-yr event
Inflow = 32.90 cfs @ 12.57 hrs, Volume= 10.603 af
Outflow = 32.90 cfs @ 12.57 hrs, Volume= 10.603 af, Atten= 0%, Lag= 0.0 min
Primary = 32.90 cfs @ 12.57 hrs, Volume= 10.603 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.42' @ 12.57 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=32.77 cfs @ 12.57 hrs HW=878.42' TW=874.00' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 32.77 cfs @ 6.19 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 1.55" for 10-yr event
Inflow = 122.80 cfs @ 12.17 hrs, Volume= 38.896 af
Outflow = 28.07 cfs @ 16.76 hrs, Volume= 36.538 af, Atten= 77%, Lag= 275.2 min
Primary = 28.07 cfs @ 16.76 hrs, Volume= 36.538 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.08' @ 16.76 hrs Surf.Area= 3.460 ac Storage= 10.153 af

Plug-Flow detention time= 433.5 min calculated for 36.538 af (94% of inflow)
Center-of-Mass det. time= 299.0 min (1,633.7 - 1,334.7)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=28.07 cfs @ 16.76 hrs HW=862.08' TW=856.60' (Dynamic Tailwater)
- **1=Culvert** (Passes 28.07 cfs of 59.39 cfs potential flow)
  - **2=Custom Weir/Orifice** (Weir Controls 28.07 cfs @ 4.70 fps)
    - **3=Culvert** (Passes 28.07 cfs of 85.71 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **1=Culvert** (Controls 0.00 cfs)
  - **2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 2.72" for 10-yr event
Inflow = 8.90 cfs @ 12.13 hrs, Volume= 0.486 af
Outflow = 8.90 cfs @ 12.13 hrs, Volume= 0.486 af, Atten= 0%, Lag= 0.0 min
Primary = 8.90 cfs @ 12.13 hrs, Volume= 0.486 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 862.08' @ 16.76 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=8.51 cfs @ 12.13 hrs HW=861.74' TW=859.67' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 8.51 cfs @ 4.82 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 1.56" for 10-yr event
Inflow = 138.29 cfs @ 12.40 hrs, Volume= 31.741 af
Outflow = 30.58 cfs @ 14.64 hrs, Volume= 29.822 af, Atten= 78%, Lag= 134.1 min
Primary = 30.58 cfs @ 14.64 hrs, Volume= 29.822 af
Routed to Pond 59P : Pond A
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 873.63' @ 14.64 hrs Surf.Area= 6.275 ac Storage= 12.238 af

Plug-Flow detention time= 514.6 min calculated for 29.822 af (94% of inflow)
Center-of-Mass det. time= 413.4 min (1,490.9 - 1,077.5)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=30.58 cfs @ 14.64 hrs HW=873.63' TW=861.74' (Dynamic Tailwater)
↑—**1=Culvert** (Passes 30.58 cfs of 34.79 cfs potential flow)
↑—**2=Custom Weir/Orifice** (Weir Controls 30.58 cfs @ 3.88 fps)
↑—**3=Culvert** (Passes 30.58 cfs of 46.11 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.00' TW=872.00' (Dynamic Tailwater)
↑—**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 2.11" for 10-yr event
Inflow = 46.01 cfs @ 12.23 hrs, Volume= 3.379 af
Primary = 45.44 cfs @ 12.49 hrs, Volume= 3.379 af, Atten= 1%, Lag= 15.9 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 1.23" for 10-yr event
Inflow = 73.43 cfs @ 12.52 hrs, Volume= 65.872 af
Primary = 73.43 cfs @ 12.52 hrs, Volume= 65.872 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth > 1.39" for 10-yr event
Inflow = 23.08 cfs @ 12.28 hrs, Volume= 4.694 af
Primary = 23.08 cfs @ 12.28 hrs, Volume= 4.694 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 2.28" for 10-yr event
Inflow = 1.33 cfs @ 12.45 hrs, Volume= 0.143 af
Primary = 1.32 cfs @ 12.88 hrs, Volume= 0.143 af, Atten= 1%, Lag= 25.6 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1S: C1

Runoff = 35.89 cfs @ 12.13 hrs, Volume= 2.048 af, Depth= 5.26"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 23.24 cfs @ 12.45 hrs, Volume= 2.467 af, Depth= 3.04"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 25.81 cfs @ 12.34 hrs, Volume= 2.362 af, Depth= 4.17"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 5.88 cfs @ 12.13 hrs, Volume= 0.341 af, Depth= 5.49"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 18.24 cfs @ 12.13 hrs, Volume= 1.101 af, Depth= 5.95"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 16.95 cfs @ 12.30 hrs, Volume= 1.447 af, Depth= 4.17"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 3.91 cfs @ 12.13 hrs, Volume= 0.209 af, Depth= 3.75"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 65.63 cfs @ 12.13 hrs, Volume= 3.807 af, Depth= 5.49"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 5.68 cfs @ 12.14 hrs, Volume= 0.302 af, Depth= 2.75"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 5.82 cfs @ 12.13 hrs, Volume= 0.371 af, Depth= 6.42"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 25.49 cfs @ 12.16 hrs, Volume= 1.503 af, Depth= 4.06"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 9.17 cfs @ 12.15 hrs, Volume= 0.534 af, Depth= 4.27"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 18.18 cfs @ 12.16 hrs, Volume= 1.065 af, Depth= 3.75"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 49.31 cfs @ 12.34 hrs, Volume= 4.500 af, Depth= 3.85"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 19.53 cfs @ 12.13 hrs, Volume= 1.193 af, Depth= 6.07"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 8.40 cfs @ 12.36 hrs, Volume= 0.786 af, Depth= 2.65"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 31.74 cfs @ 12.49 hrs, Volume= 3.604 af, Depth= 3.04"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 63.65 cfs @ 12.56 hrs, Volume= 7.776 af, Depth= 2.75"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 159.75 cfs @ 12.19 hrs, Volume= 10.377 af, Depth= 4.38"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 41.43 cfs @ 12.22 hrs, Volume= 2.933 af, Depth= 4.17"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 6.31 cfs @ 12.16 hrs, Volume= 0.374 af, Depth= 4.27"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 5.86 cfs @ 12.15 hrs, Volume= 0.332 af, Depth= 4.27"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 107.68 cfs @ 12.80 hrs, Volume= 16.811 af, Depth= 3.04"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 50.36 cfs @ 12.41 hrs, Volume= 5.047 af, Depth= 3.44"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 73.72 cfs @ 12.13 hrs, Volume= 4.123 af, Depth= 4.93"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 71.56 cfs @ 12.24 hrs, Volume= 5.313 af, Depth= 3.34"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 23.95 cfs @ 12.20 hrs, Volume= 1.585 af, Depth= 3.85"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 23.01 cfs @ 12.26 hrs, Volume= 1.787 af, Depth= 3.96"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 2.15 cfs @ 12.14 hrs, Volume= 0.115 af, Depth= 2.46"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 16.26 cfs @ 12.13 hrs, Volume= 0.921 af, Depth= 5.15"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 60.41 cfs @ 12.19 hrs, Volume= 4.154 af, Depth= 5.38"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 14.95 cfs @ 12.25 hrs, Volume= 1.120 af, Depth= 2.94"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 12.36 cfs @ 12.18 hrs, Volume= 0.773 af, Depth= 2.94"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 278.90 cfs @ 12.70 hrs, Volume= 39.644 af, Depth= 2.55"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 32.93 cfs @ 12.32 hrs, Volume= 2.894 af, Depth= 2.84"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 15.18 cfs @ 12.14 hrs, Volume= 0.858 af, Depth= 4.38"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 214.41 cfs @ 12.50 hrs, Volume= 24.413 af, Depth= 2.94"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 90.82 cfs @ 12.23 hrs, Volume= 6.656 af, Depth= 4.38"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 6.36 cfs @ 12.13 hrs, Volume= 0.346 af, Depth= 4.27"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.480	98	
*	0.490	61	
	0.970	79	Weighted Average
	0.490		50.52% Pervious Area
	0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 23.65 cfs @ 12.96 hrs, Volume= 4.198 af, Depth= 2.94"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 15.06 cfs @ 12.17 hrs, Volume= 0.904 af, Depth= 3.34"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
* 0.700	98	
2.260	61	>75% Grass cover, Good, HSG B
0.290	74	>75% Grass cover, Good, HSG C
3.250	70	Weighted Average
2.550		78.46% Pervious Area
0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 25.73 cfs @ 12.13 hrs, Volume= 1.404 af, Depth= 4.38"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
* 1.626	98	
1.828	61	>75% Grass cover, Good, HSG B
0.390	98	Water Surface, 0% imp, HSG B
3.844	80	Weighted Average
2.218		57.70% Pervious Area
1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 4.78 cfs @ 12.13 hrs, Volume= 0.254 af, Depth= 3.44"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 31.94 cfs @ 12.42 hrs, Volume= 3.256 af, Depth= 3.44"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 30.89 cfs @ 12.24 hrs, Volume= 2.255 af, Depth= 2.84"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 23.02 cfs @ 12.13 hrs, Volume= 1.246 af, Depth= 4.06"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 6.19 cfs @ 12.13 hrs, Volume= 0.330 af, Depth= 3.44"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 26.62 cfs @ 12.22 hrs, Volume= 1.864 af, Depth= 3.64"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 2.66 cfs @ 12.44 hrs, Volume= 0.287 af, Depth= 4.60"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 45.98 cfs @ 12.05 hrs, Volume= 2.335 af, Depth= 5.60"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 100-yr Rainfall=6.66"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

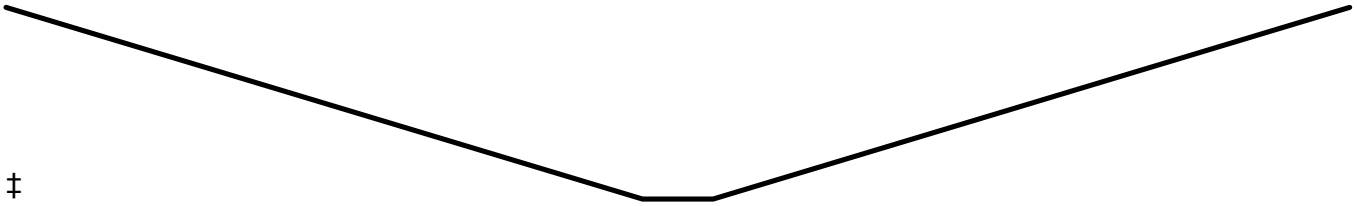
Summary for Reach 20R: Overland Flow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 5.26" for 100-yr event
Inflow = 35.89 cfs @ 12.13 hrs, Volume= 2.048 af
Outflow = 5.07 cfs @ 12.55 hrs, Volume= 2.047 af, Atten= 86%, Lag= 25.5 min
Primary = 5.07 cfs @ 12.55 hrs, Volume= 2.047 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 885.68' @ 12.55 hrs Surf.Area= 33,750 sf Storage= 43,099 cf

Plug-Flow detention time= 145.0 min calculated for 2.046 af (100% of inflow)
Center-of-Mass det. time= 144.6 min (925.8 - 781.2)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=5.07 cfs @ 12.55 hrs HW=885.68' TW=880.38' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 3.26 cfs)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 1.81 cfs @ 1.02 fps)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 3.90" for 100-yr event
Inflow = 54.15 cfs @ 12.38 hrs, Volume= 7.140 af
Outflow = 39.97 cfs @ 12.67 hrs, Volume= 7.140 af, Atten= 26%, Lag= 17.2 min
Discarded = 0.48 cfs @ 12.63 hrs, Volume= 0.397 af
Primary = 39.49 cfs @ 12.67 hrs, Volume= 6.783 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.43' @ 12.63 hrs Surf.Area= 0.732 ac Storage= 1.714 af

Plug-Flow detention time= 50.8 min calculated for 7.135 af (100% of inflow)
Center-of-Mass det. time= 50.9 min (911.0 - 860.1)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.48 cfs @ 12.63 hrs HW=880.43' (Free Discharge)
└**4=Exfiltration** (Controls 0.48 cfs)

Primary OutFlow Max=39.26 cfs @ 12.67 hrs HW=880.42' TW=879.18' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 18.92 cfs @ 5.35 fps)
  └**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Passes < 254.90 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Weir Controls 20.34 cfs @ 1.63 fps)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 5.49" for 100-yr event
Inflow = 5.88 cfs @ 12.13 hrs, Volume= 0.341 af
Outflow = 4.41 cfs @ 12.18 hrs, Volume= 0.311 af, Atten= 25%, Lag= 3.0 min
Discarded = 0.02 cfs @ 12.19 hrs, Volume= 0.048 af
Primary = 4.39 cfs @ 12.18 hrs, Volume= 0.263 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 881.32' @ 12.19 hrs Surf.Area= 3,897 sf Storage= 5,521 cf

Plug-Flow detention time= 299.6 min calculated for 0.311 af (91% of inflow)
Center-of-Mass det. time= 258.8 min (1,034.4 - 775.6)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.19 hrs HW=881.31' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=4.33 cfs @ 12.18 hrs HW=881.31' TW=878.70' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 4.33 cfs @ 5.51 fps)
│ ├**2=Orifice/Grate** (Passes < 0.99 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 3.52 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 5.95" for 100-yr event
Inflow = 18.24 cfs @ 12.13 hrs, Volume= 1.101 af
Outflow = 11.98 cfs @ 12.19 hrs, Volume= 1.090 af, Atten= 34%, Lag= 3.9 min
Discarded = 0.05 cfs @ 12.20 hrs, Volume= 0.064 af
Primary = 11.93 cfs @ 12.19 hrs, Volume= 1.026 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.48' @ 12.20 hrs Surf.Area= 4,847 sf Storage= 8,002 cf

Plug-Flow detention time= 97.6 min calculated for 1.089 af (99% of inflow)
Center-of-Mass det. time= 93.1 min (855.2 - 762.1)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.05 cfs @ 12.20 hrs HW=882.48' (Free Discharge)
└**5=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=11.98 cfs @ 12.19 hrs HW=882.47' TW=880.49' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 11.98 cfs @ 6.78 fps)
  └**2=Orifice/Grate** (Passes < 1.47 cfs potential flow)
  └**3=Orifice/Grate** (Passes < 29.28 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 4.17" for 100-yr event
Inflow = 16.95 cfs @ 12.30 hrs, Volume= 1.447 af
Outflow = 8.60 cfs @ 12.57 hrs, Volume= 1.414 af, Atten= 49%, Lag= 16.4 min
Discarded = 0.18 cfs @ 12.57 hrs, Volume= 0.148 af
Primary = 8.42 cfs @ 12.57 hrs, Volume= 1.266 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 883.64' @ 12.57 hrs Surf.Area= 16,607 sf Storage= 23,526 cf

Plug-Flow detention time= 173.6 min calculated for 1.414 af (98% of inflow)
Center-of-Mass det. time= 160.8 min (978.0 - 817.1)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.18 cfs @ 12.57 hrs HW=883.64' (Free Discharge)
└**5=Exfiltration** (Controls 0.18 cfs)

Primary OutFlow Max=8.35 cfs @ 12.57 hrs HW=883.64' TW=880.25' (Dynamic Tailwater)
├**1=Culvert** (Barrel Controls 5.47 cfs @ 6.97 fps)
│ ├**2=Orifice/Grate** (Passes < 2.86 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 14.57 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 2.88 cfs @ 0.98 fps)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 4.92" for 100-yr event
Inflow = 82.27 cfs @ 12.13 hrs, Volume= 6.308 af
Outflow = 51.97 cfs @ 12.24 hrs, Volume= 6.300 af, Atten= 37%, Lag= 6.5 min
Primary = 51.97 cfs @ 12.24 hrs, Volume= 6.300 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.53' @ 12.23 hrs Surf.Area= 29,531 sf Storage= 69,582 cf

Plug-Flow detention time= 79.8 min calculated for 6.300 af (100% of inflow)
Center-of-Mass det. time= 78.7 min (879.5 - 800.9)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=48.28 cfs @ 12.24 hrs HW=880.52' TW=879.36' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 18.37 cfs @ 5.20 fps)
  - **2=Special & User-Defined** (Passes < 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Passes < 279.63 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 29.90 cfs @ 1.90 fps)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth = 4.15" for 100-yr event
Inflow = 63.88 cfs @ 12.67 hrs, Volume= 13.385 af
Outflow = 63.88 cfs @ 12.67 hrs, Volume= 13.385 af, Atten= 0%, Lag= 0.0 min
Primary = 63.88 cfs @ 12.67 hrs, Volume= 13.385 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.92' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=56.19 cfs @ 12.67 hrs HW=879.19' TW=878.25' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Inlet Controls 56.19 cfs @ 5.51 fps)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 3.75" for 100-yr event
Inflow = 18.18 cfs @ 12.16 hrs, Volume= 1.065 af
Outflow = 18.18 cfs @ 12.16 hrs, Volume= 1.065 af, Atten= 0%, Lag= 0.0 min
Primary = 18.18 cfs @ 12.16 hrs, Volume= 1.065 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.26' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=17.85 cfs @ 12.16 hrs HW=880.23' TW=875.64' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 17.85 cfs @ 5.83 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 3.31" for 100-yr event
Inflow = 210.20 cfs @ 12.46 hrs, Volume= 49.897 af
Outflow = 210.20 cfs @ 12.46 hrs, Volume= 49.897 af, Atten= 0%, Lag= 0.0 min
Primary = 210.20 cfs @ 12.46 hrs, Volume= 49.897 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.73' @ 12.46 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=209.73 cfs @ 12.46 hrs HW=876.72' TW=874.04' (Dynamic Tailwater)
1=Culvert (Barrel Controls 209.73 cfs @ 8.34 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 2.65" for 100-yr event
Inflow = 8.40 cfs @ 12.36 hrs, Volume= 0.786 af
Outflow = 8.40 cfs @ 12.36 hrs, Volume= 0.786 af, Atten= 0%, Lag= 0.0 min
Primary = 8.40 cfs @ 12.36 hrs, Volume= 0.786 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.14' @ 12.36 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=8.36 cfs @ 12.36 hrs HW=879.14' TW=876.64' (Dynamic Tailwater)
1=Culvert (Inlet Controls 8.36 cfs @ 4.54 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 3.04" for 100-yr event
Inflow = 31.74 cfs @ 12.49 hrs, Volume= 3.604 af
Outflow = 31.74 cfs @ 12.49 hrs, Volume= 3.604 af, Atten= 0%, Lag= 0.0 min
Primary = 31.74 cfs @ 12.49 hrs, Volume= 3.604 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 883.26' @ 12.52 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=31.70 cfs @ 12.49 hrs HW=883.20' TW=881.77' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 31.70 cfs @ 6.46 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 4.38" for 100-yr event
Inflow = 159.75 cfs @ 12.19 hrs, Volume= 10.377 af
Outflow = 33.91 cfs @ 12.58 hrs, Volume= 10.359 af, Atten= 79%, Lag= 23.7 min
Primary = 33.91 cfs @ 12.58 hrs, Volume= 10.359 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 883.37' @ 12.58 hrs Surf.Area= 1.566 ac Storage= 5.085 af

Plug-Flow detention time= 238.1 min calculated for 10.352 af (100% of inflow)
Center-of-Mass det. time= 238.8 min (1,043.1 - 804.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=33.86 cfs @ 12.58 hrs HW=883.37' TW=877.22' (Dynamic Tailwater)
- **1=Culvert** (Passes 17.64 cfs of 19.58 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.45 cfs @ 11.80 fps)
  - **3=Orifice/Grate** (Orifice Controls 0.50 cfs @ 11.45 fps)
  - **4=Orifice/Grate** (Orifice Controls 0.54 cfs @ 11.09 fps)
  - **5=Orifice/Grate** (Orifice Controls 16.15 cfs @ 9.14 fps)
- **6=Broad-Crested Rectangular Weir** (Weir Controls 16.21 cfs @ 2.27 fps)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth > 4.33" for 100-yr event
Inflow = 61.73 cfs @ 12.22 hrs, Volume= 13.666 af
Outflow = 61.73 cfs @ 12.22 hrs, Volume= 13.666 af, Atten= 0%, Lag= 0.0 min
Primary = 61.73 cfs @ 12.22 hrs, Volume= 13.666 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.77' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=60.94 cfs @ 12.22 hrs HW=877.69' TW=873.12' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 60.94 cfs @ 8.94 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 3.04" for 100-yr event
Inflow = 107.68 cfs @ 12.80 hrs, Volume= 16.811 af
Outflow = 24.45 cfs @ 14.22 hrs, Volume= 16.402 af, Atten= 77%, Lag= 85.2 min
Primary = 24.45 cfs @ 14.22 hrs, Volume= 16.402 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 897.85' @ 14.23 hrs Surf.Area= 242,964 sf Storage= 400,340 cf

Plug-Flow detention time= 530.8 min calculated for 16.390 af (97% of inflow)
Center-of-Mass det. time= 518.8 min (1,391.3 - 872.5)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=24.44 cfs @ 14.22 hrs HW=897.85' TW=895.94' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 3.73 cfs @ 4.75 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 20.72 cfs @ 2.43 fps)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 2.96" for 100-yr event
Inflow = 24.45 cfs @ 14.22 hrs, Volume= 16.402 af
Outflow = 24.31 cfs @ 14.37 hrs, Volume= 16.374 af, Atten= 1%, Lag= 9.1 min
Primary = 24.31 cfs @ 14.37 hrs, Volume= 16.374 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 895.95' @ 14.37 hrs Surf.Area= 31,283 sf Storage= 32,211 cf

Plug-Flow detention time= 50.4 min calculated for 16.374 af (100% of inflow)
Center-of-Mass det. time= 45.6 min (1,436.9 - 1,391.3)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=24.30 cfs @ 14.37 hrs HW=895.95' TW=878.49' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.09 cfs @ 5.21 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 20.21 cfs @ 1.81 fps)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 3.41" for 100-yr event
Inflow = 38.17 cfs @ 12.21 hrs, Volume= 2.705 af
Outflow = 38.17 cfs @ 12.21 hrs, Volume= 2.705 af, Atten= 0%, Lag= 0.0 min
Primary = 38.17 cfs @ 12.21 hrs, Volume= 2.705 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 863.66' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=37.56 cfs @ 12.21 hrs HW=863.61' TW=861.18' (Dynamic Tailwater)
1=RCP_Elliptical 45x29 (Barrel Controls 37.56 cfs @ 5.52 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 2.94" for 100-yr event
Inflow = 14.95 cfs @ 12.25 hrs, Volume= 1.120 af
Outflow = 14.95 cfs @ 12.25 hrs, Volume= 1.120 af, Atten= 0%, Lag= 0.0 min
Primary = 14.95 cfs @ 12.25 hrs, Volume= 1.120 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 864.26' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.92 cfs @ 12.25 hrs HW=864.15' TW=863.52' (Dynamic Tailwater)
1=Culvert (Outlet Controls 14.92 cfs @ 4.75 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth = 2.59" for 100-yr event
Inflow = 300.20 cfs @ 12.68 hrs, Volume= 44.078 af
Outflow = 170.46 cfs @ 13.18 hrs, Volume= 42.987 af, Atten= 43%, Lag= 29.9 min
Primary = 170.46 cfs @ 13.18 hrs, Volume= 42.987 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.06' @ 13.19 hrs Surf.Area= 339,183 sf Storage= 676,609 cf

Plug-Flow detention time= 277.5 min calculated for 42.987 af (98% of inflow)
Center-of-Mass det. time= 255.7 min (1,147.1 - 891.4)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=170.22 cfs @ 13.18 hrs HW=861.06' TW=858.31' (Dynamic Tailwater)
1=Culvert (Outlet Controls 29.97 cfs @ 5.17 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 140.25 cfs @ 2.01 fps)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 2.84" for 100-yr event
Inflow = 32.93 cfs @ 12.32 hrs, Volume= 2.894 af
Outflow = 21.47 cfs @ 12.54 hrs, Volume= 2.868 af, Atten= 35%, Lag= 12.7 min
Primary = 21.47 cfs @ 12.54 hrs, Volume= 2.868 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.32' @ 12.54 hrs Surf.Area= 35,191 sf Storage= 36,441 cf

Plug-Flow detention time= 170.7 min calculated for 2.866 af (99% of inflow)
Center-of-Mass det. time= 167.3 min (1,010.1 - 842.8)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=21.39 cfs @ 12.54 hrs HW=862.32' TW=859.47' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 1.07 cfs @ 3.07 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 20.32 cfs @ 1.95 fps)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 4.38" for 100-yr event
Inflow = 15.18 cfs @ 12.14 hrs, Volume= 0.858 af
Outflow = 0.73 cfs @ 13.61 hrs, Volume= 0.793 af, Atten= 95%, Lag= 87.7 min
Primary = 0.73 cfs @ 13.61 hrs, Volume= 0.793 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.61' @ 13.61 hrs Surf.Area= 42,467 sf Storage= 24,564 cf

Plug-Flow detention time= 645.8 min calculated for 0.792 af (92% of inflow)
Center-of-Mass det. time= 610.9 min (1,411.8 - 800.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.73 cfs @ 13.61 hrs HW=865.61' TW=860.96' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.73 cfs @ 2.87 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 2.66" for 100-yr event
Inflow = 245.88 cfs @ 13.08 hrs, Volume= 67.400 af
Outflow = 109.26 cfs @ 14.09 hrs, Volume= 67.400 af, Atten= 56%, Lag= 60.4 min
Primary = 109.26 cfs @ 14.09 hrs, Volume= 67.400 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 858.83' @ 14.09 hrs Surf.Area= 461,575 sf Storage= 1,322,907 cf (766,461 cf above start)

Plug-Flow detention time= 313.9 min calculated for 54.588 af (81% of inflow)
Center-of-Mass det. time= 77.6 min (1,118.1 - 1,040.5)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=109.25 cfs @ 14.09 hrs HW=858.83' TW=856.60' (Dynamic Tailwater)
1=Culvert (Inlet Controls 109.25 cfs @ 5.68 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 3.34" for 100-yr event
Inflow = 15.06 cfs @ 12.17 hrs, Volume= 0.904 af
Outflow = 15.06 cfs @ 12.17 hrs, Volume= 0.904 af, Atten= 0%, Lag= 0.0 min
Primary = 15.06 cfs @ 12.17 hrs, Volume= 0.904 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.74' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.62 cfs @ 12.17 hrs HW=877.70' TW=875.82' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 14.62 cfs @ 5.54 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 3.83" for 100-yr event
Inflow = 5.80 cfs @ 12.14 hrs, Volume= 2.546 af
Outflow = 5.80 cfs @ 12.14 hrs, Volume= 2.546 af, Atten= 0%, Lag= 0.0 min
Primary = 5.80 cfs @ 12.14 hrs, Volume= 2.546 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.47' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.63 cfs @ 12.14 hrs HW=874.45' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 5.63 cfs @ 4.36 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 2.84" for 100-yr event
Inflow = 30.89 cfs @ 12.24 hrs, Volume= 2.255 af
Outflow = 30.89 cfs @ 12.24 hrs, Volume= 2.255 af, Atten= 0%, Lag= 0.0 min
Primary = 30.89 cfs @ 12.24 hrs, Volume= 2.255 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.79' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=30.49 cfs @ 12.24 hrs HW=881.76' TW=878.91' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 30.49 cfs @ 7.01 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 3.18" for 100-yr event
Inflow = 47.09 cfs @ 12.17 hrs, Volume= 3.501 af
Outflow = 31.88 cfs @ 12.33 hrs, Volume= 3.490 af, Atten= 32%, Lag= 10.0 min
Primary = 31.88 cfs @ 12.33 hrs, Volume= 3.490 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.08' @ 12.33 hrs Surf.Area= 0.407 ac Storage= 1.078 af

Plug-Flow detention time= 271.3 min calculated for 3.488 af (100% of inflow)
Center-of-Mass det. time= 271.2 min (1,096.5 - 825.3)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=31.60 cfs @ 12.33 hrs HW=879.07' TW=876.32' (Dynamic Tailwater)
├─**1=Culvert** (Passes 1.57 cfs of 12.97 cfs potential flow)
│ └─**2=Orifice/Grate** (Orifice Controls 1.57 cfs @ 7.99 fps)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 30.03 cfs @ 2.43 fps)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 2.81" for 100-yr event
Inflow = 6.19 cfs @ 12.13 hrs, Volume= 3.361 af
Outflow = 6.19 cfs @ 12.13 hrs, Volume= 3.361 af, Atten= 0%, Lag= 0.0 min
Primary = 6.19 cfs @ 12.13 hrs, Volume= 3.361 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.71' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=5.93 cfs @ 12.13 hrs HW=874.68' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 5.93 cfs @ 4.11 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth > 3.17" for 100-yr event
Inflow = 31.88 cfs @ 12.33 hrs, Volume= 3.490 af
Outflow = 5.18 cfs @ 13.51 hrs, Volume= 3.433 af, Atten= 84%, Lag= 70.8 min
Discarded = 0.11 cfs @ 13.51 hrs, Volume= 0.402 af
Primary = 5.07 cfs @ 13.51 hrs, Volume= 3.031 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.20' @ 13.51 hrs Surf.Area= 24,538 sf Storage= 58,011 cf

Plug-Flow detention time= 476.3 min calculated for 3.433 af (98% of inflow)
Center-of-Mass det. time= 445.0 min (1,541.6 - 1,096.5)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.11 cfs @ 13.51 hrs HW=878.20' (Free Discharge)
└**5=Exfiltration** (Controls 0.11 cfs)

Primary OutFlow Max=5.07 cfs @ 13.51 hrs HW=878.20' TW=874.64' (Dynamic Tailwater)
└**1=Culvert** (Passes 5.07 cfs of 5.19 cfs potential flow)
  └**2=Orifice/Grate** (Orifice Controls 1.40 cfs @ 7.14 fps)
  └**3=Orifice/Grate** (Weir Controls 3.66 cfs @ 1.46 fps)
└**4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 3.90" for 100-yr event
Inflow = 40.07 cfs @ 12.14 hrs, Volume= 2.308 af
Outflow = 2.02 cfs @ 13.61 hrs, Volume= 2.292 af, Atten= 95%, Lag= 88.4 min
Primary = 2.02 cfs @ 13.61 hrs, Volume= 2.292 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.05' @ 13.61 hrs Surf.Area= 0.572 ac Storage= 1.469 af

Plug-Flow detention time= 519.9 min calculated for 2.290 af (99% of inflow)
Center-of-Mass det. time= 517.3 min (1,325.6 - 808.3)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.02 cfs @ 13.61 hrs HW=877.05' TW=873.99' (Dynamic Tailwater)
- **1=Culvert** (Passes 2.02 cfs of 5.86 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.58 cfs @ 8.05 fps)
  - **3=Orifice/Grate** (Weir Controls 0.43 cfs @ 0.72 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth = 4.18" for 100-yr event
Inflow = 81.44 cfs @ 12.23 hrs, Volume= 15.259 af
Outflow = 81.44 cfs @ 12.23 hrs, Volume= 15.259 af, Atten= 0%, Lag= 0.0 min
Primary = 81.44 cfs @ 12.23 hrs, Volume= 15.259 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.95' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=78.11 cfs @ 12.23 hrs HW=878.89' TW=876.13' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 78.11 cfs @ 8.12 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 2.91" for 100-yr event
Inflow = 95.04 cfs @ 12.54 hrs, Volume= 27.754 af
Outflow = 95.04 cfs @ 12.54 hrs, Volume= 27.754 af, Atten= 0%, Lag= 0.0 min
Primary = 95.04 cfs @ 12.54 hrs, Volume= 27.754 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.85' @ 12.54 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=94.81 cfs @ 12.54 hrs HW=881.83' TW=876.41' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 94.81 cfs @ 9.85 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 3.57" for 100-yr event
Inflow = 265.24 cfs @ 12.17 hrs, Volume= 89.409 af
Outflow = 76.68 cfs @ 15.11 hrs, Volume= 86.792 af, Atten= 71%, Lag= 175.9 min
Primary = 76.68 cfs @ 15.11 hrs, Volume= 86.792 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 863.55' @ 15.11 hrs Surf.Area= 3.500 ac Storage= 15.333 af

Plug-Flow detention time= 252.3 min calculated for 86.792 af (97% of inflow)
Center-of-Mass det. time= 182.3 min (1,394.0 - 1,211.7)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=76.68 cfs @ 15.11 hrs HW=863.55' TW=856.60' (Dynamic Tailwater)
└─**1=Culvert** (Passes 76.68 cfs of 87.90 cfs potential flow)
└─**2=Custom Weir/Orifice** (Weir Controls 76.68 cfs @ 5.50 fps)
└─**3=Culvert** (Passes 76.68 cfs of 119.19 cfs potential flow)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 5.15" for 100-yr event
Inflow = 16.26 cfs @ 12.13 hrs, Volume= 0.921 af
Outflow = 16.26 cfs @ 12.13 hrs, Volume= 0.921 af, Atten= 0%, Lag= 0.0 min
Primary = 16.26 cfs @ 12.13 hrs, Volume= 0.921 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 865.13' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=15.55 cfs @ 12.13 hrs HW=864.80' TW=860.67' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 15.55 cfs @ 8.80 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└─**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 3.55" for 100-yr event
Inflow = 325.27 cfs @ 12.34 hrs, Volume= 72.470 af
Outflow = 66.30 cfs @ 15.41 hrs, Volume= 70.290 af, Atten= 80%, Lag= 184.5 min
Primary = 66.30 cfs @ 15.41 hrs, Volume= 70.290 af
Routed to Pond 59P : Pond A
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.19' @ 15.22 hrs Surf.Area= 6.930 ac Storage= 29.065 af

Plug-Flow detention time= 371.9 min calculated for 70.290 af (97% of inflow)
Center-of-Mass det. time= 314.1 min (1,322.0 - 1,007.9)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=66.30 cfs @ 15.41 hrs HW=876.18' TW=863.54' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 66.30 cfs @ 6.89 fps)
└**2=Custom Weir/Orifice** (Passes 66.30 cfs of 149.77 cfs potential flow)
└**3=Culvert** (Passes 66.30 cfs of 86.06 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.00' TW=872.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 4.38" for 100-yr event
Inflow = 94.50 cfs @ 12.22 hrs, Volume= 7.002 af
Primary = 93.06 cfs @ 12.49 hrs, Volume= 7.002 af, Atten= 2%, Lag= 15.9 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 3.10" for 100-yr event
Inflow = 200.42 cfs @ 13.71 hrs, Volume= 165.392 af
Primary = 200.42 cfs @ 13.71 hrs, Volume= 165.392 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth = 3.35" for 100-yr event
Inflow = 55.68 cfs @ 12.27 hrs, Volume= 11.315 af
Primary = 55.68 cfs @ 12.27 hrs, Volume= 11.315 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 4.60" for 100-yr event
Inflow = 2.66 cfs @ 12.44 hrs, Volume= 0.287 af
Primary = 2.65 cfs @ 12.87 hrs, Volume= 0.287 af, Atten= 0%, Lag= 25.6 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1S: C1

Runoff = 41.25 cfs @ 12.13 hrs, Volume= 2.378 af, Depth= 6.11"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 28.72 cfs @ 12.44 hrs, Volume= 3.033 af, Depth= 3.73"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 30.59 cfs @ 12.34 hrs, Volume= 2.811 af, Depth= 4.96"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 6.73 cfs @ 12.13 hrs, Volume= 0.394 af, Depth= 6.34"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 20.72 cfs @ 12.13 hrs, Volume= 1.261 af, Depth= 6.81"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 20.09 cfs @ 12.30 hrs, Volume= 1.721 af, Depth= 4.96"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 4.67 cfs @ 12.13 hrs, Volume= 0.252 af, Depth= 4.51"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 75.11 cfs @ 12.13 hrs, Volume= 4.398 af, Depth= 6.34"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 7.06 cfs @ 12.13 hrs, Volume= 0.375 af, Depth= 3.41"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 6.59 cfs @ 12.13 hrs, Volume= 0.421 af, Depth= 7.29"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 30.24 cfs @ 12.16 hrs, Volume= 1.793 af, Depth= 4.85"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 10.81 cfs @ 12.15 hrs, Volume= 0.634 af, Depth= 5.07"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 21.78 cfs @ 12.16 hrs, Volume= 1.281 af, Depth= 4.51"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 59.03 cfs @ 12.34 hrs, Volume= 5.397 af, Depth= 4.62"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 22.17 cfs @ 12.13 hrs, Volume= 1.364 af, Depth= 6.93"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 10.58 cfs @ 12.36 hrs, Volume= 0.980 af, Depth= 3.30"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 39.24 cfs @ 12.49 hrs, Volume= 4.430 af, Depth= 3.73"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 79.83 cfs @ 12.55 hrs, Volume= 9.659 af, Depth= 3.41"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 187.77 cfs @ 12.19 hrs, Volume= 12.282 af, Depth= 5.19"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 49.05 cfs @ 12.22 hrs, Volume= 3.489 af, Depth= 4.96"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 7.43 cfs @ 12.16 hrs, Volume= 0.444 af, Depth= 5.07"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 6.91 cfs @ 12.15 hrs, Volume= 0.393 af, Depth= 5.07"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 133.33 cfs @ 12.80 hrs, Volume= 20.664 af, Depth= 3.73"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 61.20 cfs @ 12.40 hrs, Volume= 6.125 af, Depth= 4.17"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 85.35 cfs @ 12.13 hrs, Volume= 4.820 af, Depth= 5.76"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 87.14 cfs @ 12.24 hrs, Volume= 6.468 af, Depth= 4.06"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 28.61 cfs @ 12.20 hrs, Volume= 1.902 af, Depth= 4.62"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 27.43 cfs @ 12.26 hrs, Volume= 2.137 af, Depth= 4.73"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 2.71 cfs @ 12.14 hrs, Volume= 0.144 af, Depth= 3.09"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 18.73 cfs @ 12.13 hrs, Volume= 1.072 af, Depth= 5.99"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 69.35 cfs @ 12.19 hrs, Volume= 4.811 af, Depth= 6.23"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 18.52 cfs @ 12.25 hrs, Volume= 1.381 af, Depth= 3.63"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 15.29 cfs @ 12.18 hrs, Volume= 0.954 af, Depth= 3.63"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 353.81 cfs @ 12.69 hrs, Volume= 49.620 af, Depth= 3.20"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 41.05 cfs @ 12.32 hrs, Volume= 3.582 af, Depth= 3.52"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 17.83 cfs @ 12.14 hrs, Volume= 1.016 af, Depth= 5.19"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 266.22 cfs @ 12.50 hrs, Volume= 30.112 af, Depth= 3.63"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 106.84 cfs @ 12.23 hrs, Volume= 7.878 af, Depth= 5.19"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 7.49 cfs @ 12.13 hrs, Volume= 0.410 af, Depth= 5.07"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.480	98	
*	0.490	61	
	0.970	79	Weighted Average
	0.490		50.52% Pervious Area
	0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 29.44 cfs @ 12.95 hrs, Volume= 5.178 af, Depth= 3.63"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 18.32 cfs @ 12.16 hrs, Volume= 1.100 af, Depth= 4.06"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.700	98	
	2.260	61	>75% Grass cover, Good, HSG B
	0.290	74	>75% Grass cover, Good, HSG C
	3.250	70	Weighted Average
	2.550		78.46% Pervious Area
	0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 30.20 cfs @ 12.13 hrs, Volume= 1.661 af, Depth= 5.19"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.626	98	
	1.828	61	>75% Grass cover, Good, HSG B
	0.390	98	Water Surface, 0% imp, HSG B
	3.844	80	Weighted Average
	2.218		57.70% Pervious Area
	1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 5.78 cfs @ 12.13 hrs, Volume= 0.309 af, Depth= 4.17"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 38.82 cfs @ 12.41 hrs, Volume= 3.951 af, Depth= 4.17"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 38.43 cfs @ 12.23 hrs, Volume= 2.791 af, Depth= 3.52"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 27.27 cfs @ 12.13 hrs, Volume= 1.486 af, Depth= 4.85"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 7.48 cfs @ 12.13 hrs, Volume= 0.400 af, Depth= 4.17"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 32.04 cfs @ 12.22 hrs, Volume= 2.249 af, Depth= 4.40"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 3.12 cfs @ 12.44 hrs, Volume= 0.338 af, Depth= 5.41"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 52.51 cfs @ 12.04 hrs, Volume= 2.692 af, Depth= 6.46"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 200-yr Rainfall=7.53"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

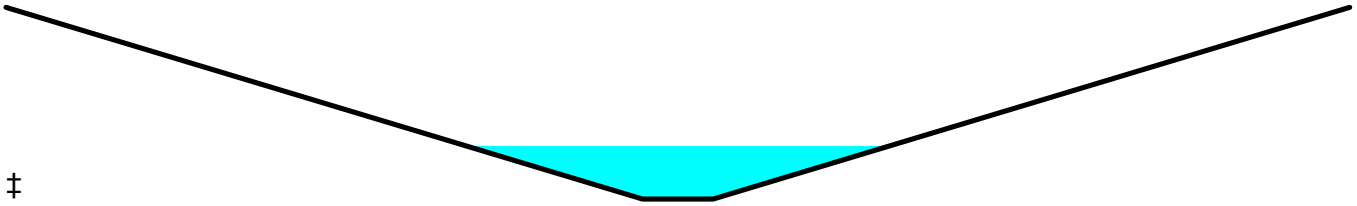
Summary for Reach 20R: Overland Flow

Inflow = 76.00 cfs @ 13.78 hrs, Volume= 9.236 af
Outflow = 66.69 cfs @ 14.04 hrs, Volume= 9.236 af, Atten= 12%, Lag= 15.9 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 2.30 fps, Min. Travel Time= 17.9 min
Avg. Velocity = 0.60 fps, Avg. Travel Time= 69.1 min

Peak Storage= 71,765 cf @ 14.04 hrs
Average Depth at Peak Storage= 0.83' , Surface Width= 59.83'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 6.11" for 200-yr event
Inflow = 41.25 cfs @ 12.13 hrs, Volume= 2.378 af
Outflow = 7.80 cfs @ 12.45 hrs, Volume= 2.376 af, Atten= 81%, Lag= 19.5 min
Primary = 7.80 cfs @ 12.45 hrs, Volume= 2.376 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 885.82' @ 12.45 hrs Surf.Area= 35,288 sf Storage= 48,005 cf

Plug-Flow detention time= 138.0 min calculated for 2.376 af (100% of inflow)
Center-of-Mass det. time= 137.5 min (915.3 - 777.8)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=7.79 cfs @ 12.45 hrs HW=885.82' TW=880.52' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 3.26 cfs)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 4.53 cfs @ 1.42 fps)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 4.66" for 200-yr event
Inflow = 67.73 cfs @ 12.37 hrs, Volume= 8.535 af
Outflow = 69.55 cfs @ 12.69 hrs, Volume= 8.535 af, Atten= 0%, Lag= 18.8 min
Discarded = 0.53 cfs @ 12.64 hrs, Volume= 0.422 af
Primary = 69.03 cfs @ 12.69 hrs, Volume= 8.540 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.77' @ 12.64 hrs Surf.Area= 0.792 ac Storage= 1.976 af

Plug-Flow detention time= 49.0 min calculated for 8.529 af (100% of inflow)
Center-of-Mass det. time= 49.1 min (902.4 - 853.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=0.53 cfs @ 12.64 hrs HW=880.76' (Free Discharge)
└**4=Exfiltration** (Controls 0.53 cfs)

Primary OutFlow Max=0.00 cfs @ 12.69 hrs HW=880.67' TW=881.42' (Dynamic Tailwater)
└**1=Culvert** (Controls 0.00 cfs)
  └**2=Special & User-Defined** (Passes 0.00 cfs of 3.79 cfs potential flow)
  └**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 6.34" for 200-yr event
Inflow = 6.73 cfs @ 12.13 hrs, Volume= 0.394 af
Outflow = 4.53 cfs @ 12.20 hrs, Volume= 0.364 af, Atten= 33%, Lag= 4.3 min
Discarded = 0.02 cfs @ 12.20 hrs, Volume= 0.048 af
Primary = 4.51 cfs @ 12.20 hrs, Volume= 0.316 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 881.42' @ 12.20 hrs Surf.Area= 4,001 sf Storage= 5,930 cf

Plug-Flow detention time= 264.8 min calculated for 0.364 af (92% of inflow)
Center-of-Mass det. time= 228.0 min (1,000.4 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.02 cfs @ 12.20 hrs HW=881.42' (Free Discharge)
└**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=4.51 cfs @ 12.20 hrs HW=881.42' TW=879.12' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 4.51 cfs @ 5.74 fps)
│ ├**2=Orifice/Grate** (Passes < 1.07 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 5.60 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 6.81" for 200-yr event
Inflow = 20.72 cfs @ 12.13 hrs, Volume= 1.261 af
Outflow = 12.16 cfs @ 12.15 hrs, Volume= 1.249 af, Atten= 41%, Lag= 1.3 min
Discarded = 0.06 cfs @ 12.22 hrs, Volume= 0.065 af
Primary = 12.11 cfs @ 12.15 hrs, Volume= 1.184 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.76' @ 12.22 hrs Surf.Area= 5,374 sf Storage= 9,416 cf

Plug-Flow detention time= 88.5 min calculated for 1.249 af (99% of inflow)
Center-of-Mass det. time= 84.7 min (844.2 - 759.5)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.06 cfs @ 12.22 hrs HW=882.74' (Free Discharge)
└**5=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=11.65 cfs @ 12.15 hrs HW=882.57' TW=880.70' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 11.65 cfs @ 6.60 fps)
  └**2=Orifice/Grate** (Passes < 1.52 cfs potential flow)
  └**3=Orifice/Grate** (Passes < 34.18 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 4.96" for 200-yr event
Inflow = 20.09 cfs @ 12.30 hrs, Volume= 1.721 af
Outflow = 12.81 cfs @ 12.50 hrs, Volume= 1.688 af, Atten= 36%, Lag= 12.1 min
Discarded = 0.19 cfs @ 12.50 hrs, Volume= 0.154 af
Primary = 12.62 cfs @ 12.50 hrs, Volume= 1.535 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 883.76' @ 12.50 hrs Surf.Area= 17,641 sf Storage= 25,506 cf

Plug-Flow detention time= 152.8 min calculated for 1.688 af (98% of inflow)
Center-of-Mass det. time= 141.9 min (954.9 - 813.0)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.19 cfs @ 12.50 hrs HW=883.75' (Free Discharge)
└**5=Exfiltration** (Controls 0.19 cfs)

Primary OutFlow Max=12.59 cfs @ 12.50 hrs HW=883.75' TW=880.48' (Dynamic Tailwater)
├**1=Culvert** (Barrel Controls 5.61 cfs @ 7.14 fps)
│ ├**2=Orifice/Grate** (Passes < 2.98 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 15.46 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 6.98 cfs @ 1.32 fps)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 5.75" for 200-yr event
Inflow = 94.64 cfs @ 12.13 hrs, Volume= 7.369 af
Outflow = 101.01 cfs @ 12.22 hrs, Volume= 7.360 af, Atten= 0%, Lag= 5.2 min
Primary = 95.47 cfs @ 12.21 hrs, Volume= 8.006 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.90' @ 12.20 hrs Surf.Area= 32,808 sf Storage= 81,022 cf

Plug-Flow detention time= 75.6 min calculated for 7.360 af (100% of inflow)
Center-of-Mass det. time= 74.6 min (871.9 - 797.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 12.21 hrs HW=880.86' TW=882.96' (Dynamic Tailwater)
- **1=Culvert** (Controls 0.00 cfs)
  - **2=Special & User-Defined** (Passes 0.00 cfs of 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth = 5.25" for 200-yr event
Inflow = 134.30 cfs @ 12.41 hrs, Volume= 16.920 af
Outflow = 134.30 cfs @ 12.41 hrs, Volume= 16.920 af, Atten= 0%, Lag= 0.0 min
Primary = 134.30 cfs @ 12.41 hrs, Volume= 16.920 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 883.86' @ 12.19 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=0.00 cfs @ 12.41 hrs HW=882.51' TW=885.58' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Controls 0.00 cfs)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 4.51" for 200-yr event
Inflow = 21.78 cfs @ 12.16 hrs, Volume= 1.281 af
Outflow = 21.78 cfs @ 12.16 hrs, Volume= 1.281 af, Atten= 0%, Lag= 0.0 min
Primary = 21.78 cfs @ 12.16 hrs, Volume= 1.281 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.68' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=21.39 cfs @ 12.16 hrs HW=880.63' TW=876.71' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 21.39 cfs @ 6.81 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 4.10" for 200-yr event
Inflow = 326.95 cfs @ 12.41 hrs, Volume= 61.739 af
Outflow = 326.95 cfs @ 12.41 hrs, Volume= 61.739 af, Atten= 0%, Lag= 0.0 min
Primary = 326.95 cfs @ 12.41 hrs, Volume= 61.739 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.17' @ 12.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=319.32 cfs @ 12.41 hrs HW=878.98' TW=874.46' (Dynamic Tailwater)
1=Culvert (Barrel Controls 319.32 cfs @ 12.71 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 3.30" for 200-yr event
Inflow = 10.58 cfs @ 12.36 hrs, Volume= 0.980 af
Outflow = 10.58 cfs @ 12.36 hrs, Volume= 0.980 af, Atten= 0%, Lag= 0.0 min
Primary = 10.58 cfs @ 12.36 hrs, Volume= 0.980 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.42' @ 12.36 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=9.83 cfs @ 12.36 hrs HW=879.41' TW=877.81' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.83 cfs @ 5.85 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 3.73" for 200-yr event
Inflow = 39.24 cfs @ 12.49 hrs, Volume= 4.430 af
Outflow = 39.24 cfs @ 12.49 hrs, Volume= 4.430 af, Atten= 0%, Lag= 0.0 min
Primary = 39.24 cfs @ 12.49 hrs, Volume= 4.430 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 885.67' @ 12.52 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=39.15 cfs @ 12.49 hrs HW=885.56' TW=883.38' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 39.15 cfs @ 7.98 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 5.19" for 200-yr event
Inflow = 187.77 cfs @ 12.19 hrs, Volume= 12.282 af
Outflow = 49.59 cfs @ 12.54 hrs, Volume= 12.264 af, Atten= 74%, Lag= 21.0 min
Primary = 49.59 cfs @ 12.54 hrs, Volume= 12.264 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 883.82' @ 12.51 hrs Surf.Area= 1.658 ac Storage= 5.798 af

Plug-Flow detention time= 213.2 min calculated for 12.255 af (100% of inflow)
Center-of-Mass det. time= 214.0 min (1,014.3 - 800.3)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=49.74 cfs @ 12.54 hrs HW=883.81' TW=880.03' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 16.55 cfs @ 9.36 fps)
  - **2=Orifice/Grate** (Passes < 0.36 cfs potential flow)
  - **3=Orifice/Grate** (Passes < 0.41 cfs potential flow)
  - **4=Orifice/Grate** (Passes < 0.46 cfs potential flow)
  - **5=Orifice/Grate** (Passes < 16.55 cfs potential flow)
- **6=Broad-Crested Rectangular Weir** (Weir Controls 33.19 cfs @ 2.88 fps)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth > 5.13" for 200-yr event
Inflow = 77.42 cfs @ 12.29 hrs, Volume= 16.196 af
Outflow = 77.42 cfs @ 12.29 hrs, Volume= 16.196 af, Atten= 0%, Lag= 0.0 min
Primary = 77.42 cfs @ 12.29 hrs, Volume= 16.196 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 880.76' @ 12.30 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=77.25 cfs @ 12.29 hrs HW=880.74' TW=873.89' (Dynamic Tailwater)
- **1=Culvert** (Barrel Controls 77.25 cfs @ 10.93 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 3.73" for 200-yr event
Inflow = 133.33 cfs @ 12.80 hrs, Volume= 20.664 af
Outflow = 89.45 cfs @ 13.50 hrs, Volume= 20.251 af, Atten= 33%, Lag= 42.2 min
Primary = 89.45 cfs @ 13.50 hrs, Volume= 20.251 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 899.19' @ 13.50 hrs Surf.Area= 257,486 sf Storage= 437,523 cf

Plug-Flow detention time= 454.1 min calculated for 20.236 af (98% of inflow)
Center-of-Mass det. time= 444.3 min (1,311.9 - 867.6)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=87.65 cfs @ 13.50 hrs HW=899.16' TW=896.53' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 4.38 cfs @ 5.57 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 83.28 cfs @ 3.86 fps)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 3.66" for 200-yr event
Inflow = 89.45 cfs @ 13.50 hrs, Volume= 20.251 af
Outflow = 75.27 cfs @ 13.51 hrs, Volume= 20.223 af, Atten= 16%, Lag= 0.5 min
Primary = 75.27 cfs @ 13.51 hrs, Volume= 20.223 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 896.56' @ 13.51 hrs Surf.Area= 32,190 sf Storage= 33,874 cf

Plug-Flow detention time= 42.6 min calculated for 20.209 af (100% of inflow)
Center-of-Mass det. time= 38.7 min (1,350.5 - 1,311.9)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=69.30 cfs @ 13.51 hrs HW=896.49' TW=882.09' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.46 cfs @ 5.67 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 64.84 cfs @ 2.62 fps)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 4.14" for 200-yr event
Inflow = 46.28 cfs @ 12.21 hrs, Volume= 3.283 af
Outflow = 46.28 cfs @ 12.21 hrs, Volume= 3.283 af, Atten= 0%, Lag= 0.0 min
Primary = 46.28 cfs @ 12.21 hrs, Volume= 3.283 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 864.92' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=45.55 cfs @ 12.21 hrs HW=864.84' TW=861.65' (Dynamic Tailwater)
1=RCP_Elliptical 45x29 (Barrel Controls 45.55 cfs @ 6.19 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 3.63" for 200-yr event
Inflow = 18.52 cfs @ 12.25 hrs, Volume= 1.381 af
Outflow = 18.52 cfs @ 12.25 hrs, Volume= 1.381 af, Atten= 0%, Lag= 0.0 min
Primary = 18.52 cfs @ 12.25 hrs, Volume= 1.381 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.87' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=18.44 cfs @ 12.25 hrs HW=865.67' TW=864.67' (Dynamic Tailwater)
1=Culvert (Outlet Controls 18.44 cfs @ 5.87 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth = 3.78" for 200-yr event
Inflow = 381.00 cfs @ 12.67 hrs, Volume= 64.315 af
Outflow = 251.95 cfs @ 13.06 hrs, Volume= 63.210 af, Atten= 34%, Lag= 23.2 min
Primary = 251.95 cfs @ 13.06 hrs, Volume= 63.210 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 861.26' @ 13.07 hrs Surf.Area= 405,016 sf Storage= 753,619 cf

Plug-Flow detention time= 205.0 min calculated for 63.166 af (98% of inflow)
Center-of-Mass det. time= 191.2 min (1,073.8 - 882.5)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=251.63 cfs @ 13.06 hrs HW=861.26' TW=858.77' (Dynamic Tailwater)
1=Culvert (Outlet Controls 30.50 cfs @ 4.94 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 221.14 cfs @ 2.32 fps)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 3.52" for 200-yr event
Inflow = 41.05 cfs @ 12.32 hrs, Volume= 3.582 af
Outflow = 29.52 cfs @ 12.50 hrs, Volume= 3.556 af, Atten= 28%, Lag= 10.5 min
Primary = 29.52 cfs @ 12.50 hrs, Volume= 3.556 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.45' @ 12.50 hrs Surf.Area= 37,327 sf Storage= 41,215 cf

Plug-Flow detention time= 145.6 min calculated for 3.554 af (99% of inflow)
Center-of-Mass det. time= 143.1 min (980.6 - 837.6)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=29.49 cfs @ 12.50 hrs HW=862.45' TW=859.78' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 1.11 cfs @ 3.18 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 28.38 cfs @ 2.17 fps)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 5.19" for 200-yr event
Inflow = 17.83 cfs @ 12.14 hrs, Volume= 1.016 af
Outflow = 0.89 cfs @ 13.59 hrs, Volume= 0.949 af, Atten= 95%, Lag= 86.5 min
Primary = 0.89 cfs @ 13.59 hrs, Volume= 0.949 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.71' @ 13.59 hrs Surf.Area= 43,136 sf Storage= 29,053 cf

Plug-Flow detention time= 615.1 min calculated for 0.948 af (93% of inflow)
Center-of-Mass det. time= 584.3 min (1,381.2 - 796.9)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=0.89 cfs @ 13.59 hrs HW=865.71' TW=861.12' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 0.89 cfs @ 2.97 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 3.69" for 200-yr event
Inflow = 367.57 cfs @ 12.93 hrs, Volume= 93.322 af
Outflow = 129.99 cfs @ 14.74 hrs, Volume= 93.322 af, Atten= 65%, Lag= 108.4 min
Primary = 129.99 cfs @ 14.74 hrs, Volume= 93.322 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 859.76' @ 14.74 hrs Surf.Area= 702,804 sf Storage= 1,854,060 cf (1,297,613 cf above start)

Plug-Flow detention time= 283.3 min calculated for 80.547 af (86% of inflow)
Center-of-Mass det. time= 108.6 min (1,109.5 - 1,000.9)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=129.99 cfs @ 14.74 hrs HW=859.76' TW=856.60' (Dynamic Tailwater)
1=Culvert (Inlet Controls 129.99 cfs @ 6.76 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 4.06" for 200-yr event
Inflow = 18.32 cfs @ 12.16 hrs, Volume= 1.100 af
Outflow = 18.32 cfs @ 12.16 hrs, Volume= 1.100 af, Atten= 0%, Lag= 0.0 min
Primary = 18.32 cfs @ 12.16 hrs, Volume= 1.100 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.66' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=17.80 cfs @ 12.16 hrs HW=878.56' TW=876.19' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 17.80 cfs @ 5.66 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 4.59" for 200-yr event
Inflow = 6.89 cfs @ 12.14 hrs, Volume= 3.054 af
Outflow = 6.89 cfs @ 12.14 hrs, Volume= 3.054 af, Atten= 0%, Lag= 0.0 min
Primary = 6.89 cfs @ 12.14 hrs, Volume= 3.054 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.59' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=6.67 cfs @ 12.14 hrs HW=874.56' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 6.67 cfs @ 4.55 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 3.52" for 200-yr event
Inflow = 38.43 cfs @ 12.23 hrs, Volume= 2.791 af
Outflow = 38.43 cfs @ 12.23 hrs, Volume= 2.791 af, Atten= 0%, Lag= 0.0 min
Primary = 38.43 cfs @ 12.23 hrs, Volume= 2.791 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 882.89' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=37.89 cfs @ 12.23 hrs HW=882.83' TW=879.22' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 37.89 cfs @ 7.72 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 3.89" for 200-yr event
Inflow = 57.63 cfs @ 12.17 hrs, Volume= 4.277 af
Outflow = 44.58 cfs @ 12.30 hrs, Volume= 4.266 af, Atten= 23%, Lag= 7.7 min
Primary = 44.58 cfs @ 12.30 hrs, Volume= 4.266 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.30' @ 12.30 hrs Surf.Area= 0.415 ac Storage= 1.168 af

Plug-Flow detention time= 231.7 min calculated for 4.263 af (100% of inflow)
Center-of-Mass det. time= 231.9 min (1,052.7 - 820.8)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=44.42 cfs @ 12.30 hrs HW=879.29' TW=876.67' (Dynamic Tailwater)
└**1=Culvert** (Passes 1.53 cfs of 13.57 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 1.53 cfs @ 7.79 fps)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 42.89 cfs @ 2.74 fps)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 3.51" for 200-yr event
Inflow = 7.46 cfs @ 12.13 hrs, Volume= 4.196 af
Outflow = 7.46 cfs @ 12.13 hrs, Volume= 4.196 af, Atten= 0%, Lag= 0.0 min
Primary = 7.46 cfs @ 12.13 hrs, Volume= 4.196 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.82' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=7.16 cfs @ 12.13 hrs HW=874.79' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 7.16 cfs @ 4.34 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 3.88" for 200-yr event
Inflow = 44.58 cfs @ 12.30 hrs, Volume= 4.266 af
Outflow = 6.84 cfs @ 13.29 hrs, Volume= 4.206 af, Atten= 85%, Lag= 59.9 min
Discarded = 0.12 cfs @ 13.29 hrs, Volume= 0.410 af
Primary = 6.72 cfs @ 13.29 hrs, Volume= 3.796 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.62' @ 13.29 hrs Surf.Area= 25,879 sf Storage= 68,494 cf

Plug-Flow detention time= 411.5 min calculated for 4.206 af (99% of inflow)
Center-of-Mass det. time= 383.9 min (1,436.5 - 1,052.7)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.12 cfs @ 13.29 hrs HW=878.62' (Free Discharge)
└**5=Exfiltration** (Controls 0.12 cfs)

Primary OutFlow Max=6.72 cfs @ 13.29 hrs HW=878.62' TW=874.80' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 5.74 cfs @ 7.31 fps)
  └**2=Orifice/Grate** (Passes < 1.53 cfs potential flow)
  └**3=Orifice/Grate** (Passes < 19.85 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 0.98 cfs @ 0.85 fps)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 4.67" for 200-yr event
Inflow = 47.67 cfs @ 12.14 hrs, Volume= 2.762 af
Outflow = 5.40 cfs @ 12.76 hrs, Volume= 2.746 af, Atten= 89%, Lag= 37.3 min
Primary = 5.40 cfs @ 12.76 hrs, Volume= 2.746 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.21' @ 12.76 hrs Surf.Area= 0.582 ac Storage= 1.559 af

Plug-Flow detention time= 461.4 min calculated for 2.744 af (99% of inflow)
Center-of-Mass det. time= 459.5 min (1,263.7 - 804.2)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=5.39 cfs @ 12.76 hrs HW=877.21' TW=874.49' (Dynamic Tailwater)
- **1=Culvert** (Passes 5.39 cfs of 6.07 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 1.56 cfs @ 7.94 fps)
  - **3=Orifice/Grate** (Weir Controls 3.84 cfs @ 1.48 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth = 5.24" for 200-yr event
Inflow = 144.44 cfs @ 12.41 hrs, Volume= 19.135 af
Outflow = 144.44 cfs @ 12.41 hrs, Volume= 19.135 af, Atten= 0%, Lag= 0.0 min
Primary = 144.44 cfs @ 12.41 hrs, Volume= 19.135 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 886.54' @ 12.40 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=121.48 cfs @ 12.41 hrs HW=885.67' TW=879.00' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 121.48 cfs @ 12.63 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 3.59" for 200-yr event
Inflow = 118.86 cfs @ 12.53 hrs, Volume= 34.312 af
Outflow = 118.86 cfs @ 12.53 hrs, Volume= 34.312 af, Atten= 0%, Lag= 0.0 min
Primary = 118.86 cfs @ 12.53 hrs, Volume= 34.312 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 883.51' @ 12.53 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=118.49 cfs @ 12.53 hrs HW=883.48' TW=878.49' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 118.49 cfs @ 12.32 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 3.98" for 200-yr event
Inflow = 317.32 cfs @ 12.18 hrs, Volume= 99.808 af
Outflow = 87.62 cfs @ 13.66 hrs, Volume= 97.171 af, Atten= 72%, Lag= 88.7 min
Primary = 87.62 cfs @ 13.66 hrs, Volume= 97.171 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 863.80' @ 13.66 hrs Surf.Area= 3.474 ac Storage= 16.187 af

Plug-Flow detention time= 235.7 min calculated for 97.171 af (97% of inflow)
Center-of-Mass det. time= 172.3 min (1,374.4 - 1,202.1)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=87.61 cfs @ 13.66 hrs HW=863.80' TW=856.60' (Dynamic Tailwater)
- **1=Culvert** (Passes 87.61 cfs of 90.84 cfs potential flow)
  - **2=Custom Weir/Orifice** (Weir Controls 87.61 cfs @ 5.68 fps)
    - **3=Culvert** (Passes 87.61 cfs of 123.88 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **1=Culvert** (Controls 0.00 cfs)
  - **2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 5.99" for 200-yr event
Inflow = 18.73 cfs @ 12.13 hrs, Volume= 1.072 af
Outflow = 18.73 cfs @ 12.13 hrs, Volume= 1.072 af, Atten= 0%, Lag= 0.0 min
Primary = 18.73 cfs @ 12.13 hrs, Volume= 1.072 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 866.98' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=17.92 cfs @ 12.13 hrs HW=866.54' TW=861.06' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 17.92 cfs @ 10.14 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 4.34" for 200-yr event
Inflow = 474.78 cfs @ 12.41 hrs, Volume= 88.509 af
Outflow = 143.53 cfs @ 13.78 hrs, Volume= 86.309 af, Atten= 70%, Lag= 82.2 min
Primary = 67.54 cfs @ 13.85 hrs, Volume= 77.074 af
Routed to Pond 59P : Pond A
Secondary = 76.00 cfs @ 13.78 hrs, Volume= 9.236 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 876.91' @ 13.78 hrs Surf.Area= 7.194 ac Storage= 34.128 af

Plug-Flow detention time= 338.3 min calculated for 86.309 af (98% of inflow)
Center-of-Mass det. time= 289.8 min (1,270.3 - 980.5)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=67.54 cfs @ 13.85 hrs HW=876.90' TW=863.78' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 67.54 cfs @ 7.02 fps)
└**2=Custom Weir/Orifice** (Passes 67.54 cfs of 193.43 cfs potential flow)
└**3=Culvert** (Passes 67.54 cfs of 92.80 cfs potential flow)

Secondary OutFlow Max=75.93 cfs @ 13.78 hrs HW=876.91' TW=872.77' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 75.93 cfs @ 1.87 fps)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 5.18" for 200-yr event
Inflow = 111.20 cfs @ 12.22 hrs, Volume= 8.288 af
Primary = 109.49 cfs @ 12.48 hrs, Volume= 8.288 af, Atten= 2%, Lag= 15.9 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 3.82" for 200-yr event
Inflow = 241.65 cfs @ 12.54 hrs, Volume= 203.958 af
Primary = 241.65 cfs @ 12.54 hrs, Volume= 203.958 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth = 4.08" for 200-yr event
Inflow = 67.90 cfs @ 12.27 hrs, Volume= 13.790 af
Primary = 67.90 cfs @ 12.27 hrs, Volume= 13.790 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 5.41" for 200-yr event
Inflow = 3.12 cfs @ 12.44 hrs, Volume= 0.338 af
Primary = 3.10 cfs @ 12.86 hrs, Volume= 0.338 af, Atten= 0%, Lag= 25.6 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1S: C1

Runoff = 49.90 cfs @ 12.13 hrs, Volume= 2.914 af, Depth= 7.49"
Routed to Pond 1P : Niebuhr Stormwater Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	3.370	98	
	1.300	61	>75% Grass cover, Good, HSG B
	4.670	88	Weighted Average
	1.300		27.84% Pervious Area
	3.370		72.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 2S: C2

Runoff = 37.90 cfs @ 12.44 hrs, Volume= 3.990 af, Depth= 4.91"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.020	98	
	5.655	61	>75% Grass cover, Good, HSG B
	0.685	58	Woods/grass comb., Good, HSG B
*	2.385	70	Row crops, SR + CR, Good, HSG B
	9.745	67	Weighted Average
	8.725		89.53% Pervious Area
	1.020		10.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0	91	0.0830	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.4	59	0.0300	0.15		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
11.9	573	0.0080	0.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
3.3	337	0.0030	1.69	11.17	**Channel Flow,** Area= 6.6 sf Perim= 13.4' r= 0.49' n= 0.030
1.1	224	0.0050	3.31	10.40	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.020 Corrugated PE, corrugated interior
30.7	1,284	Total			

Summary for Subcatchment 3S: C3-A

Runoff = 38.39 cfs @ 12.34 hrs, Volume= 3.552 af, Depth= 6.27"
Routed to Pond 2P : Storm Basin 2 with Infiltration

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.890	98	
	3.639	61	>75% Grass cover, Good, HSG B
	0.273	98	Water Surface, HSG B
	6.802	78	Weighted Average
	3.639		53.50% Pervious Area
	3.163		46.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	86	0.0260	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	68	0.0220	1.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
9.1	1,026	0.0050	1.88	15.43	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.2 '/' Top.W=16.40' n= 0.035
1.4	224	0.0050	2.76	8.66	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.1	59	0.0056	7.06	49.91	**Pipe Channel,** 36.0" Round Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013
23.6	1,463	Total			

Summary for Subcatchment 4S: C3-B

Runoff = 8.10 cfs @ 12.13 hrs, Volume= 0.480 af, Depth= 7.73"
Routed to Pond 3P : Sheriff Phase 2 Bioretention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.580	98	
	0.165	61	>75% Grass cover, Good, HSG B
	0.745	90	Weighted Average
	0.165		22.15% Pervious Area
	0.580		77.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 5S: C4-A

Runoff = 24.74 cfs @ 12.13 hrs, Volume= 1.520 af, Depth= 8.22"
Routed to Pond 4P : Cnty- Storm Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.010	98	
	0.210	61	>75% Grass cover, Good, HSG B
	2.220	94	Weighted Average
	0.210		9.46% Pervious Area
	2.010		90.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 6S: C4-B

Runoff = 25.20 cfs @ 12.30 hrs, Volume= 2.175 af, Depth= 6.27"
Routed to Pond 5P : CNTY-Infiltration Basin #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.560	98	
	1.455	61	>75% Grass cover, Good, HSG B
	1.150	74	>75% Grass cover, Good, HSG C
	4.165	78	Weighted Average
	2.605		62.55% Pervious Area
	1.560		37.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	13	0.0200	0.86		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
0.9	10	0.2400	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
14.4	127	0.0370	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.6	115	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.3	521	0.0080	2.66	15.95	**Trap/Vee/Rect Channel Flow,** Bot.W=2.00' D=1.00' Z= 4.0 '/' Top.W=10.00' n= 0.035
20.5	786	Total			

Summary for Subcatchment 7S: C4-C

Runoff = 5.93 cfs @ 12.13 hrs, Volume= 0.322 af, Depth= 5.77"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.230	98	
	0.440	61	>75% Grass cover, Good, HSG B
	0.670	74	Weighted Average
	0.440		65.67% Pervious Area
	0.230		34.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 8S: C4-D

Runoff = 90.41 cfs @ 12.13 hrs, Volume= 5.361 af, Depth= 7.73"
Routed to Pond 6P : County Pond - East

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	6.030	98	
	1.350	61	>75% Grass cover, Good, HSG B
	0.300	98	Water Surface, HSG B
	0.640	74	>75% Grass cover, Good, HSG C
	8.320	90	Weighted Average
	1.990		23.92% Pervious Area
	6.330		76.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 9S: C5-A

Runoff = 9.39 cfs @ 12.13 hrs, Volume= 0.500 af, Depth= 4.54"
Routed to Pond 9P : Culvert 534+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
	1.220	61	>75% Grass cover, Good, HSG B
*	0.100	98	
	1.320	64	Weighted Average
	1.220		92.42% Pervious Area
	0.100		7.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	16	0.2400	0.21		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.7	533	0.0300	5.30	21.19	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.030
3.0					**Direct Entry, increase to min TOC**
6.0	549	Total			

Summary for Subcatchment 10S: C5-B

Runoff = 7.83 cfs @ 12.13 hrs, Volume= 0.502 af, Depth= 8.70"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.693	98	
	0.693		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 11S: C5-C

Runoff = 37.97 cfs @ 12.16 hrs, Volume= 2.274 af, Depth= 6.14"
Routed to Pond 57P : 187+00 42" Culvert

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.898	98	
	2.544	61	>75% Grass cover, Good, HSG B
	4.442	77	Weighted Average
	2.544		57.27% Pervious Area
	1.898		42.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0270	1.17		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.8	76	0.2100	0.27		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.3	869	0.0150	4.36	61.01	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 4.0 '/' Top.W=18.00' n= 0.035
8.6	978	Total			

Summary for Subcatchment 12S: C5-E

Runoff = 13.47 cfs @ 12.15 hrs, Volume= 0.799 af, Depth= 6.39"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.720	98	
	0.740	61	>75% Grass cover, Good, HSG B
	0.040	74	>75% Grass cover, Good, HSG C
	1.500	79	Weighted Average
	0.780		52.00% Pervious Area
	0.720		48.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0180	0.88		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.2	19	0.0950	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.7	645	0.0050	1.88	15.05	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.2	682	Total			

Summary for Subcatchment 13S: C6-A

Runoff = 27.68 cfs @ 12.16 hrs, Volume= 1.641 af, Depth= 5.77"
Routed to Pond 13P : Culvert at Ramp A 690+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.890	98	
	1.690	61	>75% Grass cover, Good, HSG B
	0.830	74	>75% Grass cover, Good, HSG C
	3.410	74	Weighted Average
	2.520		73.90% Pervious Area
	0.890		26.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	65	0.3100	0.30		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.0	85	0.0390	1.38		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.9	431	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
8.5	581	Total			

Summary for Subcatchment 14S: C6-B

Runoff = 74.98 cfs @ 12.34 hrs, Volume= 6.890 af, Depth= 5.90"
Routed to Pond 14P : Culvert at Millpond 387+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	3.360	98	
	5.070	61	>75% Grass cover, Good, HSG B
	5.590	74	>75% Grass cover, Good, HSG C
	14.020	75	Weighted Average
	10.660		76.03% Pervious Area
	3.360		23.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	148	0.0260	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
4.9	898	0.0090	3.03	24.26	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 4.0 '/' Top.W=12.00' n= 0.035
23.6	1,046	Total			

Summary for Subcatchment 15S: C6-C

Runoff = 26.42 cfs @ 12.13 hrs, Volume= 1.640 af, Depth= 8.34"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.020	98	
	0.340	74	>75% Grass cover, Good, HSG C
	2.360	95	Weighted Average
	0.340		14.41% Pervious Area
	2.020		85.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 16S: C6-D1

Runoff = 14.28 cfs @ 12.35 hrs, Volume= 1.312 af, Depth= 4.42"
Routed to Pond 16P : Culvert 509+94 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.040	98	
	2.340	61	>75% Grass cover, Good, HSG B
	0.390	58	Woods/grass comb., Good, HSG B
*	0.790	70	Row crops, SR + CR, Good, HSG B
	3.560	63	Weighted Average
	3.520		98.88% Pervious Area
	0.040		1.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.0	265	0.0500	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
0.9	223	0.0240	4.07	18.31	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 & 3.0 '/' Top.W=9.00' n= 0.035
23.9	488	Total			

Summary for Subcatchment 17S: C6-D2

Runoff = 51.83 cfs @ 12.48 hrs, Volume= 5.828 af, Depth= 4.91"
Routed to Pond 18P : Culvert 505+79 (NB CTH AB)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.795	98	
	3.625	61	>75% Grass cover, Good, HSG B
	0.305	74	>75% Grass cover, Good, HSG C
	5.110	58	Woods/grass comb., Good, HSG B
*	2.820	70	Row crops, SR + CR, Good, HSG B
*	0.580	79	Row crops, SR + CR, Good, HSG C
	14.235	67	Weighted Average
	12.440		87.39% Pervious Area
	1.795		12.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	150	0.1150	0.16		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
7.2	545	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	219	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.7	335	0.0140	0.83		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	213	0.0160	3.32	13.26	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 '/' Top.W=8.00' n= 0.035
0.4	150	0.0050	6.40	31.42	**Pipe Channel,** 30.0" Round Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.012
34.5	1,612	Total			

Summary for Subcatchment 18S: YH2-B

Runoff = 107.20 cfs @ 12.55 hrs, Volume= 12.871 af, Depth= 4.54"
Routed to Pond 58P : Culvert 395+33 (Millpond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.510	98	
	11.160	61	>75% Grass cover, Good, HSG B
	9.490	74	>75% Grass cover, Good, HSG C
	2.240	65	Brush, Good, HSG C
	8.590	48	Brush, Good, HSG B
	33.990	64	Weighted Average
	31.480		92.62% Pervious Area
	2.510		7.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	150	0.0430	0.16		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
17.3	1,216	0.0280	1.17		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.7	206	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
1.6	234	0.0040	2.38	38.12	**Trap/Vee/Rect Channel Flow,** Bot.W=8.00' D=1.00' Z= 8.0 '/' Top.W=24.00' n= 0.030
0.1	35	0.0140	9.23	29.00	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.012

3.3	527	0.0140	2.68	53.55	**Trap/Vee/Rect Channel Flow,** Bot.W=10.00' D=1.00' Z= 10.0 '/' Top.W=30.00' n= 0.050
38.5	2,368	Total			

Summary for Subcatchment 19S: C7 - Landfill

Runoff = 233.24 cfs @ 12.19 hrs, Volume= 15.421 af, Depth= 6.51"
Routed to Pond 19P : Landfill Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
0.440	96	Gravel surface, HSG C
27.650	80	>75% Grass cover, Good, HSG D
0.330	98	Water Surface, HSG B
28.420	80	Weighted Average
28.090		98.84% Pervious Area
0.330		1.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0					**Direct Entry, TOC from Landfill SWMP**

Summary for Subcatchment 20S: C8

Runoff = 61.44 cfs @ 12.22 hrs, Volume= 4.409 af, Depth= 6.27"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.980	98	
	2.750	61	>75% Grass cover, Good, HSG B
	2.714	74	>75% Grass cover, Good, HSG C
	8.444	78	Weighted Average
	5.464		64.71% Pervious Area
	2.980		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	31	0.0140	0.89		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.6	10	0.0520	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.6	1,329	0.0170	3.93	11.78	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.030
5.9	395	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
13.7	1,765	Total			

Summary for Subcatchment 22S: C9

Runoff = 9.26 cfs @ 12.16 hrs, Volume= 0.559 af, Depth= 6.39"
Routed to Pond 22P : 36" Culvert 182+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.520	98	
	0.530	61	>75% Grass cover, Good, HSG B
	1.050	79	Weighted Average
	0.530		50.48% Pervious Area
	0.520		49.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	19	0.0200	0.93		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.8	19	0.1400	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.5	572	0.0030	1.46	11.66	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
8.6	610	Total			

Summary for Subcatchment 23S: C10

Runoff = 8.60 cfs @ 12.15 hrs, Volume= 0.496 af, Depth= 6.39"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.404	98	
	0.374	61	>75% Grass cover, Good, HSG B
	0.153	74	>75% Grass cover, Good, HSG C
	0.931	79	Weighted Average
	0.527		56.61% Pervious Area
	0.404		43.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
1.7	19	0.1700	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
5.5	475	0.0030	1.45	8.71	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.035
7.5	512	Total			

Summary for Subcatchment 24S: YH1

Runoff = 176.39 cfs @ 12.79 hrs, Volume= 27.185 af, Depth= 4.91"
Routed to Pond 24P : YH1 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
22.700	61	>75% Grass cover, Good, HSG B
27.890	74	>75% Grass cover, Good, HSG C
4.830	48	Brush, Good, HSG B
8.800	65	Brush, Good, HSG C
2.180	98	Water Surface, HSG B
66.400	67	Weighted Average
64.220		96.72% Pervious Area
2.180		3.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.0	150	0.0200	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
36.9	2,018	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
57.9	2,168	Total			

Summary for Subcatchment 25S: YH2-A

Runoff = 79.17 cfs @ 12.40 hrs, Volume= 7.932 af, Depth= 5.41"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.460	98	
	6.980	61	>75% Grass cover, Good, HSG B
	4.750	74	>75% Grass cover, Good, HSG C
	2.290	58	Woods/grass comb., Good, HSG B
	0.200	48	Brush, Good, HSG B
	2.930	98	Water Surface, HSG B
	17.610	71	Weighted Average
	14.220		80.75% Pervious Area
	3.390		19.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.6	150	0.0270	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.3	493	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	375	0.0280	5.77	80.72	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 15.0 & 5.0 '/' Top.W=24.00' n= 0.030
0.1	32	0.3300	4.02		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
28.1	1,050	Total			

Summary for Subcatchment 26S: C11,12,15,16,18

Runoff = 104.12 cfs @ 12.13 hrs, Volume= 5.960 af, Depth= 7.12"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	6.350	98	
	3.330	61	>75% Grass cover, Good, HSG B
	0.360	74	>75% Grass cover, Good, HSG C
	10.040	85	Weighted Average
	3.690		36.75% Pervious Area
	6.350		63.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 27S: C13-A, C13-B, C14

Runoff = 112.99 cfs @ 12.24 hrs, Volume= 8.409 af, Depth= 5.28"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	4.590	98	
*	10.730	61	
	0.643	74	>75% Grass cover, Good, HSG C
	2.716	55	Woods, Good, HSG B
	0.424	70	Woods, Good, HSG C
	19.103	70	Weighted Average
	14.513		75.97% Pervious Area
	4.590		24.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	18	0.0200	0.92		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
4.9	75	0.1900	0.25		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
10.2	1,340	0.0050	2.20	20.87	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 5.0 '/' Top.W=15.00' n= 0.035
15.4	1,433	Total			

Summary for Subcatchment 28S: C17, C21, C22-A

Runoff = 36.24 cfs @ 12.20 hrs, Volume= 2.428 af, Depth= 5.90"
Routed to Pond 28P : 12/18 140+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.830	98	
	2.930	61	>75% Grass cover, Good, HSG B
	0.180	80	>75% Grass cover, Good, HSG D
	4.940	75	Weighted Average
	3.110		62.96% Pervious Area
	1.830		37.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	17	0.0240	0.97		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
3.0	46	0.2490	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.5	1,279	0.0064	2.51	22.55	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 4.0 '/' Top.W=14.00' n= 0.035
11.8	1,342	Total			

Summary for Subcatchment 29S: C19-A

Runoff = 34.67 cfs @ 12.26 hrs, Volume= 2.719 af, Depth= 6.02"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.140	98	
*	3.280	61	Grass HSG B
	5.420	76	Weighted Average
	3.280		60.52% Pervious Area
	2.140		39.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	150	0.0720	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.1	129	0.0210	1.01		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	239	0.0300	3.52		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.2	132	0.0050	1.87	12.18	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 & 4.0 '/' Top.W=13.00' n= 0.035
17.0	650	Total			

Summary for Subcatchment 30S: C19-B

Runoff = 3.67 cfs @ 12.13 hrs, Volume= 0.195 af, Depth= 4.18"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
0.560	61	>75% Grass cover, Good, HSG B
0.560		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 31S: C19-C

Runoff = 22.72 cfs @ 12.13 hrs, Volume= 1.317 af, Depth= 7.37"
Routed to Pond 61P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.894	98	
	1.252	80	>75% Grass cover, Good, HSG D
	2.146	87	Weighted Average
	1.252		58.34% Pervious Area
	0.894		41.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 32S: C19-D

Runoff = 83.75 cfs @ 12.19 hrs, Volume= 5.881 af, Depth= 7.61"
Routed to Pond 59P : Pond A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.665	98	
	1.463	61	>75% Grass cover, Good, HSG B
	1.444	80	>75% Grass cover, Good, HSG D
	3.700	98	Water Surface, HSG B
	9.272	89	Weighted Average
	2.907		31.35% Pervious Area
	6.365		68.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0930	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.1	279	0.0450	1.48		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.3	379	Total			

Summary for Subcatchment 33S: C20

Runoff = 24.50 cfs @ 12.24 hrs, Volume= 1.824 af, Depth= 4.79"
Routed to Pond 32P : Long Drive 440+35

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.660	98	
	3.910	61	>75% Grass cover, Good, HSG B
	4.570	66	Weighted Average
	3.910		85.56% Pervious Area
	0.660		14.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	12	0.0100	0.64		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
11.3	101	0.0430	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
3.9	723	0.0140	3.08	10.79	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 3.0 '/' Top.W=7.00' n= 0.035
15.5	836	Total			

Summary for Subcatchment 34S: YH3-A

Runoff = 20.18 cfs @ 12.18 hrs, Volume= 1.260 af, Depth= 4.79"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.357	98	
	2.668	61	>75% Grass cover, Good, HSG B
	0.131	74	>75% Grass cover, Good, HSG C
	3.156	66	Weighted Average
	2.799		88.69% Pervious Area
	0.357		11.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 35S: YH3-B

Runoff = 481.51 cfs @ 12.68 hrs, Volume= 66.731 af, Depth= 4.30"
Routed to Pond 34P : YH3-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.750	98	
	111.110	61	>75% Grass cover, Good, HSG B
	25.680	74	>75% Grass cover, Good, HSG C
	35.680	48	Brush, Good, HSG B
	6.860	65	Brush, Good, HSG C
	4.200	98	Water Surface, HSG B
	186.280	62	Weighted Average
	179.330		96.27% Pervious Area
	6.950		3.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	150	0.0230	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
25.0	1,662	0.0250	1.11		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.2	219	0.0090	2.95	29.50	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 10.0 '/' Top.W=20.00' n= 0.030
2.5	885	0.0110	5.98	7.34	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
48.6	2,916	Total			

Summary for Subcatchment 36S: YH4

Runoff = 54.73 cfs @ 12.32 hrs, Volume= 4.753 af, Depth= 4.67"
Routed to Pond 36P : YH4-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
9.630	61	>75% Grass cover, Good, HSG B
2.070	74	>75% Grass cover, Good, HSG C
0.520	98	Water Surface, HSG A
12.220	65	Weighted Average
11.700		95.74% Pervious Area
0.520		4.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	150	0.0660	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
8.6	470	0.0170	0.91		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
21.6	620	Total			

Summary for Subcatchment 37S: YH5

Runoff = 22.12 cfs @ 12.14 hrs, Volume= 1.275 af, Depth= 6.51"
Routed to Pond 37P : YH5 - Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.330	98	
	1.130	61	>75% Grass cover, Good, HSG B
	0.890	98	Water Surface, HSG A
	2.350	80	Weighted Average
	1.130		48.09% Pervious Area
	1.220		51.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	11	0.0300	0.98		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
7.1	87	0.1000	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.3	98	Total			

Summary for Subcatchment 38S: YH6

Runoff = 353.32 cfs @ 12.49 hrs, Volume= 39.780 af, Depth= 4.79"
Routed to Pond 38P : YH6-Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
54.390	61	>75% Grass cover, Good, HSG B
4.340	48	Brush, Good, HSG B
7.606	65	Brush, Good, HSG C
26.837	73	Brush, Good, HSG D
6.484	98	Water Surface, HSG A
99.657	66	Weighted Average
93.173		93.49% Pervious Area
6.484		6.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.2	150	0.0250	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
15.4	889	0.0190	0.96		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
34.6	1,039	Total			

Summary for Subcatchment 39S: C22B-25

Runoff = 133.31 cfs @ 12.22 hrs, Volume= 9.891 af, Depth= 6.51"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	6.210	98	
	5.320	61	>75% Grass cover, Good, HSG B
	0.359	74	>75% Grass cover, Good, HSG C
	6.340	80	>75% Grass cover, Good, HSG D
	18.229	80	Weighted Average
	12.019		65.93% Pervious Area
	6.210		34.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	29	0.0250	1.10		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.82"
2.4	30	0.1740	0.20		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
6.1	100	0.0015	0.27		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.6	874	0.0069	2.58	23.23	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 9.0 '/' Top.W=18.00' n= 0.030
14.5	1,033	Total			

Summary for Subcatchment 40S: C25-B

Runoff = 9.31 cfs @ 12.13 hrs, Volume= 0.516 af, Depth= 6.39"
Routed to Link 35L : Ag. Ditch #4 Tributary

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.480	98	
*	0.490	61	
	0.970	79	Weighted Average
	0.490		50.52% Pervious Area
	0.480		49.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 41S: C26

Runoff = 39.20 cfs @ 12.95 hrs, Volume= 6.840 af, Depth= 4.79"
Routed to Link 36L : Combined to Ag Ditch #4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
0.040	61	>75% Grass cover, Good, HSG B
0.016	74	>75% Grass cover, Good, HSG C
3.950	48	Brush, Good, HSG B
1.800	65	Brush, Good, HSG C
11.330	73	Brush, Good, HSG D
17.136	66	Weighted Average
17.136		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2	150	0.0110	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
9.7	380	0.0170	0.65		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	58	0.0050	2.76	8.66	**Pipe Channel, CMP_Round 24"** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.024
0.2	59	0.0260	4.99	29.91	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 6.0 '/' Top.W=12.00' n= 0.030
19.3	2,177	0.0007	1.88	53.14	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=3.00' Z= 1.8 '/' Top.W=14.80' n= 0.030

69.8 2,824 Total

Summary for Subcatchment 42S: C5-D

Runoff = 23.71 cfs @ 12.16 hrs, Volume= 1.431 af, Depth= 5.28"
Routed to Pond 41P : AB 520+90

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.700	98	
	2.260	61	>75% Grass cover, Good, HSG B
	0.290	74	>75% Grass cover, Good, HSG C
	3.250	70	Weighted Average
	2.550		78.46% Pervious Area
	0.700		21.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	23	0.1600	0.19		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
7.1	800	0.0050	1.87	9.33	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 4.0 & 6.0 '/' Top.W=10.00' n= 0.035
9.1	823	Total			

Summary for Subcatchment 43S: C27-A

Runoff = 37.44 cfs @ 12.13 hrs, Volume= 2.086 af, Depth= 6.51"
Routed to Pond 54P : Pond C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.626	98	
	1.828	61	>75% Grass cover, Good, HSG B
	0.390	98	Water Surface, 0% imp, HSG B
	3.844	80	Weighted Average
	2.218		57.70% Pervious Area
	1.626		42.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 44S: C27-B1

Runoff = 7.42 cfs @ 12.13 hrs, Volume= 0.400 af, Depth= 5.41"
Routed to Pond 43P : Ramp C 805+00

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.240	98	
	0.648	61	>75% Grass cover, Good, HSG B
	0.888	71	Weighted Average
	0.648		72.97% Pervious Area
	0.240		27.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	50	0.2500	0.26		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
2.8					**Direct Entry, Increase to min TOC**
6.0	50	Total			

Summary for Subcatchment 45S: C27-B2 & C27-C

Runoff = 50.22 cfs @ 12.41 hrs, Volume= 5.117 af, Depth= 5.41"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	2.620	98	impervious
	6.800	61	>75% Grass cover, Good, HSG B
	0.246	80	>75% Grass cover, Good, HSG D
*	1.695	70	Row crops, SR + CR, Good, HSG B
	11.361	71	Weighted Average
	8.741		76.94% Pervious Area
	2.620		23.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	150	0.0300	0.18		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.82"
2.3	150	0.0142	1.07		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
4.9	274	0.0180	0.94		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	1,619	0.0130	3.60	30.61	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 3.0 & 6.0 '/' Top.W=13.00' n= 0.035
0.6	159	0.0770	4.16		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
28.9	2,352	Total			

Summary for Subcatchment 46S: C28-A

Runoff = 51.11 cfs @ 12.23 hrs, Volume= 3.703 af, Depth= 4.67"
Routed to Pond 45P : Culvert at 698+81

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.950	98	
	2.920	61	>75% Grass cover, Good, HSG B
	3.110	55	Woods, Good, HSG B
*	2.540	70	Row crops, SR + CR, Good, HSG B
	9.520	65	Weighted Average
	8.570		90.02% Pervious Area
	0.950		9.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	140	0.1950	0.19		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
0.8	132	0.0970	2.80		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
1.7	509	0.0350	4.98	39.82	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 8.0 '/' Top.W=16.00' n= 0.035
14.5	781	Total			

Summary for Subcatchment 47S: C28-B

Runoff = 34.18 cfs @ 12.13 hrs, Volume= 1.884 af, Depth= 6.14"
Routed to Pond 46P : Pond D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.023	98	
	2.055	61	>75% Grass cover, Good, HSG B
	0.603	98	Water Surface, HSG B
	3.681	77	Weighted Average
	2.055		55.83% Pervious Area
	1.626		44.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	87	0.2900	0.31		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.82"
1.4					**Direct Entry, Increase to min TOC**
6.1	87	Total			

Summary for Subcatchment 48S: C28-C1

Runoff = 9.61 cfs @ 12.13 hrs, Volume= 0.518 af, Depth= 5.41"
Routed to Pond 47P : Ramp B 706+25

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.300	98	
	0.850	61	>75% Grass cover, Good, HSG B
	1.150	71	Weighted Average
	0.850		73.91% Pervious Area
	0.300		26.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 49S: C28-C2

Runoff = 40.98 cfs @ 12.22 hrs, Volume= 2.892 af, Depth= 5.65"
Routed to Link 44L : Door Creek Combined

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	1.510	98	
	3.400	61	>75% Grass cover, Good, HSG B
	1.120	80	>75% Grass cover, Good, HSG D
	0.110	55	Woods, Good, HSG B
	6.140	73	Weighted Average
	4.630		75.41% Pervious Area
	1.510		24.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	130	0.3600	0.24		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.82"
4.7	1,305	0.0210	4.60	37.92	**Trap/Vee/Rect Channel Flow,** Bot.W=4.00' D=1.00' Z= 6.0 & 2.5 '/' Top.W=12.50' n= 0.035
13.6	1,435	Total			

Summary for Subcatchment 51S: Luds Lane

Runoff = 3.86 cfs @ 12.43 hrs, Volume= 0.422 af, Depth= 6.76"
Routed to Link 56L : Lag to Door Creek

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

	Area (ac)	CN	Description
*	0.350	98	
*	0.400	68	
	0.750	82	Weighted Average
	0.400		53.33% Pervious Area
	0.350		46.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**
25.6	2,004	0.0210	1.30		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.6	2,004	Total			

Summary for Subcatchment 52S: Proposed Stability Campus to Pond B

Runoff = 63.03 cfs @ 12.04 hrs, Volume= 3.272 af, Depth= 7.85"
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
MSE 24-hr 4 500-yr Rainfall=8.94"

Area (ac)	CN	Description
5.000	91	Urban industrial, 72% imp, HSG C
1.400		28.00% Pervious Area
3.600		72.00% Impervious Area

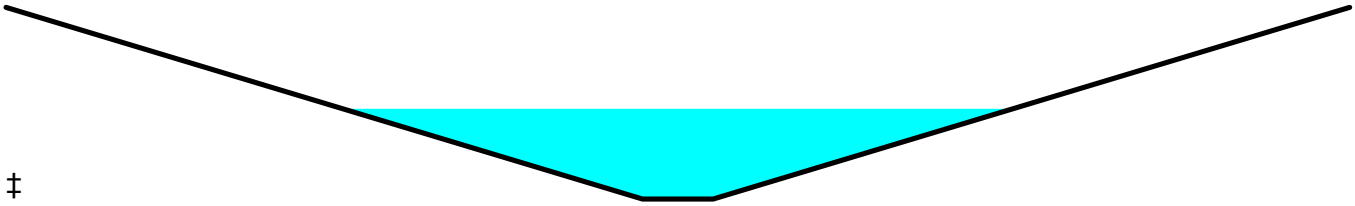
Summary for Reach 20R: Overland Flow

Inflow = 256.20 cfs @ 13.29 hrs, Volume= 33.870 af
Outflow = 234.42 cfs @ 13.51 hrs, Volume= 33.870 af, Atten= 9%, Lag= 13.2 min
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Max. Velocity= 3.16 fps, Min. Travel Time= 13.0 min
Avg. Velocity = 0.74 fps, Avg. Travel Time= 55.6 min

Peak Storage= 183,462 cf @ 13.51 hrs
Average Depth at Peak Storage= 1.41' , Surface Width= 94.86'
Bank-Full Depth= 3.00' Flow Area= 300.0 sf, Capacity= 1,515.22 cfs

10.00' x 3.00' deep channel, n= 0.030
Side Slope Z-value= 30.0 '/' Top Width= 190.00'
Length= 2,474.0' Slope= 0.0057 '/'
Inlet Invert= 872.00', Outlet Invert= 858.00'



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Summary for Pond 1P: Niebuhr Stormwater Pond

Inflow Area = 4.670 ac, 72.16% Impervious, Inflow Depth = 7.49" for 500-yr event
Inflow = 49.90 cfs @ 12.13 hrs, Volume= 2.914 af
Outflow = 19.21 cfs @ 12.30 hrs, Volume= 2.913 af, Atten= 61%, Lag= 10.4 min
Primary = 19.21 cfs @ 12.30 hrs, Volume= 2.913 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 907.46' @ 12.45 hrs Surf.Area= 37,251 sf Storage= 54,584 cf

Plug-Flow detention time= 132.1 min calculated for 2.913 af (100% of inflow)
Center-of-Mass det. time= 131.5 min (904.8 - 773.3)

Volume	Invert	Avail.Storage	Storage Description
#1	882.60'	54,584 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
882.60	0	0	0
883.00	275	55	55
884.00	9,336	4,806	4,860
885.00	26,430	17,883	22,743
886.00	37,251	31,841	54,584

Device	Routing	Invert	Outlet Devices
#1	Primary	883.00'	**Special & User-Defined** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 Disch. (cfs) 0.000 0.030 0.070 0.140 0.210 0.290 0.380 0.480 0.590 0.700 0.830 0.950 1.080 1.220 1.370 1.520 1.670 1.830 1.990 2.160 2.330 2.510 2.690 2.880 3.070 3.260
#2	Primary	885.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=19.16 cfs @ 12.30 hrs HW=886.21' TW=880.39' (Dynamic Tailwater)
└─**1=Special & User-Defined** (Custom Controls 3.26 cfs)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 15.90 cfs @ 2.25 fps)

Summary for Pond 2P: Storm Basin 2 with Infiltration

Inflow Area = 21.962 ac, 37.03% Impervious, Inflow Depth = 5.99" for 500-yr event
Inflow = 92.86 cfs @ 12.32 hrs, Volume= 10.955 af
Outflow = 88.10 cfs @ 12.44 hrs, Volume= 10.955 af, Atten= 5%, Lag= 7.3 min
Discarded = 2.27 cfs @ 12.41 hrs, Volume= 0.510 af
Primary = 86.70 cfs @ 12.44 hrs, Volume= 11.845 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 914.49' @ 12.41 hrs Surf.Area= 0.831 ac Storage= 2.160 af

Plug-Flow detention time= 50.4 min calculated for 10.955 af (100% of inflow)
Center-of-Mass det. time= 50.3 min (895.5 - 845.2)

Volume	Invert	Avail.Storage	Storage Description
#1	877.20'	2.160 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.20	0.137	0.000	0.000
877.37	0.141	0.024	0.024
877.38	0.415	0.003	0.026
878.00	0.449	0.268	0.294
879.00	0.568	0.509	0.803
880.00	0.658	0.613	1.416
881.00	0.831	0.744	2.160

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 25.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.10' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 Disch. (cfs) 0.000 0.340 0.960 1.760 2.710 3.790
#3	Device 1	878.20'	**30.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Discarded	877.20'	**0.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 870.00'
#5	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Discarded OutFlow Max=2.11 cfs @ 12.41 hrs HW=911.38' (Free Discharge)
└**4=Exfiltration** (Controls 2.11 cfs)

Primary OutFlow Max=3,264.04 cfs @ 12.44 hrs HW=899.09' TW=897.38' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 22.26 cfs @ 6.30 fps)
└**2=Special & User-Defined** (Passes < 3.79 cfs potential flow)
└**3=Broad-Crested Rectangular Weir** (Passes < 4,208.31 cfs potential flow)
└**5=Broad-Crested Rectangular Weir** (Weir Controls 3,241.78 cfs @ 5.66 fps)

Summary for Pond 3P: Sheriff Phase 2 Bioretention

Inflow Area = 0.745 ac, 77.85% Impervious, Inflow Depth = 7.73" for 500-yr event
Inflow = 8.10 cfs @ 12.13 hrs, Volume= 0.480 af
Outflow = 6.91 cfs @ 12.96 hrs, Volume= 0.450 af, Atten= 15%, Lag= 49.8 min
Discarded = 0.03 cfs @ 12.89 hrs, Volume= 0.050 af
Primary = 6.90 cfs @ 12.94 hrs, Volume= 0.500 af
Routed to Pond 2P : Storm Basin 2 with Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 881.89' @ 12.89 hrs Surf.Area= 4,080 sf Storage= 7,823 cf

Plug-Flow detention time= 234.7 min calculated for 0.450 af (94% of inflow)
Center-of-Mass det. time= 203.0 min (971.1 - 768.1)

Volume	Invert	Avail.Storage	Storage Description
#1	879.50'	8,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.50	2,225	0	0
880.00	2,651	1,219	1,219
881.00	3,579	3,115	4,334
881.50	4,080	1,915	6,249
882.00	4,080	2,040	8,289

Device	Routing	Invert	Outlet Devices
#1	Primary	879.50'	**12.0" Round Culvert** L= 34.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 879.50' / 879.00' S= 0.0147 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	880.50'	**12.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	881.50'	**10.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	879.50'	**0.500 in/hr Exfiltration over Surface area above 879.50'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 2,225 sf

Discarded OutFlow Max=0.03 cfs @ 12.89 hrs HW=881.87' (Free Discharge)
└**5=Exfiltration** (Controls 0.03 cfs)

Primary OutFlow Max=7.58 cfs @ 12.94 hrs HW=881.79' TW=880.90' (Dynamic Tailwater)
├**1=Culvert** (Inlet Controls 3.56 cfs @ 4.54 fps)
│ ├**2=Orifice/Grate** (Passes < 1.13 cfs potential flow)
│ └**3=Orifice/Grate** (Passes < 13.45 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 4.02 cfs @ 1.38 fps)

Summary for Pond 4P: Cnty- Storm Basin 1

Inflow Area = 2.220 ac, 90.54% Impervious, Inflow Depth = 8.22" for 500-yr event
Inflow = 24.74 cfs @ 12.13 hrs, Volume= 1.520 af
Outflow = 20.60 cfs @ 12.20 hrs, Volume= 1.509 af, Atten= 17%, Lag= 4.4 min
Discarded = 0.10 cfs @ 12.71 hrs, Volume= 0.069 af
Primary = 20.53 cfs @ 12.20 hrs, Volume= 1.583 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 886.74' @ 12.71 hrs Surf.Area= 5,830 sf Storage= 10,756 cf

Plug-Flow detention time= 81.9 min calculated for 1.509 af (99% of inflow)
Center-of-Mass det. time= 77.1 min (833.1 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1	879.72'	10,756 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
879.72	1,306	0	0
880.00	1,599	407	407
881.00	2,711	2,155	2,562
882.00	3,924	3,318	5,879
883.00	5,830	4,877	10,756

Device	Routing	Invert	Outlet Devices
#1	Primary	879.72'	**18.0" Round Culvert** L= 66.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 879.72' / 878.47' S= 0.0188 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	880.72'	**6.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	881.50'	**36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	882.74'	**10.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#5	Discarded	879.72'	**0.500 in/hr Exfiltration over Surface area above 879.72'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 1,306 sf

Discarded OutFlow Max=0.09 cfs @ 12.71 hrs HW=886.31' (Free Discharge)
└**5=Exfiltration** (Controls 0.09 cfs)

Primary OutFlow Max=21.14 cfs @ 12.20 hrs HW=883.21' TW=880.99' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 12.68 cfs @ 7.18 fps)
└**2=Orifice/Grate** (Passes < 1.77 cfs potential flow)
└**3=Orifice/Grate** (Passes < 44.55 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 8.46 cfs @ 1.79 fps)

Summary for Pond 5P: CNTY-Infiltration Basin #1

Inflow Area = 4.165 ac, 37.45% Impervious, Inflow Depth = 6.27" for 500-yr event
Inflow = 25.20 cfs @ 12.30 hrs, Volume= 2.175 af
Outflow = 29.92 cfs @ 12.50 hrs, Volume= 2.142 af, Atten= 0%, Lag= 12.1 min
Discarded = 0.47 cfs @ 12.50 hrs, Volume= 0.168 af
Primary = 29.45 cfs @ 12.50 hrs, Volume= 2.338 af
Routed to Pond 6P : County Pond - East

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 893.85' @ 12.50 hrs Surf.Area= 19,826 sf Storage= 30,088 cf

Plug-Flow detention time= 131.2 min calculated for 2.141 af (98% of inflow)
Center-of-Mass det. time= 124.2 min (931.7 - 807.5)

Volume	Invert	Avail.Storage	Storage Description
#1	880.71'	30,088 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
880.71	3,155	0	0
881.00	3,568	975	975
882.00	6,526	5,047	6,022
883.00	10,890	8,708	14,730
884.00	19,826	15,358	30,088

Device	Routing	Invert	Outlet Devices
#1	Primary	880.71'	**12.0" Round Culvert** L= 51.8' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 880.71' / 880.28' S= 0.0083 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	881.71'	**6.0" W x 12.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	882.71'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	883.49'	**20.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	880.71'	**0.500 in/hr Exfiltration over Surface area above 880.71'** Conductivity to Groundwater Elevation = 875.00' Excluded Surface area = 3,155 sf

Discarded OutFlow Max=0.47 cfs @ 12.50 hrs HW=893.84' (Free Discharge)
└**5=Exfiltration** (Controls 0.47 cfs)

Primary OutFlow Max=0.00 cfs @ 12.50 hrs HW=893.75' TW=895.91' (Dynamic Tailwater)
├**1=Culvert** (Controls 0.00 cfs)
│ ├**2=Orifice/Grate** (Controls 0.00 cfs)
│ └**3=Orifice/Grate** (Controls 0.00 cfs)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 6P: County Pond - East

Inflow Area = 15.375 ac, 65.89% Impervious, Inflow Depth = 7.50" for 500-yr event
Inflow = 112.22 cfs @ 12.13 hrs, Volume= 9.605 af
Outflow = 121.55 cfs @ 13.45 hrs, Volume= 9.591 af, Atten= 0%, Lag= 79.1 min
Primary = 127.88 cfs @ 13.25 hrs, Volume= 12.888 af
Routed to Pond 9P : Culvert 534+50

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 899.49' @ 13.36 hrs Surf.Area= 35,400 sf Storage= 101,764 cf

Plug-Flow detention time= 73.0 min calculated for 9.584 af (100% of inflow)
Center-of-Mass det. time= 73.2 min (865.3 - 792.1)

Volume	Invert	Avail.Storage	Storage Description
#1	877.19'	101,764 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
877.19	14,796	0	0
878.00	17,475	13,070	13,070
879.00	20,998	19,237	32,306
880.00	24,807	22,903	55,209
881.00	33,736	29,272	84,480
881.50	35,400	17,284	101,764

Device	Routing	Invert	Outlet Devices
#1	Primary	877.20'	**18.0" Round Culvert X 2.00** L= 31.8' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 877.20' / 877.00' S= 0.0063 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Device 1	877.20'	**Special & User-Defined** Head (feet) 0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 Disch. (cfs) 0.000 0.100 0.400 0.800 1.500 2.500 3.400 4.500 5.600 6.900 8.300
#3	Device 1	879.20'	**68.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#4	Primary	880.00'	**30.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=0.00 cfs @ 13.25 hrs HW=881.61' TW=905.16' (Dynamic Tailwater)
- **1=Culvert** (Controls 0.00 cfs)
  - **2=Special & User-Defined** (Passes 0.00 cfs of 8.30 cfs potential flow)
  - **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 9P: Culvert 534+50

Inflow Area = 38.657 ac, 47.50% Impervious, Inflow Depth = 7.83" for 500-yr event
Inflow = 204.28 cfs @ 13.45 hrs, Volume= 25.233 af
Outflow = 204.28 cfs @ 13.45 hrs, Volume= 25.233 af, Atten= 0%, Lag= 0.0 min
Primary = 204.28 cfs @ 13.45 hrs, Volume= 25.233 af
Routed to Pond 57P : 187+00 42" Culvert

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 916.65' @ 12.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.00'	**53.0" W x 34.0" H, R=47.9" Elliptical RCP_Elliptical 53x34** L= 128.0' Ke= 0.270 Inlet / Outlet Invert= 875.00' / 874.50' S= 0.0039 '/' Cc= 0.900 n= 0.012, Flow Area= 10.20 sf

Primary OutFlow Max=0.00 cfs @ 13.45 hrs HW=891.80' TW=897.42' (Dynamic Tailwater)
- **1=RCP_Elliptical 53x34** (Controls 0.00 cfs)

Summary for Pond 13P: Culvert at Ramp A 690+50

Inflow Area = 3.410 ac, 26.10% Impervious, Inflow Depth = 5.77" for 500-yr event
Inflow = 27.68 cfs @ 12.16 hrs, Volume= 1.641 af
Outflow = 27.68 cfs @ 12.16 hrs, Volume= 1.641 af, Atten= 0%, Lag= 0.0 min
Primary = 27.68 cfs @ 12.16 hrs, Volume= 1.641 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.79' @ 13.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.35'	**24.0" Round Culvert** L= 132.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.35' / 874.50' S= 0.0292 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=23.70 cfs @ 12.16 hrs HW=881.43' TW=879.13' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 23.70 cfs @ 7.54 fps)

Summary for Pond 14P: Culvert at Millpond 387+00

Inflow Area = 180.907 ac, 17.94% Impervious, Inflow Depth > 5.58" for 500-yr event
Inflow = 452.88 cfs @ 12.41 hrs, Volume= 84.087 af
Outflow = 452.88 cfs @ 12.41 hrs, Volume= 84.087 af, Atten= 0%, Lag= 0.0 min
Primary = 452.88 cfs @ 12.41 hrs, Volume= 84.087 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.57' @ 13.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.30'	**48.0" Round Culvert X 2.00** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 871.30' / 871.00' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 12.57 sf

Primary OutFlow Max=431.28 cfs @ 12.41 hrs HW=883.67' TW=875.54' (Dynamic Tailwater)
1=Culvert (Inlet Controls 431.28 cfs @ 17.16 fps)

Summary for Pond 16P: Culvert 509+94 (NB CTH AB)

Inflow Area = 3.560 ac, 1.12% Impervious, Inflow Depth = 4.42" for 500-yr event
Inflow = 14.28 cfs @ 12.35 hrs, Volume= 1.312 af
Outflow = 14.28 cfs @ 12.35 hrs, Volume= 1.312 af, Atten= 0%, Lag= 0.0 min
Primary = 14.28 cfs @ 12.35 hrs, Volume= 1.312 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 885.42' @ 12.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	878.00'	**24.0" Round Culvert** L= 178.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 878.00' / 876.00' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=16.81 cfs @ 12.35 hrs HW=880.00' TW=878.17' (Dynamic Tailwater)
1=Culvert (Outlet Controls 16.81 cfs @ 6.64 fps)

Summary for Pond 18P: Culvert 505+79 (NB CTH AB)

Inflow Area = 14.235 ac, 12.61% Impervious, Inflow Depth = 4.91" for 500-yr event
Inflow = 51.83 cfs @ 12.48 hrs, Volume= 5.828 af
Outflow = 51.83 cfs @ 12.48 hrs, Volume= 5.828 af, Atten= 0%, Lag= 0.0 min
Primary = 51.83 cfs @ 12.48 hrs, Volume= 5.828 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 905.83' @ 13.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	877.97'	**30.0" Round Culvert** L= 128.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 877.97' / 877.05' S= 0.0072 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=49.52 cfs @ 12.48 hrs HW=893.61' TW=890.12' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 49.52 cfs @ 10.09 fps)

Summary for Pond 19P: Landfill Pond

Inflow Area = 28.420 ac, 1.16% Impervious, Inflow Depth = 6.51" for 500-yr event
Inflow = 233.24 cfs @ 12.19 hrs, Volume= 15.421 af
Outflow = 275.81 cfs @ 12.30 hrs, Volume= 15.403 af, Atten= 0%, Lag= 6.7 min
Primary = 274.81 cfs @ 12.30 hrs, Volume= 15.776 af
Routed to Pond 22P : 36" Culvert 182+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 996.92' @ 12.30 hrs Surf.Area= 1.697 ac Storage= 6.106 af

Plug-Flow detention time= 182.2 min calculated for 15.392 af (100% of inflow)
Center-of-Mass det. time= 183.2 min (978.1 - 795.0)

Volume	Invert	Avail.Storage	Storage Description
#1	877.33'	6.106 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
877.33	0.334	0.000	0.000
878.00	0.401	0.246	0.246
879.00	0.497	0.449	0.695
880.00	0.661	0.579	1.274
881.00	0.952	0.806	2.081
882.00	1.214	1.083	3.164
883.00	1.487	1.350	4.514
884.00	1.697	1.592	6.106

Device	Routing	Invert	Outlet Devices
#1	Primary	877.33'	**18.0" Round Culvert** L= 69.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 877.33' / 875.77' S= 0.0224 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	877.33'	**1.0" Vert. Orifice/Grate X 7.00** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.68'	**1.0" Vert. Orifice/Grate X 8.00** C= 0.600 Limited to weir flow at low heads
#4	Device 1	878.03'	**1.0" Vert. Orifice/Grate X 9.00** C= 0.600 Limited to weir flow at low heads
#5	Device 1	879.77'	**18.0" Horiz. Orifice/Grate** C= 0.600

			Limited to weir flow at low heads
#6	Primary	882.66'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=289.04 cfs @ 12.30 hrs HW=996.13' TW=996.13' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 0.16 cfs @ 0.09 fps)
  - **2=Orifice/Grate** (Passes < 0.00 cfs potential flow)
  - **3=Orifice/Grate** (Passes < 0.00 cfs potential flow)
  - **4=Orifice/Grate** (Passes < 0.00 cfs potential flow)
  - **5=Orifice/Grate** (Passes < 0.16 cfs potential flow)
- **6=Broad-Crested Rectangular Weir** (Weir Controls 288.87 cfs @ 0.25 fps)

Summary for Pond 22P: 36" Culvert 182+00

Inflow Area = 37.914 ac, 10.10% Impervious, Inflow Depth = 6.57" for 500-yr event
Inflow = 329.14 cfs @ 12.30 hrs, Volume= 20.744 af
Outflow = 329.14 cfs @ 12.30 hrs, Volume= 20.744 af, Atten= 0%, Lag= 0.0 min
Primary = 329.14 cfs @ 12.30 hrs, Volume= 20.744 af
Routed to Pond 64P : Pond B-reduced_raised 1 ft and raised spillway

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 996.90' @ 12.30 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**36.0" Round Culvert**
			L= 289.0' RCP, groove end w/headwall, Ke= 0.200
			Inlet / Outlet Invert= 874.00' / 871.00' S= 0.0104 '/' Cc= 0.900
			n= 0.014, Flow Area= 7.07 sf

Primary OutFlow Max=324.29 cfs @ 12.30 hrs HW=993.50' TW=874.76' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 324.29 cfs @ 45.88 fps)

Summary for Pond 24P: YH1 - Pond

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth = 4.91" for 500-yr event
Inflow = 176.39 cfs @ 12.79 hrs, Volume= 27.185 af
Outflow = 266.34 cfs @ 13.05 hrs, Volume= 26.766 af, Atten= 0%, Lag= 15.5 min
Primary = 266.34 cfs @ 13.05 hrs, Volume= 26.766 af
Routed to Pond 25P : Small Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 904.02' @ 13.05 hrs Surf.Area= 257,486 sf Storage= 437,523 cf

Plug-Flow detention time= 362.3 min calculated for 26.766 af (98% of inflow)
Center-of-Mass det. time= 353.3 min (1,214.3 - 861.0)

Volume	Invert	Avail.Storage	Storage Description
#1	895.00'	437,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
895.00	94,949	0	0
896.00	101,543	98,246	98,246
897.00	159,762	130,653	228,899
898.00	257,486	208,624	437,523

Device	Routing	Invert	Outlet Devices
#1	Primary	895.00'	**12.0" Round Culvert** L= 140.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 895.00' / 894.00' S= 0.0071 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	897.00'	**10.0' long x 100.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 13.05 hrs HW=903.95' TW=905.14' (Dynamic Tailwater)
└─**1=Culvert** (Controls 0.00 cfs)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 25P: Small Depression

Inflow Area = 66.400 ac, 3.28% Impervious, Inflow Depth > 4.84" for 500-yr event
Inflow = 266.34 cfs @ 13.05 hrs, Volume= 26.766 af
Outflow = 197.73 cfs @ 13.06 hrs, Volume= 26.737 af, Atten= 26%, Lag= 0.5 min
Primary = 197.73 cfs @ 13.06 hrs, Volume= 26.737 af
Routed to Pond 58P : Culvert 395+33 (Millpond)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 905.26' @ 13.05 hrs Surf.Area= 32,190 sf Storage= 33,874 cf

Plug-Flow detention time= 33.7 min calculated for 26.719 af (100% of inflow)
Center-of-Mass det. time= 30.5 min (1,244.8 - 1,214.3)

Volume	Invert	Avail.Storage	Storage Description
#1	894.00'	33,874 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
894.00	5,815	0	0
895.00	14,871	10,343	10,343
896.00	32,190	23,531	33,874

Device	Routing	Invert	Outlet Devices
#1	Primary	894.00'	**12.0" Round Culvert** L= 205.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 894.00' / 892.00' S= 0.0098 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Primary	895.50'	**25.0' long x 40.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=958.36 cfs @ 13.06 hrs HW=903.84' TW=902.27' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.99 cfs @ 3.81 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 955.37 cfs @ 4.58 fps)

Summary for Pond 28P: 12/18 140+35

Inflow Area = 9.510 ac, 26.18% Impervious, Inflow Depth = 5.37" for 500-yr event
Inflow = 59.72 cfs @ 12.21 hrs, Volume= 4.252 af
Outflow = 59.72 cfs @ 12.21 hrs, Volume= 4.252 af, Atten= 0%, Lag= 0.0 min
Primary = 59.72 cfs @ 12.21 hrs, Volume= 4.252 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 866.83' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	860.79'	**45.0" W x 29.0" H, R=39.2" Elliptical RCP_Elliptical 45x29** L= 310.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 860.79' / 859.89' S= 0.0029 '/' Cc= 0.900 n= 0.015, Flow Area= 7.36 sf

Primary OutFlow Max=58.84 cfs @ 12.21 hrs HW=866.70' TW=862.47' (Dynamic Tailwater)
1=RCP_Elliptical 45x29 (Outlet Controls 58.84 cfs @ 7.99 fps)

Summary for Pond 32P: Long Drive 440+35

Inflow Area = 4.570 ac, 14.44% Impervious, Inflow Depth = 4.79" for 500-yr event
Inflow = 24.50 cfs @ 12.24 hrs, Volume= 1.824 af
Outflow = 24.50 cfs @ 12.24 hrs, Volume= 1.824 af, Atten= 0%, Lag= 0.0 min
Primary = 24.50 cfs @ 12.24 hrs, Volume= 1.824 af
Routed to Pond 28P : 12/18 140+35

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 868.52' @ 12.23 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	861.50'	**24.0" Round Culvert** L= 62.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 861.50' / 860.80' S= 0.0113 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=24.34 cfs @ 12.24 hrs HW=868.42' TW=866.69' (Dynamic Tailwater)
1=Culvert (Outlet Controls 24.34 cfs @ 7.75 fps)

Summary for Pond 34P: YH3-Pond

Inflow Area = 204.006 ac, 4.43% Impervious, Inflow Depth = 6.37" for 500-yr event
Inflow = 527.83 cfs @ 12.77 hrs, Volume= 108.340 af
Outflow = 706.05 cfs @ 13.55 hrs, Volume= 106.895 af, Atten= 0%, Lag= 47.1 min
Primary = 706.05 cfs @ 13.55 hrs, Volume= 220.056 af
Routed to Pond 38P : YH6-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 1,023.33' @ 13.35 hrs Surf.Area= 638,965 sf Storage= 1,137,523 cf

Plug-Flow detention time= 168.8 min calculated for 106.821 af (99% of inflow)
Center-of-Mass det. time= 158.8 min (1,024.5 - 865.7)

Volume	Invert	Avail.Storage	Storage Description
#1	858.00'	1,137,523 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
858.00	182,909	0	0
859.00	191,060	186,985	186,985
860.00	214,659	202,860	389,844
861.00	320,867	267,763	657,607
862.00	638,965	479,916	1,137,523

Device	Routing	Invert	Outlet Devices
#1	Primary	858.00'	**36.0" Round Culvert** L= 1,066.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 858.00' / 855.00' S= 0.0028 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Primary	860.50'	**125.0' long x 60.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=39,040.41 cfs @ 13.55 hrs HW=942.05' TW=941.58' (Dynamic Tailwater)
1=Culvert (Outlet Controls 13.75 cfs @ 1.95 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 39,026.66 cfs @ 3.83 fps)

Summary for Pond 36P: YH4-Pond

Inflow Area = 12.220 ac, 4.26% Impervious, Inflow Depth = 4.67" for 500-yr event
Inflow = 54.73 cfs @ 12.32 hrs, Volume= 4.753 af
Outflow = 42.47 cfs @ 12.46 hrs, Volume= 4.726 af, Atten= 22%, Lag= 8.8 min
Primary = 42.47 cfs @ 12.46 hrs, Volume= 5.195 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 862.65' @ 12.47 hrs Surf.Area= 40,496 sf Storage= 48,818 cf

Plug-Flow detention time= 124.7 min calculated for 4.726 af (99% of inflow)
Center-of-Mass det. time= 121.3 min (952.1 - 830.8)

Volume	Invert	Avail.Storage	Storage Description
#1	861.00'	64,001 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
861.00	21,906	0	0
862.00	29,959	25,933	25,933
863.00	46,178	38,069	64,001

Device	Routing	Invert	Outlet Devices
#1	Primary	861.00'	**8.0" Round Culvert** L= 248.5' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 861.00' / 859.76' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Primary	861.80'	**20.0' long x 50.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=42.25 cfs @ 12.46 hrs HW=862.65' TW=860.37' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 1.16 cfs @ 3.33 fps)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 41.09 cfs @ 2.43 fps)

Summary for Pond 37P: YH5 - Pond

Inflow Area = 2.350 ac, 51.91% Impervious, Inflow Depth = 6.51" for 500-yr event
Inflow = 22.12 cfs @ 12.14 hrs, Volume= 1.275 af
Outflow = 1.00 cfs @ 12.80 hrs, Volume= 1.205 af, Atten= 95%, Lag= 39.2 min
Primary = 1.00 cfs @ 12.80 hrs, Volume= 1.285 af
Routed to Pond 34P : YH3-Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 865.94' @ 14.80 hrs Surf.Area= 44,613 sf Storage= 39,213 cf

Plug-Flow detention time= 656.4 min calculated for 1.205 af (94% of inflow)
Center-of-Mass det. time= 628.1 min (1,419.6 - 791.5)

Volume	Invert	Avail.Storage	Storage Description
#1	865.00'	93,414 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
865.00	38,602	0	0
866.00	44,980	41,791	41,791
867.00	58,266	51,623	93,414

Device	Routing	Invert	Outlet Devices
#1	Primary	866.50'	**65.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Primary	865.00'	**8.0" Round Culvert**

L= 170.1' RCP, sq.cut end projecting, Ke= 0.500
Inlet / Outlet Invert= 865.00' / 864.15' S= 0.0050 '/' Cc= 0.900
n= 0.012, Flow Area= 0.35 sf

Primary OutFlow Max=1.00 cfs @ 12.80 hrs HW=865.85' TW=861.49' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
2=Culvert (Barrel Controls 1.00 cfs @ 2.91 fps)

Summary for Pond 38P: YH6-Pond

Inflow Area = 303.663 ac, 5.11% Impervious, Inflow Depth > 10.27" for 500-yr event
Inflow = 776.31 cfs @ 13.55 hrs, Volume= 259.836 af
Outflow = 960.30 cfs @ 17.85 hrs, Volume= 259.835 af, Atten= 0%, Lag= 258.1 min
Primary = 960.30 cfs @ 17.85 hrs, Volume= 259.835 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 282,460 sf Storage= 556,446 cf
Peak Elev= 1,028.96' @ 17.85 hrs Surf.Area= 771,626 sf Storage= 2,032,289 cf (1,475,843 cf above start)

Plug-Flow detention time= 129.1 min calculated for 246.890 af (95% of inflow)
Center-of-Mass det. time= 71.5 min (1,042.0 - 970.4)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	2,032,289 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
854.63	282,460	0	0
856.60	282,460	556,446	556,446
857.00	299,898	116,472	672,918
858.00	336,652	318,275	991,193
859.00	486,957	411,805	1,402,997
860.00	771,626	629,292	2,032,289

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**42.0" Round Culvert X 2.00**
			L= 28.0' CMP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900
			n= 0.024, Flow Area= 9.62 sf

Primary OutFlow Max=960.28 cfs @ 17.85 hrs HW=1,028.95' TW=856.60' (Dynamic Tailwater)
1=Culvert (Inlet Controls 960.28 cfs @ 49.90 fps)

Summary for Pond 41P: AB 520+90

Inflow Area = 3.250 ac, 21.54% Impervious, Inflow Depth = 5.28" for 500-yr event
Inflow = 23.71 cfs @ 12.16 hrs, Volume= 1.431 af
Outflow = 23.71 cfs @ 12.16 hrs, Volume= 1.431 af, Atten= 0%, Lag= 0.0 min
Primary = 23.71 cfs @ 12.16 hrs, Volume= 1.431 af
Routed to Pond 54P : Pond C

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 881.00' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.61'	**24.0" Round Culvert** L= 335.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 875.61' / 874.00' S= 0.0048 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=23.07 cfs @ 12.16 hrs HW=880.76' TW=876.77' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 23.07 cfs @ 7.34 fps)

Summary for Pond 43P: Ramp C 805+00

Inflow Area = 7.982 ac, 32.15% Impervious, Inflow Depth > 5.86" for 500-yr event
Inflow = 9.38 cfs @ 12.27 hrs, Volume= 3.900 af
Outflow = 9.38 cfs @ 12.27 hrs, Volume= 3.900 af, Atten= 0%, Lag= 0.0 min
Primary = 9.38 cfs @ 12.27 hrs, Volume= 3.900 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 874.85' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.30'	**24.0" Round Culvert** L= 92.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.30' / 872.90' S= 0.0043 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=9.05 cfs @ 12.27 hrs HW=874.82' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 9.05 cfs @ 4.91 fps)

Summary for Pond 45P: Culvert at 698+81

Inflow Area = 9.520 ac, 9.98% Impervious, Inflow Depth = 4.67" for 500-yr event
Inflow = 51.11 cfs @ 12.23 hrs, Volume= 3.703 af
Outflow = 51.11 cfs @ 12.23 hrs, Volume= 3.703 af, Atten= 0%, Lag= 0.0 min
Primary = 51.11 cfs @ 12.23 hrs, Volume= 3.703 af
Routed to Pond 46P : Pond D

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 884.73' @ 12.23 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	879.00'	**30.0" Round Culvert** L= 167.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 879.00' / 878.00' S= 0.0060 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf

Primary OutFlow Max=50.34 cfs @ 12.23 hrs HW=884.61' TW=879.57' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 50.34 cfs @ 10.25 fps)

Summary for Pond 46P: Pond D

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 5.08" for 500-yr event
Inflow = 75.20 cfs @ 12.17 hrs, Volume= 5.587 af
Outflow = 63.96 cfs @ 12.26 hrs, Volume= 5.576 af, Atten= 15%, Lag= 5.7 min
Primary = 63.96 cfs @ 12.26 hrs, Volume= 5.792 af
Routed to Pond 51P : Pond D Infiltration

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.60' @ 12.26 hrs Surf.Area= 0.427 ac Storage= 1.296 af

Plug-Flow detention time= 189.6 min calculated for 5.576 af (100% of inflow)
Center-of-Mass det. time= 188.3 min (1,003.0 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	876.00'	1.469 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
876.00	0.299	0.000	0.000
877.00	0.331	0.315	0.315
878.00	0.364	0.347	0.662
879.00	0.404	0.384	1.046
880.00	0.442	0.423	1.469

Device	Routing	Invert	Outlet Devices
#1	Primary	876.00'	**18.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 876.00' / 875.50' S= 0.0109 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	876.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	878.25'	**15.0' long x 6.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=63.36 cfs @ 12.26 hrs HW=879.59' TW=877.35' (Dynamic Tailwater)
├─**1=Culvert** (Passes 1.41 cfs of 12.73 cfs potential flow)
│ └─**2=Orifice/Grate** (Orifice Controls 1.41 cfs @ 7.21 fps)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 61.95 cfs @ 3.08 fps)

Summary for Pond 47P: Ramp B 706+25

Inflow Area = 14.351 ac, 20.04% Impervious, Inflow Depth = 4.87" for 500-yr event
Inflow = 36.12 cfs @ 12.80 hrs, Volume= 5.827 af
Outflow = 36.12 cfs @ 12.80 hrs, Volume= 5.827 af, Atten= 0%, Lag= 0.0 min
Primary = 36.12 cfs @ 12.80 hrs, Volume= 5.827 af
Routed to Link 44L : Door Creek Combined

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 878.88' @ 12.80 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	873.75'	**24.0" Round Culvert** L= 111.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 873.75' / 872.00' S= 0.0158 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=36.12 cfs @ 12.80 hrs HW=878.88' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 36.12 cfs @ 11.50 fps)

Summary for Pond 51P: Pond D Infiltration

Inflow Area = 13.201 ac, 19.51% Impervious, Inflow Depth = 5.26" for 500-yr event
Inflow = 63.96 cfs @ 12.26 hrs, Volume= 5.792 af
Outflow = 35.28 cfs @ 12.80 hrs, Volume= 5.728 af, Atten= 45%, Lag= 32.2 min
Discarded = 0.14 cfs @ 12.70 hrs, Volume= 0.419 af
Primary = 35.14 cfs @ 12.80 hrs, Volume= 5.309 af
Routed to Pond 47P : Ramp B 706+25

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 879.64' @ 12.70 hrs Surf.Area= 27,119 sf Storage= 78,680 cf

Plug-Flow detention time= 320.0 min calculated for 5.728 af (99% of inflow)
Center-of-Mass det. time= 297.8 min (1,291.7 - 994.0)

Volume	Invert	Avail.Storage	Storage Description
#1	875.50'	78,680 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
875.50	18,668	0	0
876.00	19,685	9,588	9,588
877.00	21,796	20,741	30,329
878.00	23,894	22,845	53,174
879.00	27,119	25,507	78,680

Device	Routing	Invert	Outlet Devices
#1	Primary	875.50'	**12.0" Round Culvert** L= 46.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 875.50' / 875.35' S= 0.0033 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	875.75'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	878.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.50'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Discarded	875.50'	**0.140 in/hr Exfiltration over Horizontal area** Conductivity to Groundwater Elevation = 870.00'

Discarded OutFlow Max=0.14 cfs @ 12.70 hrs HW=879.64' (Free Discharge)
└**5=Exfiltration** (Controls 0.14 cfs)

Primary OutFlow Max=28.77 cfs @ 12.80 hrs HW=879.54' TW=878.88' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 3.06 cfs @ 3.90 fps)
└**2=Orifice/Grate** (Passes < 0.77 cfs potential flow)
└**3=Orifice/Grate** (Passes < 49.00 cfs potential flow)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 25.70 cfs @ 2.48 fps)

Summary for Pond 54P: Pond C

Inflow Area = 7.094 ac, 32.79% Impervious, Inflow Depth = 5.95" for 500-yr event
Inflow = 60.11 cfs @ 12.14 hrs, Volume= 3.516 af
Outflow = 6.72 cfs @ 12.82 hrs, Volume= 3.500 af, Atten= 89%, Lag= 40.6 min
Primary = 6.72 cfs @ 12.82 hrs, Volume= 3.500 af
Routed to Pond 43P : Ramp C 805+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.81' @ 12.75 hrs Surf.Area= 0.619 ac Storage= 1.920 af

Plug-Flow detention time= 399.3 min calculated for 3.498 af (99% of inflow)
Center-of-Mass det. time= 398.1 min (1,196.7 - 798.7)

Volume	Invert	Avail.Storage	Storage Description
#1	874.00'	2.703 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
874.00	0.393	0.000	0.000
875.00	0.451	0.422	0.422
876.00	0.509	0.480	0.902
877.00	0.569	0.539	1.441
878.00	0.631	0.600	2.041
879.00	0.693	0.662	2.703

Device	Routing	Invert	Outlet Devices
#1	Primary	874.00'	**12.0" Round Culvert** L= 41.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 874.00' / 873.80' S= 0.0049 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	874.00'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	877.00'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	878.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=6.72 cfs @ 12.82 hrs HW=877.80' TW=874.65' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 6.72 cfs @ 8.55 fps)
  - **2=Orifice/Grate** (Passes < 1.68 cfs potential flow)
  - **3=Orifice/Grate** (Passes < 29.67 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 57P: 187+00 42" Culvert

Inflow Area = 43.792 ac, 47.85% Impervious, Inflow Depth = 7.68" for 500-yr event
Inflow = 207.25 cfs @ 13.45 hrs, Volume= 28.009 af
Outflow = 207.25 cfs @ 13.45 hrs, Volume= 28.009 af, Atten= 0%, Lag= 0.0 min
Primary = 207.25 cfs @ 13.45 hrs, Volume= 28.009 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 904.06' @ 12.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	872.70'	**42.0" Round Culvert** L= 297.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 872.70' / 871.50' S= 0.0040 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=183.79 cfs @ 13.45 hrs HW=897.42' TW=882.14' (Dynamic Tailwater)
- **1=Culvert** (Outlet Controls 183.79 cfs @ 19.10 fps)

Summary for Pond 58P: Culvert 395+33 (Millpond)

Inflow Area = 114.625 ac, 5.66% Impervious, Inflow Depth > 4.76" for 500-yr event
Inflow = 265.85 cfs @ 13.06 hrs, Volume= 45.437 af
Outflow = 265.85 cfs @ 13.06 hrs, Volume= 45.437 af, Atten= 0%, Lag= 0.0 min
Primary = 265.85 cfs @ 13.06 hrs, Volume= 45.437 af
Routed to Pond 14P : Culvert at Millpond 387+00

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 905.25' @ 13.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	875.90'	**42.0" Round Culvert**

L= 148.0' RCP, groove end w/headwall, Ke= 0.200
Inlet / Outlet Invert= 875.90' / 875.40' S= 0.0034 '/' Cc= 0.900
n= 0.012, Flow Area= 9.62 sf

Primary OutFlow Max=250.93 cfs @ 13.06 hrs HW=902.65' TW=882.10' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 250.93 cfs @ 26.08 fps)

Summary for Pond 59P: Pond A

Inflow Area = 300.773 ac, 22.78% Impervious, Inflow Depth > 4.42" for 500-yr event
Inflow = 412.63 cfs @ 12.18 hrs, Volume= 110.811 af
Outflow = 99.46 cfs @ 13.48 hrs, Volume= 108.150 af, Atten= 76%, Lag= 78.0 min
Primary = 99.46 cfs @ 13.48 hrs, Volume= 108.150 af
Routed to Link 36L : Combined to Ag Ditch #4

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 864.56' @ 13.48 hrs Surf.Area= 3.632 ac Storage= 18.878 af

Plug-Flow detention time= 222.6 min calculated for 108.075 af (98% of inflow)
Center-of-Mass det. time= 165.3 min (1,352.9 - 1,187.6)

Volume	Invert	Avail.Storage	Storage Description
#1	859.00'	24.336 af	**Custom Stage Data (Prismatic)** Listed below (Recalc) x 0.85

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
859.00	3.694	0.000	0.000
860.00	3.815	3.755	3.755
861.00	3.937	3.876	7.631
862.00	4.061	3.999	11.630
863.00	4.186	4.123	15.753
864.00	4.061	4.123	19.877
865.00	4.439	4.250	24.127
866.00	4.570	4.505	28.631

Device	Routing	Invert	Outlet Devices
#1	Primary	858.20'	**42.0" Round Culvert** L= 15.2' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 858.20' / 858.00' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	859.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 3.50 3.50 6.00 Width (feet) 0.17 4.20 6.00 6.00
#3	Device 2	857.00'	**42.0" Round Culvert** L= 15.9' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 857.00' / 857.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Primary	865.00'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=99.46 cfs @ 13.48 hrs HW=864.56' TW=856.60' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 99.46 cfs @ 10.34 fps)
  - **2=Custom Weir/Orifice** (Passes 99.46 cfs of 125.47 cfs potential flow)
    - **3=Culvert** (Passes 99.46 cfs of 136.54 cfs potential flow)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 60P: Pond B (Wet Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **1=Culvert** (Controls 0.00 cfs)
  - **2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
- **3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 61P: (new Pond)

Inflow Area = 2.146 ac, 41.66% Impervious, Inflow Depth = 7.37" for 500-yr event
Inflow = 22.72 cfs @ 12.13 hrs, Volume= 1.317 af
Outflow = 22.72 cfs @ 12.13 hrs, Volume= 1.317 af, Atten= 0%, Lag= 0.0 min
Primary = 22.72 cfs @ 12.13 hrs, Volume= 1.317 af
Routed to Pond 59P : Pond A

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3

Peak Elev= 870.44' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.50'	**18.0" Round Culvert** L= 122.0' RCP, groove end w/headwall, Ke= 0.200 Inlet / Outlet Invert= 859.50' / 859.00' S= 0.0041 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=21.73 cfs @ 12.13 hrs HW=869.80' TW=861.74' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 21.73 cfs @ 12.30 fps)

Summary for Pond 62P: Pond B (Wet Basin) Spillway change

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	38.463 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.901	0.000	0.000
872.00	3.063	2.982	2.982
873.00	3.159	3.111	6.093
874.00	6.376	4.768	10.861
875.00	6.599	6.487	17.348
876.00	6.861	6.730	24.078
877.00	7.228	7.045	31.123
878.00	7.451	7.340	38.463

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Secondary	876.40'	**Asymmetrical Weir, C= 3.27** Offset (feet) 0.00 20.00 60.00 80.00 Height (feet) 1.00 0.00 0.00 1.00

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**1=Culvert** (Controls 0.00 cfs)
└**2=Custom Weir/Orifice** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
└**3=Asymmetrical Weir** (Controls 0.00 cfs)

Summary for Pond 63P: Pond B (Dry Basin)

Volume	Invert	Avail.Storage	Storage Description
#1	869.00'	1.772 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
869.00	0.018	0.000	0.000
870.00	0.057	0.037	0.037
871.00	0.097	0.077	0.114
872.00	0.138	0.117	0.232
873.00	2.941	1.540	1.772

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**18.0" Round Culvert** L= 13.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 871.00' / 871.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Secondary	873.00'	**378.0' long + 20.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 64P: Pond B-reduced_raised 1 ft and raised spillway

Inflow Area = 244.722 ac, 18.67% Impervious, Inflow Depth > 5.79" for 500-yr event
Inflow = 824.14 cfs @ 12.30 hrs, Volume= 118.172 af
Outflow = 323.38 cfs @ 13.29 hrs, Volume= 115.948 af, Atten= 61%, Lag= 59.4 min
Primary = 67.17 cfs @ 13.30 hrs, Volume= 82.078 af
Routed to Pond 59P : Pond A
Secondary = 256.20 cfs @ 13.29 hrs, Volume= 33.870 af
Routed to Reach 20R : Overland Flow

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 877.52' @ 13.29 hrs Surf.Area= 7.345 ac Storage= 38.634 af

Plug-Flow detention time= 272.1 min calculated for 115.948 af (98% of inflow)
Center-of-Mass det. time= 234.6 min (1,179.7 - 945.1)

Volume	Invert	Avail.Storage	Storage Description
#1	871.00'	42.125 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
871.00	2.930	0.000	0.000
872.00	3.134	3.032	3.032
872.50	5.890	2.256	5.288
873.00	6.100	2.998	8.285
874.00	6.376	6.238	14.524
875.00	6.599	6.487	21.011
876.00	6.861	6.730	27.741
877.00	7.228	7.044	34.785
878.00	7.451	7.339	42.125

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**42.0" Round Culvert** L= 3,037.0' Ke= 0.850 Inlet / Outlet Invert= 871.00' / 859.50' S= 0.0038 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#2	Device 1	871.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.50 1.50 6.00 Width (feet) 0.17 1.27 6.00 6.00
#3	Device 2	870.00'	**42.0" Round Culvert** L= 20.0' Ke= 0.700 Inlet / Outlet Invert= 870.00' / 870.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 9.62 sf
#4	Secondary	876.40'	**80.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=67.17 cfs @ 13.30 hrs HW=877.52' TW=864.55' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 67.17 cfs @ 6.98 fps)
└**2=Custom Weir/Orifice** (Passes 67.17 cfs of 226.31 cfs potential flow)
└**3=Culvert** (Passes 67.17 cfs of 98.21 cfs potential flow)

Secondary OutFlow Max=254.82 cfs @ 13.29 hrs HW=877.52' TW=873.38' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 254.82 cfs @ 2.84 fps)

Summary for Pond 65P: YH6-Pond

Inflow	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af
Outflow	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af, Atten= 0%, Lag= 0.0 min
Primary	=	78.74 cfs @	0.00 hrs, Volume=	12.903 af
Secondary	=	0.00 cfs @	0.00 hrs, Volume=	0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Starting Elev= 856.60' Surf.Area= 6.484 ac Storage= 12.773 af
Peak Elev= 856.60' @ 0.00 hrs Surf.Area= 6.484 ac Storage= 12.773 af

Plug-Flow detention time= (not calculated: no plugs found)
Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	854.63'	46.654 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
854.63	6.484	0.000	0.000
856.60	6.484	12.773	12.773
857.00	6.885	2.674	15.447
858.00	7.728	7.307	22.754
859.00	11.179	9.453	32.207
860.00	17.714	14.447	46.654

Device	Routing	Invert	Outlet Devices
#1	Primary	854.63'	**108.0" W x 36.0" H Box Culvert** L= 28.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 854.63' / 854.25' S= 0.0136 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 27.00 sf
#2	Secondary	858.60'	**50.0' long + 25.0 '/' SideZ x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=78.74 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 78.74 cfs @ 5.92 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=856.60' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 35L: Ag. Ditch #4 Tributary

Inflow Area = 19.199 ac, 34.85% Impervious, Inflow Depth = 6.51" for 500-yr event
Inflow = 138.31 cfs @ 12.22 hrs, Volume= 10.408 af
Primary = 136.17 cfs @ 12.48 hrs, Volume= 10.408 af, Atten= 2%, Lag= 15.9 min
Routed to Link 36L : Combined to Ag Ditch #4

Primary outflow = Inflow delayed by 15.8 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 36L: Combined to Ag Ditch #4

Inflow Area = 640.771 ac, 14.16% Impervious, Inflow Depth > 7.21" for 500-yr event
Inflow = 1,090.65 cfs @ 13.35 hrs, Volume= 385.233 af
Primary = 1,090.65 cfs @ 13.35 hrs, Volume= 385.233 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Fixed water surface Elevation= 856.60'

Summary for Link 44L: Door Creek Combined

Inflow Area = 40.584 ac, 24.45% Impervious, Inflow Depth = 5.37" for 500-yr event
Inflow = 92.82 cfs @ 12.59 hrs, Volume= 18.158 af
Primary = 92.82 cfs @ 12.59 hrs, Volume= 18.158 af, Atten= 0%, Lag= 0.0 min

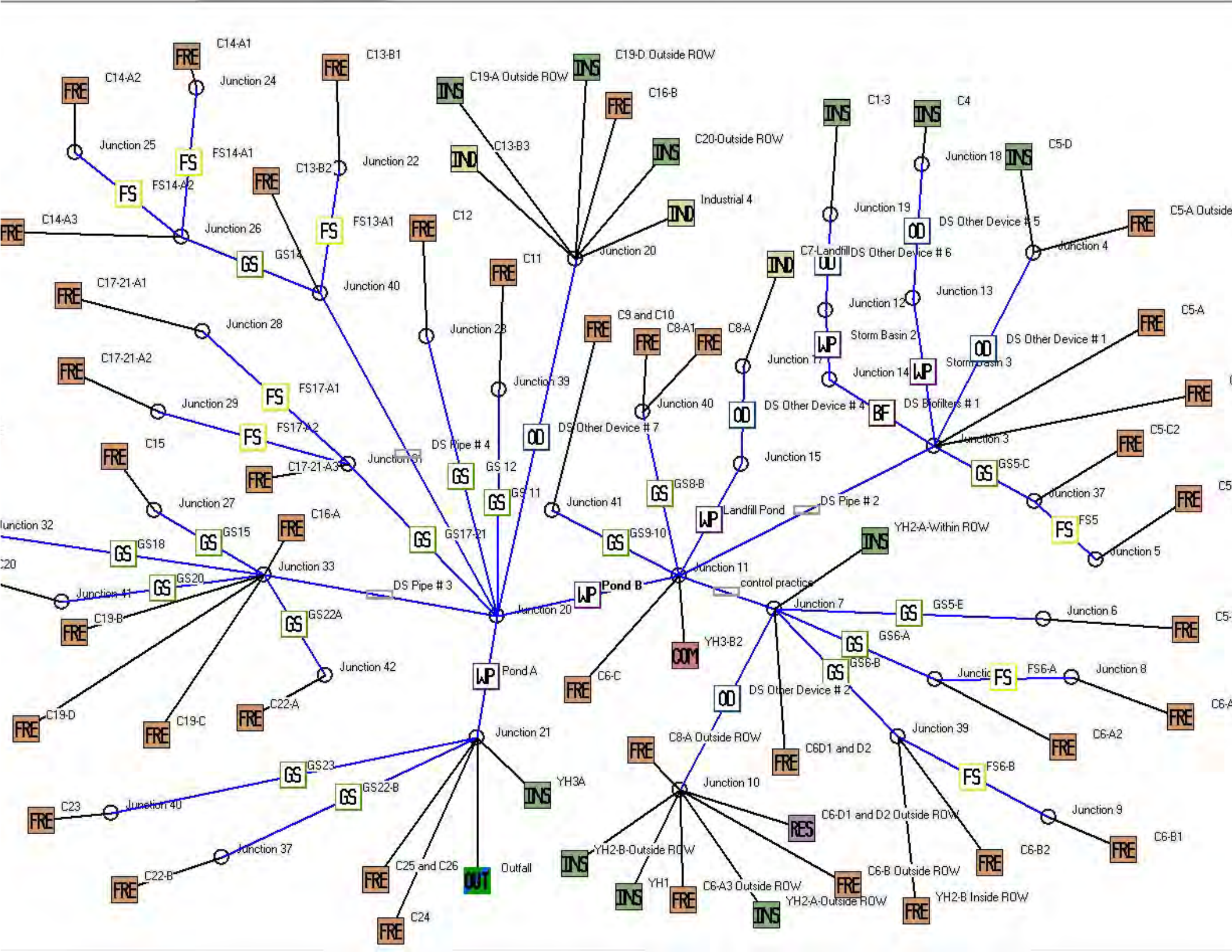
Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 56L: Lag to Door Creek

Inflow Area = 0.750 ac, 46.67% Impervious, Inflow Depth = 6.76" for 500-yr event
Inflow = 3.86 cfs @ 12.43 hrs, Volume= 0.422 af
Primary = 3.84 cfs @ 12.86 hrs, Volume= 0.422 af, Atten= 0%, Lag= 25.7 min
Routed to Link 44L : Door Creek Combined

Primary outflow = Inflow delayed by 25.6 min, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

WinSLAMM Model


C14-A1
C14-A2
Junction 24
Junction 25
FS14-A1
FS14-A2
C14-A3
Junction 26
GS14
C13-B1
C13-B2
Junction 22
FS13-A1
Junction 40
C19-A Outside ROW
C19-D Outside ROW
C16-B
C13-B3
C20-Outside ROW
Industrial 4
Junction 20
C12
C11
Junction 23
Junction 39
C17-21-A1
Junction 28
C17-21-A2
FS17-A1
Junction 29
FS17-A2
C17-21-A3
C15
Junction 27
GS15
C16-A
GS17-21
DS Pipe # 4
GS 12
GS 11
C9 and C10
C8-A1
C8-A
C7-Landfill
C1-3
C4
Junction 18
C5-D
Junction 19
DS Other Device # 5
DS Other Device # 6
C5-A Outside
Junction 4
Junction 12
Junction 13
Storm Basin 2
Junction 17
Junction 14
Storm Basin 3
DS Other Device # 1
C5-A
DS Other Device # 4
DS Biofilters # 1
DS Other Device # 7
Junction 40
Junction 15
Junction 3
C5-C2
GS5-C
Junction 37
FS5
Junction 5
Junction 41
GS9-10
GS8-B
Landfill Pond
DS Pipe # 2
YH2-A-Within ROW
Junction 11
control practice
Junction 32
GS18
Junction 33
GS20
Junction 41
C19-B
GS22A
DS Pipe # 3
Junction 20
Pond B
Junction 7
GS5-E
Junction 6
GS6-A
GS6-B
YH3-B2
C6-C
Junction 42
Pond A
C19-D
C19-C
C22-A
DS Other Device # 2
FS6-A
Junction 8
C6-A2
Junction 21
C8-A Outside ROW
C6D1 and D2
Junction 39
FS6-B
GS23
GS22-B
YH3A
C23
Junction 40
Junction 10
C6-D1 and D2 Outside ROW
Junction 9
C6-B1
C6-B2
Junction 37
C22-B
C25 and C26
Outfall
YH2-B-Outside ROW
C6-B Outside ROW
YH1
C6-A3 Outside ROW
YH2-A-Outside ROW
YH2-B Inside ROW
C24

SLAMM for Windows Version 10.4.0

Data file name: I:\25222268.00\Data and Calculations\Storm Water\01_WisDOT Pond B Evaluation\SCS Modified WinSLAMM Model\Scenario 3_SCS modified.mdb
Data file description:
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
Date of run: 09-28-2023 Time of run: 14:35:52
Total Area Modeled (acres): 317.280
Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	9.417E+06	-	64.85	38125	-

Outfall Total with Controls:	8.583E+06	8.86%	11.17	5986	84.30%
Annualized Total After Outfall Controls:	8.607E+06			6002	

Pollutant	Concentration - No Controls	Concentration - With Controls	Conc. Units	Pollutant Yield No Controls	Pollutant Yield With Controls	Units	Pol. Yield Percent Reduction
Particulate Solids	64.85	11.17	mg/L	38125	5986	lbs	84.30 %
Total Phosphorus	0.7732	0.06367	mg/L	97.62	34.54	lbs	64.62 %

Data file name: I:\25222268.00\Data and Calculations\Storm Water\01_WisDOT Pond B Evaluation\SCS Modified WinSLAMM Model\Scenario 3_SCS modified.mdb
WinSLAMM Version 10.4.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 09-28-2023 Time: 14:47:06
Site information:

LU# 1 - Freeway: C5-A Total area (ac): 0.420
     19 - Large Turf Areas 1: 0.420 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Freeway: C5-A Outside ROW Total area (ac): 0.795

19 - Large Turf Areas 1: 0.700 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
28 - Other Direct Con Imp Areas: 0.095 ac. Connected Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Freeway: C5-B Total area (ac): 0.693
11 - High Traffic Urban 1: 0.693 ac. Street Length = 0.212 curb-mi Street Width (assuming two curb-mi per street mile) = 53.9 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Institutional: C5-D Total area (ac): 0.850
1 - Roofs 1: 0.122 ac. Pitched Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.728 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Freeway: C5-C1 Total area (ac): 1.094
11 - High Traffic Urban 1: 0.414 ac. Street Length = 0.213 curb-mi Street Width (assuming two curb-mi per street mile) = 32.1 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.680 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Freeway: C5-C2 Total area (ac): 3.330
11 - High Traffic Urban 1: 1.430 ac. Street Length = 0.704 curb-mi Street Width (assuming two

curb-mi per street mile) = 33.5 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 1.860 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
28 - Other Direct Con Imp Areas: 0.040 ac. Connected Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Freeway: C6-A1 Total area (ac): 0.636
11 - High Traffic Urban 1: 0.159 ac. Street Length = 0.092 curb-mi Street Width (assuming two curb-mi per street mile) = 28.5 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.360 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
20 - Large Turf Areas 2: 0.117 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Freeway: C6-A2 Total area (ac): 2.770
11 - High Traffic Urban 1: 0.695 ac. Street Length = 0.342 curb-mi Street Width (assuming two curb-mi per street mile) = 33.5 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 1.365 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
20 - Large Turf Areas 2: 0.710 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 9 - Freeway: C6-B1 Total area (ac): 0.959

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     11 - High Traffic Urban 1:  0.252 ac.    Street Length = 0.211 curb-mi    Street Width (assuming two
curb-mi per street mile) = 19.7 ft
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     19 - Large Turf Areas 1:  0.074 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2:  0.633 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz


LU# 10 - Freeway:  C6-B2     Total area (ac):  8.310
     11 - High Traffic Urban 1:  2.700 ac.    Street Length = 1.65 curb-mi    Street Width (assuming two
curb-mi per street mile) = 27 ft
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     19 - Large Turf Areas 1:  3.440 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2:  1.770 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     28 - Other Direct Con Imp Areas:  0.400 ac.    Connected    Connected    Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz


LU# 11 - Residential:  C6-D1 and D2 Outside ROW     Total area (ac):  14.820
     25 - Driveways 1:  0.650 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  1.950 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     57 - Undeveloped Areas 1:  11.410 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     58 - Undeveloped Areas 2:  0.510 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
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77 - Other Direct Con Imp Areas: 0.300 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 12 - Institutional: C1-3 Total area (ac): 22.592
45 - Large Landscaped Areas 1: 11.210 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
57 - Undeveloped Areas 1: 0.685 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
58 - Undeveloped Areas 2: 2.384 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.273 ac. Source Area PSD File:
77 - Other Direct Con Imp Areas: 8.040 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 13 - Institutional: C4 Total area (ac): 15.346
45 - Large Landscaped Areas 1: 7.637 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
57 - Undeveloped Areas 1: 1.439 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 0.349 ac. Source Area PSD File:
77 - Other Direct Con Imp Areas: 5.921 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 14 - Industrial: C7-Landfill Total area (ac): 28.424
25 - Driveways 1: 0.440 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 27.650 ac. Moderately Compacted Clayey Source Area PSD File:

C:\WinSLAMM Files\NURP.cpz
     70 - Water Body Areas: 0.334 ac.   Source Area PSD File:

LU# 15 - Freeway: C5-E   Total area (ac): 1.502
     11 - High Traffic Urban 1: 0.720 ac.   Street Length = 0.297 curb-mi   Street Width (assuming two curb-mi per street mile) = 40 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.743 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 0.039 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 16 - Freeway: C8-A   Total area (ac): 0.010
     11 - High Traffic Urban 1: 0.010 ac.   Street Length = 0.005 curb-mi   Street Width (assuming two curb-mi per street mile) = 33 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 17 - Freeway: C6-A3 Outside ROW   Total area (ac): 5.186
     19 - Large Turf Areas 1: 3.259 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 1.927 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 18 - Freeway: C9 and C10   Total area (ac): 1.970
     11 - High Traffic Urban 1: 0.920 ac.   Street Length = 0.286 curb-mi   Street Width (assuming two

curb-mi per street mile) = 53.1 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.900 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
20 - Large Turf Areas 2: 0.150 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 19 - Freeway: C6-C Total area (ac): 2.360
11 - High Traffic Urban 1: 1.710 ac. Street Length = 0.763 curb-mi Street Width (assuming two curb-mi per street mile) = 37 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.340 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
28 - Other Direct Con Imp Areas: 0.310 ac. Connected Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 20 - Institutional: YH2-B-Outside ROW Total area (ac): 32.140
45 - Large Landscaped Areas 1: 9.770 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
46 - Large Landscaped Areas 2: 9.490 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
57 - Undeveloped Areas 1: 8.590 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
58 - Undeveloped Areas 2: 2.240 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
77 - Other Direct Con Imp Areas: 2.050 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 21 - Freeway: C11   Total area (ac): 0.999
     11 - High Traffic Urban 1: 0.491 ac.   Street Length = 0.193 curb-mi   Street Width (assuming two curb-mi per street mile) = 42 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.420 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 0.088 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 22 - Freeway: C12   Total area (ac): 0.947
     11 - High Traffic Urban 1: 0.464 ac.   Street Length = 0.182 curb-mi   Street Width (assuming two curb-mi per street mile) = 42.1 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.483 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 23 - Freeway: C20   Total area (ac): 2.970
     11 - High Traffic Urban 1: 0.480 ac.   Street Length = 0.202 curb-mi   Street Width (assuming two curb-mi per street mile) = 39.2 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 2.490 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 24 - Freeway: C13-B1   Total area (ac): 0.952

11 - High Traffic Urban 1: 0.523 ac. Street Length = 0.278 curb-mi Street Width (assuming two curb-mi per street mile) = 31 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.379 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
20 - Large Turf Areas 2: 0.050 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 25 - Freeway: C13-B2 Total area (ac): 1.080
11 - High Traffic Urban 1: 0.080 ac. Street Length = 0.039 curb-mi Street Width (assuming two curb-mi per street mile) = 33.8 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 1.000 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 26 - Industrial: C13-B3 Total area (ac): 5.650
25 - Driveways 1: 1.150 ac. Disconnected Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 1.430 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
46 - Large Landscaped Areas 2: 0.380 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
57 - Undeveloped Areas 1: 2.690 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 27 - Freeway: C14-A1 Total area (ac): 3.420

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     11 - High Traffic Urban 1:  1.700 ac.    Street Length = 0.825 curb-mi    Street Width (assuming two
curb-mi per street mile) = 34 ft
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     19 - Large Turf Areas 1:  1.450 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2:  0.270 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz


LU# 28 - Freeway:  C14-A2     Total area (ac):  2.750
     11 - High Traffic Urban 1:  1.000 ac.    Street Length = 0.413 curb-mi    Street Width (assuming two
curb-mi per street mile) = 40 ft
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     19 - Large Turf Areas 1:  1.644 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2:  0.106 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz


LU# 29 - Freeway:  C14-A3     Total area (ac):  1.543
     11 - High Traffic Urban 1:  0.490 ac.    Street Length = 0.101 curb-mi    Street Width (assuming two
curb-mi per street mile) = 80 ft
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
     19 - Large Turf Areas 1:  0.787 ac.    Normal Silty    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2:  0.266 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM
Files\NURP.cpz
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LU# 30 - Freeway: C15   Total area (ac): 1.472
     11 - High Traffic Urban 1: 0.735 ac.   Street Length = 0.276 curb-mi   Street Width (assuming two curb-mi per street mile) = 43.9 ft
          Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.470 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 0.267 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 31 - Freeway: C16-A   Total area (ac): 4.919
     11 - High Traffic Urban 1: 3.300 ac.   Street Length = 1.361 curb-mi   Street Width (assuming two curb-mi per street mile) = 40 ft
          Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 1.095 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     28 - Other Direct Con Imp Areas: 0.524 ac.   Connected   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 32 - Freeway: C16-B   Total area (ac): 0.193
     19 - Large Turf Areas 1: 0.100 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     28 - Other Direct Con Imp Areas: 0.093 ac.   Connected   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 33 - Freeway: C17-21-A1   Total area (ac): 1.210
     11 - High Traffic Urban 1: 0.363 ac.   Street Length = 0.176 curb-mi   Street Width (assuming two curb-mi per street mile) = 34 ft

Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.847 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 34 - Freeway: C17-21-A2 Total area (ac): 0.403
11 - High Traffic Urban 1: 0.208 ac. Street Length = 0.086 curb-mi Street Width (assuming two curb-mi per street mile) = 39.9 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.195 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 35 - Freeway: C17-21-A3 Total area (ac): 2.210
11 - High Traffic Urban 1: 0.710 ac. Street Length = 0.293 curb-mi Street Width (assuming two curb-mi per street mile) = 40 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 1.320 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
20 - Large Turf Areas 2: 0.180 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 36 - Freeway: C18 Total area (ac): 1.501
11 - High Traffic Urban 1: 0.741 ac. Street Length = 0.273 curb-mi Street Width (assuming two curb-mi per street mile) = 44.8 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.760 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 37 - Freeway: C19-B   Total area (ac): 3.543
     19 - Large Turf Areas 1: 0.555 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 38 - Institutional: C20-Outside ROW   Total area (ac): 2.076
     25 - Driveways 1: 0.176 ac.   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1: 1.900 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 39 - Freeway: C25 and C26   Total area (ac): 2.241
     11 - High Traffic Urban 1: 1.540 ac.   Street Length = 0.502 curb-mi   Street Width (assuming two curb-mi per street mile) = 50.6 ft
          Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.516 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     28 - Other Direct Con Imp Areas: 0.185 ac.   Connected   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 40 - Freeway: C22-B   Total area (ac): 1.048
     11 - High Traffic Urban 1: 0.398 ac.   Street Length = 0.117 curb-mi   Street Width (assuming two curb-mi per street mile) = 56.1 ft
          Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.650 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 41 - Freeway: C23   Total area (ac): 0.608
     11 - High Traffic Urban 1: 0.130 ac.   Street Length = 0.047 curb-mi   Street Width (assuming two curb-mi per street mile) = 45.6 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 0.478 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 42 - Freeway: C24   Total area (ac): 2.800
     11 - High Traffic Urban 1: 1.210 ac.   Street Length = 0.357 curb-mi   Street Width (assuming two curb-mi per street mile) = 55.9 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 1.590 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 43 - Freeway: C8-A Outside ROW   Total area (ac): 1.314
     19 - Large Turf Areas 1: 0.234 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 1.080 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 44 - Freeway: C8-A1   Total area (ac): 8.430
     11 - High Traffic Urban 1: 2.970 ac.   Street Length = 1.324 curb-mi   Street Width (assuming two curb-mi per street mile) = 37 ft

Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 2.750 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
20 - Large Turf Areas 2: 2.710 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 45 - Institutional: YH3A Total area (ac): 0.323
45 - Large Landscaped Areas 1: 0.313 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
46 - Large Landscaped Areas 2: 0.010 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 46 - Freeway: C19-C Total area (ac): 2.143
11 - High Traffic Urban 1: 0.893 ac. Street Length = 0.21 curb-mi Street Width (assuming two curb-mi per street mile) = 70.2 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 1.250 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 47 - Institutional: C19-D Outside ROW Total area (ac): 4.695
45 - Large Landscaped Areas 1: 0.995 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 3.700 ac. Source Area PSD File:

LU# 48 - Institutional: C19-A Outside ROW   Total area (ac): 5.330
     45 - Large Landscaped Areas 1: 3.190 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     77 - Other Direct Con Imp Areas: 2.140 ac.   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 49 - Freeway: C6D1 and D2   Total area (ac): 2.973
     11 - High Traffic Urban 1: 1.015 ac.   Street Length = 0.305 curb-mi   Street Width (assuming two curb-mi per street mile) = 54.9 ft
            Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 1.530 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 0.370 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     28 - Other Direct Con Imp Areas: 0.058 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 50 - Institutional: YH1   Total area (ac): 66.400
     45 - Large Landscaped Areas 1: 22.700 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     46 - Large Landscaped Areas 2: 27.890 ac.   Normal Clayey   Low Density   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     57 - Undeveloped Areas 1: 4.830 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     58 - Undeveloped Areas 2: 8.800 ac.   Normal Clayey   Low Density   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     70 - Water Body Areas: 2.180 ac.   Source Area PSD File:

LU# 51 - Freeway: C6-B Outside ROW   Total area (ac): 4.750
     19 - Large Turf Areas 1: 1.560 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     20 - Large Turf Areas 2: 3.190 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 52 - Freeway: YH2-B Inside ROW   Total area (ac): 1.850
     11 - High Traffic Urban 1: 0.440 ac.   Street Length = 0.142 curb-mi   Street Width (assuming two curb-mi per street mile) = 51.1 ft
           Default St. Dirt Accum.   Annual Winter Load = 2500 lbs   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     19 - Large Turf Areas 1: 1.390 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     28 - Other Direct Con Imp Areas: 0.020 ac.   Connected   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 53 - Institutional: YH2-A-Outside ROW   Total area (ac): 7.370
     45 - Large Landscaped Areas 1: 4.880 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     57 - Undeveloped Areas 1: 2.490 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 54 - Institutional: YH2-A-Within ROW   Total area (ac): 10.240
     25 - Driveways 1: 0.460 ac.   Connected   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1: 2.100 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

46 - Large Landscaped Areas 2: 4.750 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
70 - Water Body Areas: 2.930 ac. Source Area PSD File:

LU# 55 - Industrial: Industrial 4 Total area (ac): 3.695
25 - Driveways 1: 0.080 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.900 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
57 - Undeveloped Areas 1: 2.715 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 56 - Freeway: C22-A Total area (ac): 1.115
11 - High Traffic Urban 1: 0.545 ac. Street Length = 0.195 curb-mi Street Width (assuming two curb-mi per street mile) = 46.1 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.570 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 57 - Freeway: C19-D Total area (ac): 2.910
11 - High Traffic Urban 1: 1.960 ac. Street Length = 0.874 curb-mi Street Width (assuming two curb-mi per street mile) = 37 ft
Default St. Dirt Accum. Annual Winter Load = 2500 lbs Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
19 - Large Turf Areas 1: 0.555 ac. Normal Clayey Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
28 - Other Direct Con Imp Areas: 0.395 ac. Connected Connected Source Area PSD File:

C:\WinSLAMM Files\NURP.cpz

LU# 58 - Commercial: YH3-B2   Total area (ac): 5.000
     13 - Paved Parking 1: 4.250 ac.   Disconnected   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     51 - Small Landscaped Areas 1: 0.750 ac.   Normal Silty   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Other Device CP# 1 (DS) - DS Other Device # 1
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 3: Filter Strip CP# 1 (DS) - FS5
   Total drainage area (acres)= 1.094
   Fraction of drainage area served by filter strips (ac) = 1.00
   Total filter strip width (ft) = 496.0
   Effective flow length (ft) = 60
   Infiltration rate (in/hr)= 0.070
   Typical longitudinal slope (ft.H/ft.V) = 0.227
   Typical grass height (in) = 6.0
   Swale retardance factor = C
   Use stochastic analysis to determine infiltration rate: False

Infiltration rate coeficient of variation (COV) = 0.00
Particle size distribution file name: Not needed - calculated by program
Surface Clogging Load (lbs/sf) = 3.50

Control Practice 4: Filter Strip CP# 2 (DS) - FS6-A
Total drainage area (acres)= 0.636
Fraction of drainage area served by filter strips (ac) = 1.00
Total filter strip width (ft) = 289.0
Effective flow length (ft) = 72
Infiltration rate (in/hr)= 0.070
Typical longitudinal slope (ft.H/ft.V) = 0.180
Typical grass height (in) = 6.0
Swale retardance factor = C
Use stochastic analysis to determine infiltration rate: False
Infiltration rate coeficient of variation (COV) = 0.00
Particle size distribution file name: Not needed - calculated by program
Surface Clogging Load (lbs/sf) = 3.50

Control Practice 5: Filter Strip CP# 3 (DS) - FS6-B
Total drainage area (acres)= 0.959
Fraction of drainage area served by filter strips (ac) = 1.00
Total filter strip width (ft) = 551.0
Effective flow length (ft) = 56
Infiltration rate (in/hr)= 0.070
Typical longitudinal slope (ft.H/ft.V) = 0.284
Typical grass height (in) = 6.0
Swale retardance factor = C

Use stochastic analysis to determine infiltration rate: False
Infiltration rate coeficient of variation (COV) = 0.00
Particle size distribution file name: Not needed - calculated by program
Surface Clogging Load (lbs/sf) = 3.50

Control Practice 6: Other Device CP# 2 (DS) - DS Other Device # 2
Fraction of drainage area served by device (ac) = 1.00
Particulate Concentration reduction fraction = 1.00
Filterable Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

Control Practice 8: Wet Detention Pond CP# 1 (DS) - Storm Basin 2
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5.38
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft): 1.25
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5.38
Outlet type: Orifice 2
1. Orifice diameter (ft): 1.25
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5.68
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 170

2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 6.7

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0400	0.00	0.00
2	1.00	0.0600	0.00	0.00
3	2.00	0.0800	0.00	0.00
4	3.00	0.1000	0.00	0.00
5	4.00	0.1200	0.00	0.00
6	5.00	0.1300	0.00	0.00
7	5.38	0.2730	0.00	0.00
8	6.00	0.2950	0.00	0.00
9	7.00	0.3700	0.00	0.00
10	8.00	0.4340	0.00	0.00
11	9.00	0.5780	0.00	0.00

Control Practice 9: Wet Detention Pond CP# 2 (DS) - Storm Basin 3

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 5.19

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 1.5
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5.19

Outlet type: Orifice 2
1. Orifice diameter (ft): 1.5
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5.22

Outlet type: Broad Crested Weir
1. Weir crest length (ft): 30
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 8

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.2000	0.00	0.00
2	1.00	0.2200	0.00	0.00
3	2.00	0.2400	0.00	0.00
4	3.00	0.2600	0.00	0.00
5	4.00	0.2800	0.00	0.00
6	5.00	0.3000	0.00	0.00
7	5.19	0.4050	0.00	0.00
8	6.00	0.4600	0.00	0.00
9	7.00	0.5500	0.00	0.00
10	8.00	0.6600	0.00	0.00
11	9.00	0.9100	0.00	0.00

Control Practice 10: Biofilter CP# 1 (DS) - DS Biofilters # 1
1. Top area (square feet) = 11154
2. Bottom aea (square feet) = 5889
3. Depth (ft): 3.88

```
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.5
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   1
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
   Soil Data                        Soil Type Fraction in Eng. Soil
   Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
               1.  Weir crest length (ft):   30
               2.  Weir crest width (ft):   10
               3.  Height of datum to bottom of weir opening:   2.88
       Outlet type:  Surface Discharge Pipe
               1.  Surface discharge pipe outlet diameter (ft):   1.25
               2.  Pipe invert elevation above datum (ft):   0
               3.  Number of surface pipe outlets:   2


Control Practice 11:  Wet Detention Pond CP# 3 (DS) - Landfill Pond
   Particle Size Distribution file name:  Not needed - calculated by program
```

Initial stage elevation (ft): 5.33
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.08
2. Number of orifices: 7
3. Invert elevation above datum (ft): 5.33
Outlet type: Orifice 2
1. Orifice diameter (ft): 0.08
2. Number of orifices: 8
3. Invert elevation above datum (ft): 5.68
Outlet type: Orifice 3
1. Orifice diameter (ft): 0.08
2. Number of orifices: 9
3. Invert elevation above datum (ft): 6.03
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 10.66
Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 1.5
2. Stand pipe height above datum (ft): 7.77
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.1000	0.00	0.00
2	1.00	0.1400	0.00	0.00

3	2.00	0.1800	0.00	0.00
4	3.00	0.2200	0.00	0.00
5	4.00	0.2600	0.00	0.00
6	5.33	0.3340	0.00	0.00
7	6.00	0.4010	0.00	0.00
8	7.00	0.4970	0.00	0.00
9	8.00	0.6610	0.00	0.00
10	9.00	0.9520	0.00	0.00
11	10.00	1.2140	0.00	0.00
12	11.00	1.4870	0.00	0.00
13	12.00	1.6970	0.00	0.00

Control Practice 12: Other Device CP# 3 (DS) - DS Other Device # 4
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 13: Other Device CP# 4 (DS) - DS Other Device # 5
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 14: Other Device CP# 5 (DS) - DS Other Device # 6
   Fraction of drainage area served by device (ac) = 1.00

Particulate Concentration reduction fraction = 1.00
Filterable Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

Control Practice 15: Wet Detention Pond CP# 4 (DS) - Pond B
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Sharp Crested Weir
1. Sharp crested weir length (ft): 20.9
2. Sharp crested weir height from invert: 5.5
3. Sharp crested weir invert elevation above datum (ft): 6.5
Outlet type: V - notch weir
1. Weir angle (degrees): 40
2. Weir height from invert: 0
3. Invert elevation above datum (ft): 5
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 80
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 10.4
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.6171	0.00	0.00
2	0.50	0.6301	0.00	0.00

3	1.50	0.6561	0.00	0.00
4	2.50	0.6821	0.00	0.00
5	3.50	0.7085	0.00	0.00
6	4.00	0.7216	0.00	0.00
7	5.00	2.9010	0.00	0.00
8	6.00	3.0630	0.00	0.00
9	7.00	3.1590	0.00	0.00
10	8.00	6.3760	0.00	0.00
11	9.00	6.5990	0.00	0.00
12	10.00	6.8610	0.00	0.00
13	11.00	7.2280	0.00	0.00
14	12.00	7.4510	0.00	0.00

Control Practice 16: Other Device CP# 6 (DS) - DS Other Device # 7
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 17: Wet Detention Pond CP# 5 (DS) - Pond A
   Particle Size Distribution file name: Not needed - calculated by program
   Initial stage elevation (ft):   5
   Peak to Average Flow Ratio: 3.8
   Maximum flow allowed into pond (cfs): No maximum value entered
   Outlet Characteristics:
        Outlet type: Sharp Crested Weir
               1. Sharp crested weir length (ft):   6

2. Sharp crested weir height from invert: 3.5
3. Sharp crested weir invert elevation above datum (ft): 8.5

Outlet type: V - notch weir

1. Weir angle (degrees): 60
2. Weir height from invert: 0
3. Invert elevation above datum (ft): 5

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 20
2. Weir crest width (ft): 20
3. Height from datum to bottom of weir opening: 11

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.4282	0.00	0.00
2	1.00	0.5353	0.00	0.00
3	2.00	0.6690	0.00	0.00
4	3.00	0.8362	0.00	0.00
5	4.00	1.0453	0.00	0.00
6	5.00	3.6940	0.00	0.00
7	6.00	3.8150	0.00	0.00
8	7.00	3.9370	0.00	0.00
9	8.00	4.0610	0.00	0.00
10	9.00	4.1860	0.00	0.00
11	10.00	4.3120	0.00	0.00
12	11.00	4.4390	0.00	0.00
13	12.00	4.5700	0.00	0.00

Control Practice 18: Filter Strip CP# 4 (DS) - FS13-A1
   Total drainage area (acres)= 0.952
   Fraction of drainage area served by filter strips (ac) = 1.00
   Total filter strip width (ft) = 1337.0
   Effective flow length (ft) = 14
   Infiltration rate (in/hr)= 0.070
   Typical longitudinal slope (ft.H/ft.V) = 0.250
   Typical grass height (in) = 8.0
   Swale retardance factor = C
   Use stochastic analysis to determine infiltration rate: False
   Infiltration rate coeficient of variation (COV) = 0.00
   Particle size distribution file name: Not needed - calculated by program
   Surface Clogging Load (lbs/sf) = 3.50

Control Practice 19: Grass Swale CP# 1 (DS) - GS 12
   Total drainage area (acres)= 0.947
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 570.22
   Total swale length (ft) = 540
   Average swale length to outlet (ft)= 270
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 6.0
   Typical longitudinal slope (ft.H/ft.V) = 0.003
   Swale retardance factor: C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program

Use total swale length instead of swale density for infiltration calculations: True

Control Practice 20: Filter Strip CP# 5 (DS) - FS14-A1
Total drainage area (acres)= 3.420
Fraction of drainage area served by filter strips (ac) = 1.00
Total filter strip width (ft) = 2504.0
Effective flow length (ft) = 30
Infiltration rate (in/hr)= 0.070
Typical longitudinal slope (ft.H/ft.V) = 0.250
Typical grass height (in) = 8.0
Swale retardance factor = C
Use stochastic analysis to determine infiltration rate: False
Infiltration rate coeficient of variation (COV) = 0.00
Particle size distribution file name: Not needed - calculated by program
Surface Clogging Load (lbs/sf) = 3.50

Control Practice 21: Filter Strip CP# 6 (DS) - FS14-A2
Total drainage area (acres)= 2.750
Fraction of drainage area served by filter strips (ac) = 1.00
Total filter strip width (ft) = 2461.0
Effective flow length (ft) = 31
Infiltration rate (in/hr)= 0.070
Typical longitudinal slope (ft.H/ft.V) = 0.167
Typical grass height (in) = 8.0
Swale retardance factor = C
Use stochastic analysis to determine infiltration rate: False
Infiltration rate coeficient of variation (COV) = 0.00

Particle size distribution file name: Not needed - calculated by program
Surface Clogging Load (lbs/sf) = 3.50

Control Practice 22: Grass Swale CP# 2 (DS) - GS14
Total drainage area (acres)= 7.713
Fraction of drainage area served by swales (ac) = 1.00
Swale density (ft/ac) = 339.56
Total swale length (ft) = 2619
Average swale length to outlet (ft)= 1310
Typical bottom width (ft) = 4.0
Typical swale side slope (_H:1V) = 4.0
Typical longitudinal slope (ft.H/ft.V) = 0.006
Swale retardance factor: C
Typical grass height (in) = 8.0
Swale dynamic infiltration rate (in/hr)= 0.070
Typical swale depth (ft) for cost analysis (optional) = 0.0
Particle size distribution file name: Not needed - calculated by program
Use total swale length instead of swale density for infiltration calculations: True

Control Practice 23: Grass Swale CP# 3 (DS) - GS15
Total drainage area (acres)= 1.472
Fraction of drainage area served by swales (ac) = 1.00
Swale density (ft/ac) = 541.50
Total swale length (ft) = 659
Average swale length to outlet (ft)= 330
Typical bottom width (ft) = 0.0
Typical swale side slope (_H:1V) = 6.0

```
   Typical longitudinal slope (ft.H/ft.V) = 0.005
   Swale retardance factor:  C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 24:  Filter Strip CP# 7 (DS) - FS17-A1
   Total drainage area (acres)= 1.210
   Fraction of drainage area served by filter strips (ac) = 1.00
   Total filter strip width (ft) = 923.0
   Effective flow length (ft) = 40
   Infiltration rate (in/hr)= 0.070
   Typical longitudinal slope (ft.H/ft.V) = 0.240
   Typical grass height (in) = 8.0
   Swale retardance factor = C
   Use stochastic analysis to determine infiltration rate: False
   Infiltration rate coeficient of variation (COV) = 0.00
   Particle size distribution file name: Not needed - calculated by program
   Surface Clogging Load (lbs/sf) = 3.50


Control Practice 25:  Filter Strip CP# 8 (DS) - FS17-A2
   Total drainage area (acres)= 0.403
   Fraction of drainage area served by filter strips (ac) = 1.00
   Total filter strip width (ft) = 427.0
   Effective flow length (ft) = 20
```

```
   Infiltration rate (in/hr)= 0.070
   Typical longitudinal slope (ft.H/ft.V) = 0.167
   Typical grass height (in) = 8.0
   Swale retardance factor = C
   Use stochastic analysis to determine infiltration rate: False
   Infiltration rate coeficient of variation (COV) = 0.00
   Particle size distribution file name: Not needed - calculated by program
   Surface Clogging Load (lbs/sf) = 3.50


Control Practice 26:  Grass Swale CP# 4 (DS) - GS17-21
   Total drainage area (acres)= 3.823
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 372.74
   Total swale length (ft) = 1425
   Average swale length to outlet (ft)= 356
   Typical bottom width (ft) = 4.0
   Typical swale side slope (_H:1V) = 5.5
   Typical longitudinal slope (ft.H/ft.V) = 0.003
   Swale retardance factor:  C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 27:  Grass Swale CP# 5 (DS) - GS18
   Total drainage area (acres)= 1.501
```

```
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 633.58
   Total swale length (ft) = 951
   Average swale length to outlet (ft)= 475
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 6.0
   Typical longitudinal slope (ft.H/ft.V) = 0.004
   Swale retardance factor:  C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 29:  Grass Swale CP# 6 (DS) - GS20
   Total drainage area (acres)= 2.970
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 457.91
   Total swale length (ft) = 1360
   Average swale length to outlet (ft)= 680
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 3.5
   Typical longitudinal slope (ft.H/ft.V) = 0.006
   Swale retardance factor:  C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
```

Use total swale length instead of swale density for infiltration calculations: True

Control Practice 30: Grass Swale CP# 7 (DS) - GS22-B
Total drainage area (acres)= 1.048
Fraction of drainage area served by swales (ac) = 1.00
Swale density (ft/ac) = 1512.32
Total swale length (ft) = 921
Average swale length to outlet (ft)= 460
Typical bottom width (ft) = 0.0
Typical swale side slope (_H:1V) = 6.0
Typical longitudinal slope (ft.H/ft.V) = 0.003
Swale retardance factor: C
Typical grass height (in) = 8.0
Swale dynamic infiltration rate (in/hr)= 0.070
Typical swale depth (ft) for cost analysis (optional) = 0.0
Particle size distribution file name: Not needed - calculated by program
Use total swale length instead of swale density for infiltration calculations: True

Control Practice 31: Grass Swale CP# 8 (DS) - GS5-C
Total drainage area (acres)= 4.424
Fraction of drainage area served by swales (ac) = 1.00
Swale density (ft/ac) = 19.29
Total swale length (ft) = 870
Average swale length to outlet (ft)= 435
Typical bottom width (ft) = 10.0
Typical swale side slope (_H:1V) = 4.0
Typical longitudinal slope (ft.H/ft.V) = 0.010

```
   Swale retardance factor:  C
   Typical grass height (in) = 6.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 32:  Grass Swale CP# 9 (DS) - GS5-E
   Total drainage area (acres)= 1.502
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 578.56
   Total swale length (ft) = 869
   Average swale length to outlet (ft)= 434
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 4.0
   Typical longitudinal slope (ft.H/ft.V) = 0.003
   Swale retardance factor:  C
   Typical grass height (in) = 6.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 33:  Grass Swale CP# 10 (DS) - GS6-A
   Total drainage area (acres)= 3.406
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 1469.03
```

```
   Total swale length (ft) = 830
   Average swale length to outlet (ft)= 415
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 5.0
   Typical longitudinal slope (ft.H/ft.V) = 0.006
   Swale retardance factor:  C
   Typical grass height (in) = 6.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 34:  Grass Swale CP# 11 (DS) - GS6-B
   Total drainage area (acres)= 11.119
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 272.65
   Total swale length (ft) = 2290
   Average swale length to outlet (ft)= 573
   Typical bottom width (ft) = 4.0
   Typical swale side slope (_H:1V) = 3.5
   Typical longitudinal slope (ft.H/ft.V) = 0.010
   Swale retardance factor:  C
   Typical grass height (in) = 6.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True
```

Control Practice 35: Grass Swale CP# 12 (DS) - GS8-B
   Total drainage area (acres)= 8.440
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 168.64
   Total swale length (ft) = 1425
   Average swale length to outlet (ft)= 713
   Typical bottom width (ft) = 4.0
   Typical swale side slope (_H:1V) = 5.5
   Typical longitudinal slope (ft.H/ft.V) = 0.010
   Swale retardance factor: C
   Typical grass height (in) = 6.0
   Swale dynamic infiltration rate (in/hr)= 0.007
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations: True

Control Practice 36: Grass Swale CP# 13 (DS) - GS 11
   Total drainage area (acres)= 0.999
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 578.58
   Total swale length (ft) = 578
   Average swale length to outlet (ft)= 289
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 6.0
   Typical longitudinal slope (ft.H/ft.V) = 0.003
   Swale retardance factor: C
   Typical grass height (in) = 8.0

```
   Swale dynamic infiltration rate (in/hr)= 0.007
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 38:  Grass Swale CP# 14 (DS) - GS23
   Total drainage area (acres)= 0.608
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 0.00
   Total swale length (ft) = 234
   Average swale length to outlet (ft)= 117
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 6.0
   Typical longitudinal slope (ft.H/ft.V) = 0.004
   Swale retardance factor:  C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 39:  Grass Swale CP# 15 (DS) - GS9-10
   Total drainage area (acres)= 1.970
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 531.47
   Total swale length (ft) = 1047
   Average swale length to outlet (ft)= 262
```

```
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 6.0
   Typical longitudinal slope (ft.H/ft.V) = 0.003
   Swale retardance factor:  C
   Typical grass height (in) = 6.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True


Control Practice 40:  Grass Swale CP# 16 (DS) - GS22A
   Total drainage area (acres)= 1.115
   Fraction of drainage area served by swales (ac) = 1.00
   Swale density (ft/ac) = 576.68
   Total swale length (ft) = 643
   Average swale length to outlet (ft)= 313
   Typical bottom width (ft) = 0.0
   Typical swale side slope (_H:1V) = 6.0
   Typical longitudinal slope (ft.H/ft.V) = 0.004
   Swale retardance factor:  C
   Typical grass height (in) = 8.0
   Swale dynamic infiltration rate (in/hr)= 0.070
   Typical swale depth (ft) for cost analysis (optional) = 0.0
   Particle size distribution file name: Not needed - calculated by program
   Use total swale length instead of swale density for infiltration calculations:  True
```