

Jones Farm
Maine DEP Stormwater Law Permit by Rule Application and
Stormwater Report

38 M.R.S.A. § 420-D

January 2, 2026

13 Lot Residential Subdivision Project
0 Lisbon Road, Brunswick, Maine
Town of Brunswick Tax Map 1 Lot 70

BY: Belanger Engineering
63 Second Avenue
Augusta, Maine 04330
207-622-1462

FOR: Bob Walton
Ray Labbe and Sons
4 Highland Road
Brunswick, Maine 04011



Ch Belanger

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RESOURCES

Stormwater Application Form

PLEASE TYPE OR PRINT IN INK

FOR DEP USE
L-_____
ATS# _____
FEES PAID _____
DATE RECEIVED _____

This application is for (Check the one that applies):		<input type="checkbox"/> New application	<input type="checkbox"/> Amendment		
1. Name of Applicant:		5. Name of Agent:			
2. Applicant's Mailing Address:		6. Agent's Mailing Address:			
3. Applicant's Phone #:		7. Agent's Phone #:			
4. Email address (REQUIRED-license will be sent via email):		8. E-mail address (REQUIRED-license will be sent via email)			
9. Location of Project: (Road, Street, Rt.#)		10. Town:			
		11. County:			
12. Type of Direct Watershed: (Check all that apply)	<input type="checkbox"/> Lake not most at risk <input type="checkbox"/> Lake most at risk <input type="checkbox"/> Lake most at risk, severely blooming <input type="checkbox"/> River, stream or brook <input type="checkbox"/> Urban impaired stream <input type="checkbox"/> Freshwater wetland <input type="checkbox"/> Coastal wetland <input type="checkbox"/> Wellhead of public water supply	13. Amount of Disturbed Area:	Total Amt.= _____ acres		
		14. Amount of Developed Area:	<input type="checkbox"/> 1 or more acres, but less than 5 acres <input type="checkbox"/> 5 acres or more Total Amt.= _____ acres		
		15. Amount of Impervious Area:	<input type="checkbox"/> less than 20,000 sq. ft. <input type="checkbox"/> 20,000 sq. ft. to 1 acre <input type="checkbox"/> 1 to 3 acres <input type="checkbox"/> 3 or more acres Total Amount of Impervious Acres =		
16. Applicable Standards: (Check all that apply)	<input type="checkbox"/> Stormwater PBR <input type="checkbox"/> Basic standards <input type="checkbox"/> General standards: BMP <input type="checkbox"/> General standards: phosphorus <input type="checkbox"/> Flooding standard <input type="checkbox"/> Urban impaired stream standards <input type="checkbox"/> Other: _____	17. Type of Stormwater Control:	<input type="checkbox"/> Vegetative (e.g. buffers) <input type="checkbox"/> Structural (e.g. underdrained filters, ponds, infiltration structures)		
18. Exceptions &/or Waivers Requested:	BMP Standards ▼ <input type="checkbox"/> Pretreatment measures <input type="checkbox"/> Discharge to ocean/major river segment <input type="checkbox"/> Linear portion of project <input type="checkbox"/> Utility corridor <input type="checkbox"/> Redevelopment		Urban impaired stream standard ▼ <input type="checkbox"/> Developed area not landscaped or impervious <input type="checkbox"/> Redevelopment		
19. Proposed Start Date and Brief Project Description:					
20. Size of Lot or Parcel:	<input type="checkbox"/> sq. ft., or	<input type="checkbox"/> acres	UTM Easting:	UTM Northing:	
21. Title, Right or Interest:	<input type="checkbox"/> own <input type="checkbox"/> lease <input type="checkbox"/> purchase option <input type="checkbox"/> written agreement				
22. Deed Reference Numbers:	Book#:	Page:	24. Map and Lot Numbers:	Map #:	Lot #:
23. DEP Staff Previously Contacted:		25. Project started prior to application?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Completed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
SIGNATURES / CERTIFICATIONS ON PAGE 2					

26. Resubmission of Application?	<input type="checkbox"/> Yes ➔ <input type="checkbox"/> No	If yes, previous application #	Previous project manager:	
27. Written Notice of Violation?	<input type="checkbox"/> Yes ➔ <input type="checkbox"/> No	If yes, name of DEP enforcement staff involved:		
28. Detailed Directions to the Project Site:				
29. Stormwater Permit by Rule Submissions ▼		30. Stormwater Application Submissions▼		
<input type="checkbox"/> This form (including signature page) <input type="checkbox"/> Fee <input type="checkbox"/> Topographic Map <input type="checkbox"/> Plan or Drawing <input type="checkbox"/> Photos of Area		<input type="checkbox"/> This form (including signature page) <input type="checkbox"/> Fee <input type="checkbox"/> Proof of title, right or interest <input type="checkbox"/> Certificate of good standing (if applicable) <input type="checkbox"/> Photos of Area <input type="checkbox"/> Copy of Public Notice	<input type="checkbox"/> Professional & Notice Certification <input type="checkbox"/> Basic standards submissions <input type="checkbox"/> General standards submissions <input type="checkbox"/> Flooding standard submissions <input type="checkbox"/> Other standard submissions <input type="checkbox"/> Compensation Fee (if required)	
31. FEES, Amount Enclosed:				
Does the agent have an interest in the project? If yes, what is the interest?: <input type="checkbox"/> Yes ➔ <input type="checkbox"/> No				

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following:

CERTIFICATIONS/ SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by

E-mailing the decision to the electronic address located on the front page of this application (see #4 for the applicant and #9 for the agent.6

Signed: _____ Title: _____ Date: _____

Notice of Intent to Comply with Maine Construction General Permit	With this Stormwater Law application form and my signature below, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.
---	---

Signed _____ Date: _____

NOTE: If a Notice of Intent is required, you must file a Notice of Termination (attached as Form G) within 20 days of completing permanent stabilization of the project site.

ADDITIONAL SIGNATURES/CERTIFICATIONS

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for stormwater approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Re/Cert/Lic No: _____

Name (print): _____

Engineer _____

Date: _____

Geologist _____

Soil Scientist _____

Land Surveyor _____

Site Evaluator _____

Active Member of the Maine Bar _____

Professional Landscape Architect _____



[Corporate Name Search](#)

Information Summary

[Subscriber activity report](#)

This record contains information from the CEC database and is accurate as of: Mon Jun 26 2023 09:58:25. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
RAY LABBE & SONS, INC.	20190622 D	BUSINESS CORPORATION	GOOD STANDING
Filing Date	Expiration Date	Jurisdiction	
02/01/2019	N/A	MAINE	
Other Names	(A=Assumed ; F=Former)		
RLS ACQUISITION, INC.	F		

Clerk/Registered Agent

AARON P. BURNS
P.O. BOX 108
PORTLAND, ME 04112

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Ray Labbe & Sons, Inc.

4 Highland Road, Brunswick, ME 04011 Tel : 207-725-7336 Fax : 207-725-0796

January 30, 2023

Christopher Belanger, P.E.
Belanger Engineering
63 Second Avenue
Augusta, ME 04330

**RE: Town and State Permitting
0 Lisbon Road
Jones Farm Development
Brunswick, Maine**

Dear Chris,

This letter will serve as authorization for Belanger Engineering to act as agent for Robert Walton, President of Ray Labbe and Sons, Inc. and Jones Farm Estates, LLC with regard to various land use permitting requirements for the Jones Farm Subdivision Project located at 0 Lisbon Road in Brunswick. This will include any submissions to the DEP, DOT, EPA, ACOE and the Town.

Very Truly Yours,


Robert J. Walton



125 foot Abutters List Report

Brunswick, ME
November 21, 2022

Subject Property:

Parcel Number: 1-70
CAMA Number: 1-70
Property Address: 0 LISBON RD

Mailing Address: JONES FARM ESTATE LLC
4 HIGHLAND RD
BRUNSWICK, ME 04011

Abutters:

Parcel Number: 1-11
CAMA Number: 1-11
Property Address: 158 LISBON RD

Mailing Address: JONES CEMETERY
LISBON RD
BRUNSWICK, ME 04011

Parcel Number: 1-23
CAMA Number: 1-23
Property Address: 71 LISBON RD

Mailing Address: FAGAN, JAMES R & AMY B JT
71 LISBON RD
BRUNSWICK, ME 04011

Parcel Number: 1-6
CAMA Number: 1-6-1
Property Address: 40 LISBON RD

Mailing Address: RAYMOND, ALISA
40 LISBON RD
BRUNSWICK, ME 04011

Parcel Number: 1-6
CAMA Number: 1-6-2
Property Address: 0 LISBON RD

Mailing Address: RBB LLC
4 HIGHLAND RD
BRUNSWICK, ME 04011

Parcel Number: 1-6
CAMA Number: 1-6-3
Property Address: 44 LISBON RD

Mailing Address: MILLER, CAMDEN & MIKAYLA
44 LISBON RD
BRUNSWICK, ME 04011

Parcel Number: 1-6
CAMA Number: 1-6-4
Property Address: 46 LISBON RD

Mailing Address: LABBE, MICHAEL & KATHRYN
46 LISBON RD
BRUNSWICK, ME 04011

Parcel Number: 1-69
CAMA Number: 1-69
Property Address: 23 MISTY WAY

Mailing Address: LABBE, PAUL
PO BOX 1067
BRUNSWICK, ME 04011

Parcel Number: 1-69A
CAMA Number: 1-69A
Property Address: 0 MISTY WAY

Mailing Address: LABBE, PETER
33 PATRIOT DR
BRUNSWICK, ME 04011

Parcel Number: 1-9
CAMA Number: 1-9
Property Address: 49 GRAHAM RD

Mailing Address: BRUNSWICK, TOWN OF
85 UNION ST
BRUNSWICK, ME 04011

Parcel Number: 53-1
CAMA Number: 53-1
Property Address: 2 MADELINE DR

Mailing Address: MERRILL, ANTONE S
2 MADELINE DR
BRUNSWICK, ME 04011



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11/21/2022

Page 1 of 2



125 foot Abutters List Report

Brunswick, ME
November 21, 2022

Parcel Number: 53-2
CAMA Number: 53-2
Property Address: 4 MADELINE DR

Mailing Address: LABBE, KELLY A
4 MADELINE DR
BRUNSWICK, ME 04011

Parcel Number: 53-3
CAMA Number: 53-3
Property Address: 6 MADELINE DR

Mailing Address: CROCKER, MICHAEL JR
6 MADELINE DR
BRUNSWICK, ME 04011

Parcel Number: 53-4
CAMA Number: 53-4
Property Address: 8 MADELINE DR

Mailing Address: GOSSELIN, DANIEL J & DIANA L JT
8 MADELINE DR
BRUNSWICK, ME 04011

Parcel Number: 53-5
CAMA Number: 53-5
Property Address: 10 MADELINE DR

Mailing Address: HAYCOCK, WALTER C & THERESA M JT
10 MADELINE DR
BRUNSWICK, ME 04011

Parcel Number: 53-53
CAMA Number: 53-53
Property Address: 71 MADELINE DR

Mailing Address: PARKER, CHRISTOPHER & ASHLEY JT
71 MADELINE DR
BRUNSWICK, ME 04011

Parcel Number: 53-6
CAMA Number: 53-6
Property Address: 12 MADELINE DR

Mailing Address: MACLEAN, IAN A
12 MADELINE DR
BRUNSWICK, ME 04011



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Stormwater Narrative
Jones Farm
0 Lisbon Road, Brunswick, Maine

Belanger Engineering is preparing a Maine Stormwater Law Permit by Rule application for the Jones Farm residential subdivision project located on Lisbon Road in Brunswick, Maine. The project parcel is approximately 32.50 acres in size and is proposed to be subdivided into 13 residential parcels. The property is located on Town of Brunswick Tax Map 1 Lot 70. Jones Farm Estate LLC owns the property.

The house lots will be accessed by a new main access road, 20' wide, Jones Farm Road which is approximately 1000', includes a hammerhead turnaround at the end of the road. The side road, Hay Stack Lane, will be 20' wide and serves 2-3 single family lots. The access roads create 0.88 acres of impervious area and 2.29 acres of developed area for this project. The roads will be private when complete.

The residential single-family house lots are not required to be treated but are included in the HydroCAD stormwater calculations. We have assumed each lot will have 0.10 acres of impervious area and 0.25 acres of developed area in the calculations. The lot development creates 1.30 acres of impervious area and 3.25 acres of developed area.

DEP Jurisdiction: The proposed project includes the development of 0.88 acres of road impervious area and the creation of 2.29 acres of road developed area. The project does not trigger the DEP Site Law for the development of 13 house lots on a parcel more than 30 acres. The project is not within an urban impaired stream or a severely blooming lake. This project triggers the Stormwater Law Permit by Rule for the creation of less than 1 acre of road impervious area. As a result, the Basic Standards only apply to this project. See Section 4A of the Chapter 500 Rules, pages 4&5. The Town of Brunswick will also require the Flooding Standard be met. The Town code requires a minimum sliding scale quality treatment. Table 4.5.4.C requires 70% impervious capture and 60% developed area capture for this project. Flooding and water quality calculations have been included in the report.

Basic Standards

1. Erosion and sedimentation control plan – See Appendix A of Chapter 500 Rules
2. Inspection and Maintenance Plan – See Appendix A and B of Chapter 500 Rules
3. Housekeeping – See Appendix C of the Chapter 500 Rules

General Standards – Town Water Quality

1. Narrative
2. Drainage Plans
3. Calculations
4. Details, designs, and specifications for Wet Ponds, Filter Ponds, and Buffers.

Flooding Standards – Town Review Standards

1. Stormwater Management System must detain, retain, or result in infiltration of stormwater for the 2, 10, 25 storms such that the peak flows do not exceed “pre-development” conditions.

Existing Conditions

Ray Labbe and Sons currently own 79.44 acres along Lisbon Road in Brunswick. The property includes an existing gravel pit and construction access. The developer wants to keep and maintain the pit areas. Approximately **32.50** acres is located adjacent to Pit Road and is proposed to be developed. Jones Farm is a previously approved subdivision that was never built and has since expired. The roads were cut post approvals but no further development moved forward at the time. The tax maps still show the old approved lot lines.

Wetlands and existing topography are shown on the pre-development and existing conditions plan. The remaining site areas are currently wooded. The watershed pre development existing conditions are listed in the chart below.

Subarea	Pre-Development Watershed Areas										
	Total Area	Total Area	Existing Impervious	Existing Impervious	Existing Lawn	Existing Lawn	Existing Pit	Existing Woods	Existing Woods	Existing Woods	
			Off Site	On Site	Off Site	On Site	PSG	B	C	D	
	S.F.	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	
1S	890665	20.45	0	0	0	0	4.12	3.94	11.49	0.90	
2S	832099	19.10	0.46	0.3	0.46	0.3	1.91	0.94	12.71	2.02	
3S	1223438	28.09	0	0.38	0	0.38	0.00	8.88	17.49	0.96	
4S	239386	5.50	0	0.38	0	0.38	3.64	0.25	0.85	0.00	
5S	654490	15.03	0.28	0.29	0.28	0.29	0.00	1.85	7.52	4.52	
Totals		88.16	0.74	1.35	0.74	1.35	9.67	15.86	50.05	8.40	

These watersheds and subcatchment drainage areas are defined in the Stormwater Model as shown on the HydroCAD diagrams. Full-size drainage plans and stormwater calculations for the pre and post developed site conditions are included with this report. Refer to the HydroCAD diagrams, calculations, report and drainage plans for modeling assumptions, subcatchments, flowpaths, drainage reaches, etc. Road and Lot areas are included in the quantity calculations. The lot development areas for this project are not required to be treated per Maine DEP stormwater law rules as it does not trigger the Maine DEP site Law.

This project roads are required to meet Basic Standards of Maine DEP Chapter 500 Stormwater Rules. A Maine DEP permit by rule is required for this project for the creation of less than 1 acre of impervious area. The Town of Brunswick requires the flooding standards be maintained so it is included with this report. The Town also requires a sliding scale water quality standard which requires capture and treatment of 70% of the site impervious area and 60% of the site developed area. The Maine DEP permit by rule does not require the flooding or General standards be met. However, the project was designed to meet the Maine DEP General Standards and Flooding standards which meets or exceeds the standards required by the Town of Brunswick.

Runoff calculations were performed for the 2-year, 10 year and 25 year storm events in accordance with Town requirements for Flooding Standards. Results of the calculations are shown in the Summary Tables submitted with this report. Complete HydroCAD reports were generated for the 2-year, 10-year, and 25-year storm events with summary descriptions of all nodes and subcatchments, etc.

The Post Development conditions evaluate the “new” changes resulting from the project development and maintains the existing pre development runoff peak flow rates at property boundaries.

Portions of the pit and property areas abut the Androscoggin River. A couple of reaches pass through the boundary and discharge to the Androscoggin River approximately 1200' downstream. All runoff from the site eventually drains to the Northeast (Reach 1R and 2R) through on site forested wetlands. Reaches 3R, 4R, and 5R are other portions of the property that are not being developed at this time. Runoff eventually reaches a no name stream and discharges into the Androscoggin River. The Androscoggin River discharges directly into the ocean. We used the S. C. S. method for computing peak runoff rates. All supporting data and calculations are submitted with this report.

Proposed Conditions

The units will be accessed by a new main access road, 20' wide, Jones Farm Road which is approximately 1110', includes a hammerhead turnaround at the end of the road. The side road, Hay Stack Lane, will be 20' wide and serves 4 single family lots. The access roads create 0.88 acres of impervious area and 2.29 acres of developed area for this project. The roads will be private when complete.

The residential single-family house lots are not required to be treated but are included in the HydroCAD stormwater calculations as required by stormwater law development. We have assumed each lot will have 0.10 acres of impervious area and 0.25 acres of developed area in the calculations. The lot development creates 1.30 acres of impervious area and 3.25 acres of developed area.

This report, calculations and supporting plans supporting the development expansion is attached.

Project Location: The project is located off Lisbon Road in Brunswick, Maine.

Surface water on or abutting the site: Stormwater from the site flows through on site wetlands and discharges into the Androscoggin River through a stream.

Alterations to Land Cover: The drainage study is conducted on the watersheds 88 acres draining through the property. The existing ground cover is 93% woods, meadow, 4% impervious, and 3% lawn. The proposed ground cover will result in approximately: 8% impervious, 12% lawn, and 80% meadow and woods. Single family residential houses will be developed.

Downstream ponds and Lakes: Stormwater from the site is predominately stored on site within the wetland areas, pond storage areas, and natural forest buffer and conservation areas. All runoff from the site eventually drains to the Androscoggin River. The Androscoggin River discharges directly into the ocean. Enclosed is a U.S.G.S. Map showing the site location.

Historic Flooding: No portion of the area being developed is located within the 100 year flood zone. A copy of the FEMA map with the site location is included.

Alterations to natural drainage ways: Natural drainage ways will not be altered as a result of the proposed development. Culverts will be installed to maintain current drainage flow patterns.

Post-Development Watershed Areas							
Subarea	Area	Total sf	Exempt	Exempt	Exempt	Exempt	Existing
			Off Site	Off Site	On Site	On Site	Woods/Field
			Existing	Existing	Existing	Existing	Undeveloped
			Total Area	Impervious to remain	Lawn to remain	Impervious to remain	Lawn to remain
			acres	acres	acres	acres	acres
1S	828696	19.02	0	0	0	0	17.97
2S	492456	11.31	0.17	0.17	0	0	9.79
3S	1223437	28.09	0	0	0.38	0.38	27.33
4S	239423	5.50	0	0	0.38	0.38	4.74
5S	654490	15.03	0.28	0.28	0.29	0.29	13.89
6S	247820	5.69	0.29	0.29	0.3	0.3	3.84
7S	35553	0.82	0	0	0	0	0.14
8S	6869	0.16	0	0		0	0.00
9S	22631	0.52	0	0		0	0.32
10	47780	1.10	0	0		0	0.40
11	14378	0.33	0	0		0	0.00
12	26596	0.61	0	0		0	0.04
50							
51							
52							
53							
54							
Totals	3840129	88.16	0.74	0.74	1.35	1.35	78.44
		✓					

General Standard Calculations:

Several BMP's are being utilized to treat road impervious and developed areas as far as practical. The general standard calculations are attached which exceed the Town standards. The subdivision roads classify as a "linear portion of the project" which requires it meet the 75% and 50% capture general standard. Its is noted the Town standard is 70% and 60% capture standards.

A filter pond provides treatment for the road project areas shown below.

The treatment summary and general standard calculation is shown below:

In 2003, a class A high intensity soil survey was completed for the project by Devine Tarbell & Associates, INC. This plan can be used for buffer and filter pond verification. The high intensity soils map is enclosed for review. Portions of the map are included for information. In addition, the test pit logs are included in the report. This information should provide sufficient buffer and pond soil conditions.

Filter Pond – Pond 10P

BMP 7.1 – Grassed Underdrained Soil Filter

One Filter Pond (Pond 10P) will be developed to support the project. The pond has been sized to store 1" X the watershed impervious area and 0.4" X the watershed disturbed area. An outlet control structure and spillway has been implemented in the pond to provide emergency overflow as required. The outlet control structure will also be the gravel filter drain outlet. Runoff will discharge to the adjacent wetland and stream.

Jones Farm					
Grassed Underdrained Soil Filter Pond Design Criteria - Hydrocad Pond 10P					
	acres	s.f.			
Impervious Area Draining to Pond	0.68	29620.8			
Lawn Area draining to Pond	1.11	48352			
Total Area	1.79	Acres < 2.5 ac.		✓	
Minimum Treatment Volume	1" X Impervious Area + 0.4" X Lawn			4054	c.f.
Pond Storage Volume Provided				5257	✓
Minimum Pond Surface Area	5% Impervious Area + 2% Lawn			2448	s.f.
Pond Surface Area Provided	< 3000 s.f.			3000	✓
Pre-Treatment	Sanded Area (acres)		0.54	acres	
	10 storms per year				
	500 lbs per acre-storm				
	90 lbs/c.f.				
	Annual Sediment Load		30.00	c.f.	

Zero Treatment

Portions of the road that cannot be practically captured and treated will drain toward road ditches and wetlands as required. The first 250' of Jones Farm Road will drain toward Lisbon Road and will discharge into the existing road ditch. Approximately 0.20 acres of impervious area and 0.50 acres of developed area cannot be practically captured and treated.

General Standard Calculation – Road Linear Development

As stated, the project creates 0.88 acres of road impervious area and 2.29 acres of road developed area. The proposed pond provides road treatment for 0.68 acres of impervious area and 1.79 acres of developed area. As a result, the project captures 77% of the road impervious area and 78% of the road developed area which exceeds the 75% Impervious and 50% "linear portion of a project" DEP standards. The project also meets the Town of Brunswick Sliding Scale of 70% and 60% capture standards. The calculation is shown below.

Post-Development Watershed Areas Road Development						
Subarea	Linear 75%		Linear 50%			Treatment
	Road	Road	Road	Road	Road	
	New	New	New	New	New	
	Impervious	Impervious	Lawn	Developed	Developed	
Area	Area		Area	Area		BMP
	Treated			Treated		
acres	acres	acres	acres	acres	acres	
1S	0.01	0	0.04	0.05	0	Zero Treatment
2S	0.12	0	0.16	0.28	0	Zero Treatment
3S	0	0	0	0	0	No Changes
4S	0	0	0	0	0	No Changes
5S	0	0	0	0	0	No Changes
6S	0.07	0	0.1	0.17	0	Zero Treatment
7S	0.08	0.08	0.1	0.18	0.18	Filter Pond 10P
8S	0.09	0.09	0.07	0.16	0.16	Filter Pond 10P
9S	0.09	0.09	0.11	0.2	0.2	Filter Pond 10P
10	0.19	0.19	0.26	0.45	0.45	Filter Pond 10P
11	0.1	0.1	0.13	0.23	0.23	Filter Pond 10P
12	0.13	0.13	0.44	0.57	0.57	Filter Pond 10P
Totals	0.88	0.68	1.41	2.29	1.79	
	>75%	77%	✓	>50%	78%	✓

Flooding Standard

Modeling assumptions: The flooding standard is required with this development. The Town of Brunswick requires the flooding standard be met. Maine DEP does not require the flooding standard be met for this project. To meet the Town Ordinance Standards, we have modeled the watershed areas to demonstrate that the ponds, reaches, and outlets have the required storage volume and capacity to pass the 25 year storm event without flooding the pond embankments. The “HydroCad” computer program was used to determine the peak storm water runoff for the pre- and post-development conditions. HydroCad is a storm water modeling system, which utilizes the TR-20 method developed by the Soil Conservation Service (SCS).

The design assumptions used for this project are:

Design storm: 24 hour, Type III rainfall distribution.

Rainfall: 24 hour precipitation values from U.S. Weather Bureau Technical Release No. 40:

- 2 year storm = 3.1 inches
- 10 year storm = 4.6 inches
- 25 year storm = 5.8 inches
- 50 year storm = 6.9 inches
- 100 year storm = 8.1 inches

Site specific parameters for the project are listed below:

Soils: Soils information to determine the hydrologic soil group for the site, are derived from the Soil Survey of Cumberland County by the United States Department of Agriculture Soil Conservation Service. A High Intensity Soil Survey was completed in 2008 to verify soil conditions on site. The soils and hydrologic group are listed below:

<u>Soil Classification</u>	<u>Hydrologic Group</u>
----------------------------	-------------------------

Allagash - AlA	"B"
Lamoine (LaA, LaB, LaC, LaD	"C/D"
Madawaska (MaA, MaB, MaC	"B"
Nicholville (NiA, NiB, NiC, NiD	"B"
Pits Dump (PDA)	"x"
Pits Sand and Gravel (PSG)	"x"
Roundabout (RoA, RoB)	"B/D"
Scantic (ScA, ScB)	"D"
Skerry (SKB)	"C/D"
Swanton (SwA, SwB)	"B/D"
Udorthents (UdA)	"x"

Ground Cover:

Pre-& Post Development: The watershed ground cover is modeled as woods, grass, brush/weed, erosion control mix, and impervious.

<u>Cover Description</u>	<u>Curve Number:</u>
Impervious	98
Woods	30, 70, 77
Lawn	39, 74, 77
Erosion Control Mix (ECM)	30

The Hydrocad models pre and post development conditions at the property boundary. See Reaches 1R, 2R, 3R, 4R, and 5R are points where on site wetlands cross the property line. All of the proposed impacts from the project site drains to these outlets. The hydrocad pre and post summaries are provided below.

PRE- & POST-DEVELOPMENT HYDROLOGIC RESULTS

The results indicate the project maintains the "pre-development" peak flow conditions for the project.

The reach routing information is described below:

FLOODING STANDARD RESULTS Reach 1R			
Storm	PRE	POST	DIFFERENCE
	C.F.S.	C.F.S.	%
2 YEAR	1.85	1.81	-2%
10 YEAR	8.17	7.83	-4%
25 YEAR	15.2	14.47	-5%
50 YEAR	22.58	24.12	6%
100 YEAR	31.33	33.12	5%

Reach 1R is a wetland finger draining along a drainage swale / ravine area about 20' deep. The results shown above demonstrate the pre development peak flow is being met for the 2, 10, and 25 year storms as required.

FLOODING STANDARD RESULTS Reach 2R			
Storm	PRE	POST	DIFFERENCE
	C.F.S.	C.F.S.	%
2 YEAR	5.24	3.16	-66%
10 YEAR	15.39	8.24	-87%
25 YEAR	25.1	13.09	-92%
50 YEAR	34.71	17.89	-94%
100 YEAR	45.73	23.38	-96%

Reach 2R models the existing stream located adjacent to the development. The results shown above demonstrate the pre development peak flow is being met for all storms modeled.

FLOODING STANDARD RESULTS Reach 3R			
Storm	PRE	POST	DIFFERENCE
	C.F.S.	C.F.S.	%
2 YEAR	6.05	6.05	0%
10 YEAR	17.47	17.47	0%
25 YEAR	28.55	28.55	0%
50 YEAR	39.56	39.56	0%
100 YEAR	52.2	52.2	0%

The watershed associated with Reach 3R is not being developed at this time. No changes occurred in this watershed.

FLOODING STANDARD RESULTS Reach 4R			
Storm	PRE	POST	DIFFERENCE
	C.F.S.	C.F.S.	%
2 YEAR	0.02	0.02	0%
10 YEAR	0.32	0.32	0%
25 YEAR	0.98	0.98	0%
50 YEAR	1.88	1.88	0%
100 YEAR	3.11	3.11	0%

Reach 4R is the point where the flow crosses the property line. The hydrocad calculations confirm the pre development flows are being met at this location as shown above.

FLOODING STANDARD RESULTS Reach 5R			
Storm	PRE C.F.S.	POST C.F.S.	DIFFERENCE %
2 YEAR	3.94	3.94	0%
10 YEAR	9.56	9.56	0%
25 YEAR	14.73	14.73	0%
50 YEAR	19.77	19.77	0%
100 YEAR	25.46	25.46	0%

The watershed associated with Reach 5R is not being developed at this time. No changes occurred in this watershed.

CONCLUSIONS:

The above analysis points are located where the project crosses the property line (Reaches 1R, 2R, 3R, 4R, and 5R). At this point we compared pre and post development peak flow rates. The results, shown above, indicate the proposed expansion keeps peak flows below pre-development levels as required. Reach 1R is located in a large ravine and has the capacity to handle pre development flows without causing flooding of downstream properties. Proposed peak flows have been reduced by constructing culverts along the new road areas and sending the proposed paved areas to the filter pond for treatment and storage. Other non-treatment areas will drain to wooded buffer open space areas established adjacent to the road and lots.

As the results indicate, the post development peak flows stay below the pre-development peak flow for the 2, 10, and 25 year storms as required. The proposed culverts and structures have the capacity to control flow from the 25 year storm which exceeds the Flooding Standard requirement. As a result, the project does not significantly impact downstream structures or properties. Further this property abuts the Androscoggin River. Considering the close proximity to the Androscoggin River, additional stormwater quantity measures should not be necessary for this development. We submit that the Flooding Standard has been met or exceeded with this development.

The proposed filter pond will treat stormwater prior to discharge to a wetland area or before it leaves the site as required by Maine DEP. The Jones farm project is a 13 lot residential development. The treatment devices treat the road as required by the stormwater law development. In this case the roads would qualify as a linear portion of the project. The road is not required to meet the 75% impervious area capture and 50% developed area capture standard. The project captures and treats 77% of the road impervious area and 78% of the road new developed area which exceeds the 75%/50% capture standards required by the Maine DEP.

The Basic Standards will be met with the proposed erosion control plans and stabilization details provided on the construction plan set.

We submit that the project meets the Basic and General standards as outlined in the Maine DEP Chapter 500 Stormwater Rules. The Flooding standard is also met per the Town of Brunswick stormwater standards.

We submit that the General Standards has been met or exceeded with the development as required to meet the minimum Town Standards.

Jones Farm Property Maintenance:

PART 1: RESPONSIBILITY FOR MAINTENANCE

Jones Farm HOA or Jones Farm Estate LLC will be responsible for maintenance of the stormwater system.

PART 2: INSPECTIONS – During Construction and Post Construction

- Detention Facilities: Wet Ponds, Filter Ponds, etc.
 - Embankment inspection and maintenance
 - Spillway maintenance
 - Outlet Structure sump cleaning and maintenance
 - Sediment removal and disposal
- Detention Facilities: Stoned Bermed Level Spreaders at Buffer Outlets
 - Debris removal from stone storage area (leaves, branches, trash, etc.)
 - Sediment removal and disposal
- Ditches, Swales, or other open stormwater channels
 - Embankment inspection and maintenance
 - Channel inspection
 - Sediment removal and disposal
- Culverts, catch basins, stormwater control structures
 - Embankment inspection and maintenance
 - Inlet and Outlet inspection
 - Debris removal and disposal

The owners representative will inspect the buffers, swales, channels, stormwater structures to determine if the soil blockage or impaired capacity to pass flow exists. Inspections will be performed on a monthly basis from March to November, and quarterly during the remainder of the year. A record of inspections and maintenance or corrective measures shall be kept by the owner / maintenance personnel (see part 4).

PART 3: MAINTENANCE AND CLEANING

The owner representative will regularly inspect for sediment accumulation, obstructions, debris, and other potential causes for operational difficulty in the conveyance and detention system as described in Part 2. Immediate action shall be taken to remedy detrimental obstructions. This may include replacing the filter pond and roof driplines filter beds as necessary to allow infiltration and treatment to occur.

Cleaning out of catch basins, culvert cleaning, and other means necessary to ensure the stormwater system is maintained. Some additional measures (but not limited to) are shown below:

- Under drained filter Maintenance:
 - Soil Filter Inspection
 - Soil Filter replacement
 - Outlet Structure sump cleaning and maintenance
 - Sediment removal and disposal
 - Mowing
 - Harvesting and Weeding

The owner will regularly inspect the soil filter after every major storm event in the first few months to ensure proper function. There after the filter should be inspected bi-annually to ensure that it is draining within 24 hours. The top several inches of the filter shall be replaced with fresh material when water ponds on the surface of the bed for more than 72 hours. Sediment shall be removed from the filter bed annually. The bed shall be hand raked and re-seeded as necessary. The removed sediment shall be hauled off site and disposed of in a stabilized area. Mowing of the filter area shall be limited to 2 times per year to maintain grass heights to less than 12". Weeding and pruning of growth within the filter zone will be completed as necessary.

- Detention Facilities: Stoned Bermed Level Spreaders at Buffer Outlets
A mandatory scheduled maintenance will be performed every four weeks for a period of one hundred and twenty (120) days and will begin after satisfactory completion and acceptance of landscape construction. Ongoing maintenance will be required as necessary.
- Paved Roadway Areas:
All sand, salt, etc. accumulated when sweeping the road areas, shall be trucked off-site for disposal. The road shall be swept annually in the spring.
- Catch Basins, Culverts, Pipe inlets/outlets, Pond outlets, and swales:
Culverts shall be cleaned of sediment and debris as required when flow is blocked or impaired. The roads shall be swept annually in the spring to minimize sediment build up in road ditches. Check culvert and pipe outlets for erosion and make repairs as required. Re-seed or armor with riprap as conditions require.

PART 4: RECORD KEEPING

The owner will maintain inspection records, with recordings of condition of basins, and pipes and annotation of substantial precipitation events or mitigating circumstances in the intervening time for trending to develop the anticipated preventive maintenance schedule.

PART 5: MAINTENANCE CONTRACT

Should proprietary devices be utilized, a maintenance contract will be established with the manufacturer for regular maintenance and cleaning of the device.

PART 6: RE-CERTIFICATION

The owner shall submit a certification to Maine DEP within three months of the expiration of each five year interval from the date of issuance of the permit. The owner shall submit the maintenance log which identifies inspections completed, erosion problems found, when corrective action was taken, and who completed the work. The certification will include a statement indicating that the stormwater system is working and is being maintained in working condition in accordance with the permit requirements.

Maintenance Log Sheet

Jones Farm Residential Subdivision

Maine DEP Chapter 500 Appendix C. Housekeeping – Updated 2026

These performance standards apply to all projects.

1. Spill prevention. Controls must be used to prevent pollutants from construction and waste materials stored on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop, and implement as necessary, appropriate spill prevention, containment, and response planning measures.

NOTE: Any spill or release of toxic or hazardous substances must be reported to the Department. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the Department's website at <http://www.maine.gov/dep/spills/emergspillresp/>

2. Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

See Appendix D for license by rule standards for infiltration of stormwater.

NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1).

3. Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

NOTE: Dewatering a stream without a permit from the Department may violate state water quality standards and the Natural Resources Protection Act.

4. Debris and other materials. Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

NOTE: To prevent these materials from becoming a source of pollutants, construction and post-construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

5. Excavation de-watering. Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site.

Equivalent measures may be taken if approved by the Department.

NOTE: Dewatering controls are discussed in the "Maine Erosion and Sediment Control BMPs, Maine Department of Environmental Protection."

6. Authorized Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

- (a) Discharges from firefighting activity;
- (b) Fire hydrant flushings;
- (c) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
- (d) Dust control runoff in accordance with permit conditions and Appendix (C)(3);
- (e) Routine external building washdown, not including surface paint removal, that does not involve detergents;
- (f) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
- (g) Uncontaminated air conditioning or compressor condensate;
- (h) Uncontaminated groundwater or spring water;
- (i) Foundation or footer drain-water where flows are not contaminated;
- (j) Uncontaminated excavation dewatering (see requirements in Appendix C(5));
- (k) Potable water sources including waterline flushings; and
- (l) Landscape irrigation.

7. Unauthorized non-stormwater discharges. The Department's approval under this Chapter does not authorize a discharge that is mixed with a source of non_stormwater, other than those discharges in compliance with Appendix C (6). Specifically, the Department's approval does not authorize discharges of the following:

- (a) Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
- (b) Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
- (c) Soaps, solvents, or detergents used in vehicle and equipment washing; and
- (d) Toxic or hazardous substances from a spill or other release.

(8) Additional requirements. Additional requirements may be applied on a site-specific basis.

Jones Farm Residential Subdivision, Lisbon Road, Brunswick, Maine
Post Construction Inspection form for Grassed Underdrained Filter Pond

Pond Name / Number or Description: Pond 10P

General Information

Site Name: Jones Farm Subdivision

Date:

Owner: Jones Farm Estates LLC

Inspected By:

Retained 3PI:

Last Rain Date:

Amount:

Reason for Inspection

Rain Event	Monthly	Quarterly	Bi-Annual
------------	---------	-----------	-----------

Basin Existing Condition and Basin Description

Photos

Inspection Details

Yes / No

Comments:

Is the pond free from trash, debris, or waste?

Is the pond banks stable with vegetation established?

Any erosion found on the pond banks?

Have repaired been made? List Date and By whom.

** Has the pond been mowed?

Does the pond drain within 24-48 hours?

*** Is sediment built up within the pond bottom?

Is the filter working and functioning as intended?

* Does the filter require replacement?

Filter media replacement note date and who completed work

Are the outlet structure inlets free from debris and working?

Has the outlet structure been cleaned and maintained? When?

Is the emergency spillway stable, working, and free of debris?

Is the pond outlet stable and functioning?

Level spreader functioning properly or filled with sediment?

Is erosion occurring downslope of the pond outlet?

Is the pond functioning as intended?

Additional Comments:

* The top several inches of the filter can be replaced with fresh material if water is ponding for more than 72 hours, or the basin can be rototilled, seeded and mulched. Once the filter is mature, adding new material (a 1 inch to 2 inch cover of mature compost) can compensate for subsidence

** If mowing is desired, only hand-held string trimmers or push-mowers are allowed on the filter (no tractor) and the grass bed should be mowed no more than 2 times per growing season to maintain grass heights of no less than 6 inches.

*** Sediment and plant debris should be removed from the pre-treatment structure at least annually

Fertilization of the underdrained filter should be avoided unless absolutely necessary to establish vegetation

Harvesting, Weeding, and pruning of excessive growth should be done occasionally.

Weeding to control unwanted or invasive plants may also be necessary.

QUITCLAIM DEED WITH COVENANT

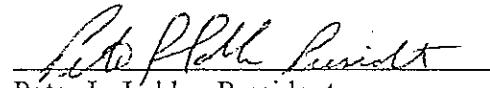
KNOW ALL PERSONS BY THESE PRESENTS, that **RAY LABBE & SONS, INC.**, a Maine corporation with a principal place of business in Brunswick, Maine ("Grantor"), for consideration paid, does hereby grant to **JONES FARM, LLC**, a Maine limited liability company with a mailing address of 4 Highland Road, Brunswick, Maine 04011 ("Grantee"), with Quitclaim Covenant, the real property in the Town of Brunswick, County of Cumberland, and State of Maine more particularly described on the attached EXHIBIT A.

IN WITNESS WHEREOF, the said Ray Labbe & Sons, Inc. has caused this instrument to be signed by Peter L. Labbe, its President, thereunto duly authorized, this 28th day of December, 2006.

WITNESS:



RAY LABBE & SONS, INC.



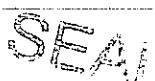
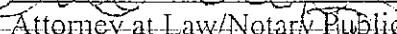
Peter L. Labbe, President

STATE OF MAINE
CUMBERLAND, ss.

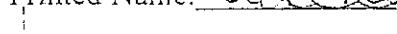
December 28, 2006

Then personally appeared the above named Peter L. Labbe, President of Ray Labbe & Sons, Inc., and acknowledged the foregoing instrument to be his free act and deed and the free act and deed of said corporation.

Before me,

Attorney at Law/Notary Public

Printed Name: 

JUDE A. CLUFF-GRAHAM
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES OCTOBER 27, 2013

EXHIBIT A

Lisbon Road, Brunswick

A certain parcel of land, with any improvements thereon, on the easterly side of Lisbon Road in the Town of Brunswick, County of Cumberland, and State of Maine (the "Premises"), said Premises being more particularly described as follows:

BEGINNING on the assumed right-of-way line of said Lisbon Road at the most southerly corner of the Jones Cemetery as described in a deed recorded at the Cumberland County Registry of Deeds in Book 111, Page 332;

THENCE N 57° 44' 43" E along said Cemetery a distance of 214.50 feet to the most easterly corner of said parcel, and the most southerly corner of a parcel extending said Cemetery described in a deed recorded at said Registry in Book 286, Page 445;

THENCE N 56° 37' 03" E along said Cemetery extension a distance of 184.14 feet to the most easterly corner of said extension;

THENCE N 37° 28' 50" W along the end of said Cemetery extension a distance of 71.87 feet to the most northerly corner thereof at remaining land of Ray Labbe & Sons, Inc.;

THENCE N 58° 18' 01" E along said remaining land of Ray Labbe & Sons, Inc. a distance of 625.17 feet to the southwesterly line of land now or formerly of Town of Brunswick;

THENCE S 72° 40' 46" E along said Town land a distance of 1467.19 feet to a survey pin set at other remaining land of Ray Labbe & Sons, Inc.;

THENCE S 13° 26' 28" W along said remaining land of Ray Labbe & Sons, Inc. a distance of 1239.48 feet to a point;

THENCE S 55° 53' 16" W along said remaining land of Ray Labbe & Sons, Inc. a distance of 749.38 feet to a point;

THENCE N 38° 28' 40" W along said remaining land of Ray Labbe & Sons, Inc. a distance of 18.10 feet to the northeasterly prolongation of the northwesterly line of land now or formerly of the Spruce Pond Homeowners Association;

THENCE S 67° 04' 13" W along said remaining land of Ray Labbe & Sons, Inc. a distance of 6.22 feet to the most northerly corner of said land of the Spruce Pond Homeowners Association;

THENCE S 67° 04' 13" W along said land of the Spruce Pond Homeowners Association a distance of 1065.51 feet to said line of said Lisbon Road;

THENCE N 03° 50' 35" E along said road line a distance of 202.43 feet to an angle point;

THENCE N 02° 11' 36" E along said road line a distance of 443.83 feet to an angle point;

THENCE N 02° 15' 10" W along said road line a distance of 207.72 feet to an angle point;

THENCE N 11° 44' 58" W along said road line a distance of 187.41 feet to an angle point;

THENCE N 14° 36' 19" W along said road line a distance of 181.71 feet to an angle point;

THENCE N 21° 23' 31" W along said road line a distance of 700.56 feet to the POINT OF BEGINNING.

Containing 79.43 acres, more or less. All survey pins set are 5/8" rebar with an aluminum cap bearing the name Martinson and PLS 2137.

Being a portion of the premises conveyed from Lewiston Crushed Stone Co., Inc. to the Grantor herein by Warranty Deed dated July 16, 1984, recorded at the Cumberland County Registry of Deeds in Book 9171, Page 148.

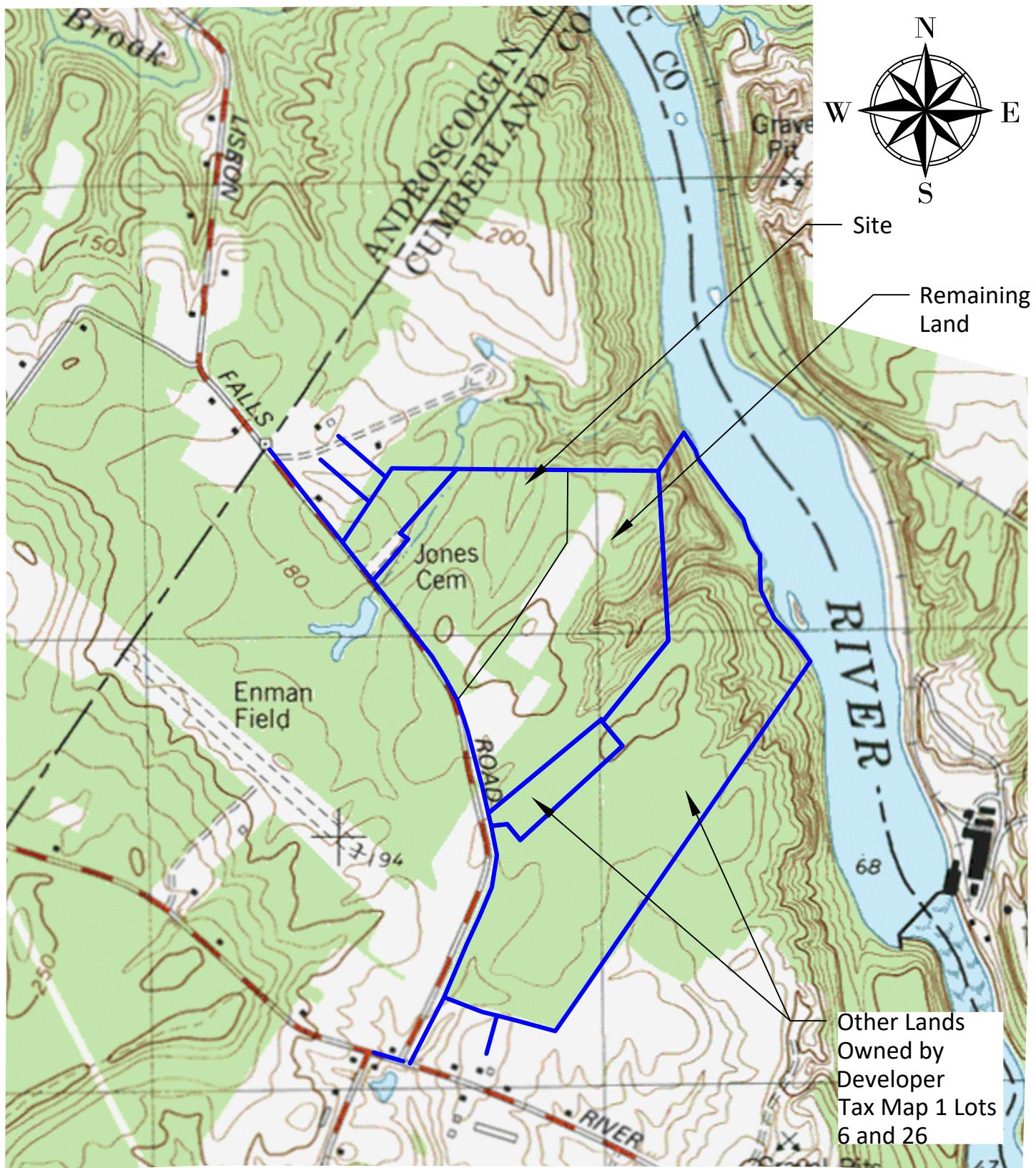
RESERVING to Grantor a nonexclusive easement to use any roadway constructed on the Premises for access to Grantor's remaining land located southerly and easterly of the Premises (the "Grantor's Remaining Property"), with any construction by Grantee of any such roadway to include a curb cut at a location suitable for such access to Grantor's Remaining Property, provided that Grantor shall be responsible for obtaining all necessary permits and approvals required for such curb cut, and provided further that this easement shall only be over and across such roadway as may exist from time to time, and this easement shall not be construed to prevent Grantee from altering and/or relocating any such roadway. Said nonexclusive easement to include the right of Grantor to construct and maintain its own roadway from said curb cut to Grantor's Remaining Property. If Grantor shall desire to use the Premises for access to Grantor's Remaining Property at any time before Grantee shall construct a roadway on the Premises, then Grantor shall have the right to construct and maintain a private roadway on the Premises (at the sole cost and expense of Grantor), subject to the prior written approval of Grantee, which approval shall not be unreasonably withheld, conditioned, or delayed. Said right of Grantor shall include the right to grade, excavate and fill a 50-foot wide strip on the Premises, and the right to construct, maintain, repair, and replace a roadway, curbing, sidewalks and other paved surfaces within such 50-foot wide strip; provided, however, that any construction or maintenance by

Grantor on the Premises shall be at the sole risk and expense of Grantor and shall be in compliance with all laws, ordinances and regulations pertaining thereto. Grantee shall have the right to use any such private roadway so constructed by Grantor, provided that Grantee reimburses Grantor for fifty percent (50%) of the costs incurred by Grantor in constructing that portion of such private roadway to be used by Grantee. The aforementioned reimbursement obligation of Grantee shall automatically terminate at such time as any roadway so constructed by Grantor is established as a public way. Nothing contained herein shall be deemed a gift or dedication of any portion of the Premises to the general public or for the general public or for any public purpose whatsoever.

ALSO RESERVING to Grantor the right to install and maintain on the Premises utility services for Grantor's Remaining Property, including facilities necessary for the transmission of electricity, gas, telephone communications, cable television, sewerage, water or similar services which are currently or may in the future become available; provided, however, that the location of any such utility services shall be subject to the prior written approval of Grantee, which approval shall not be unreasonably withheld, conditioned, or delayed.

P:\acalcagni\Labbe\deed3.doc

Received
Recorded Register of Deeds
Jan 05, 2007 02:46:27P
Cumberland County
Pamela E. Lovles



BELANGER
ENGINEERING
CONSULTING ENGINEERS

Prepared For:
Jones Farm Subdivision
0 Lisbon Road
Brunswick, Maine

Title:
USGS Map Overlay
Brunswick 7.5' Quad.

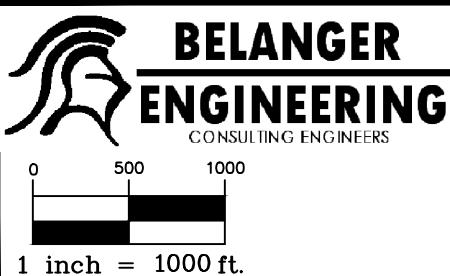
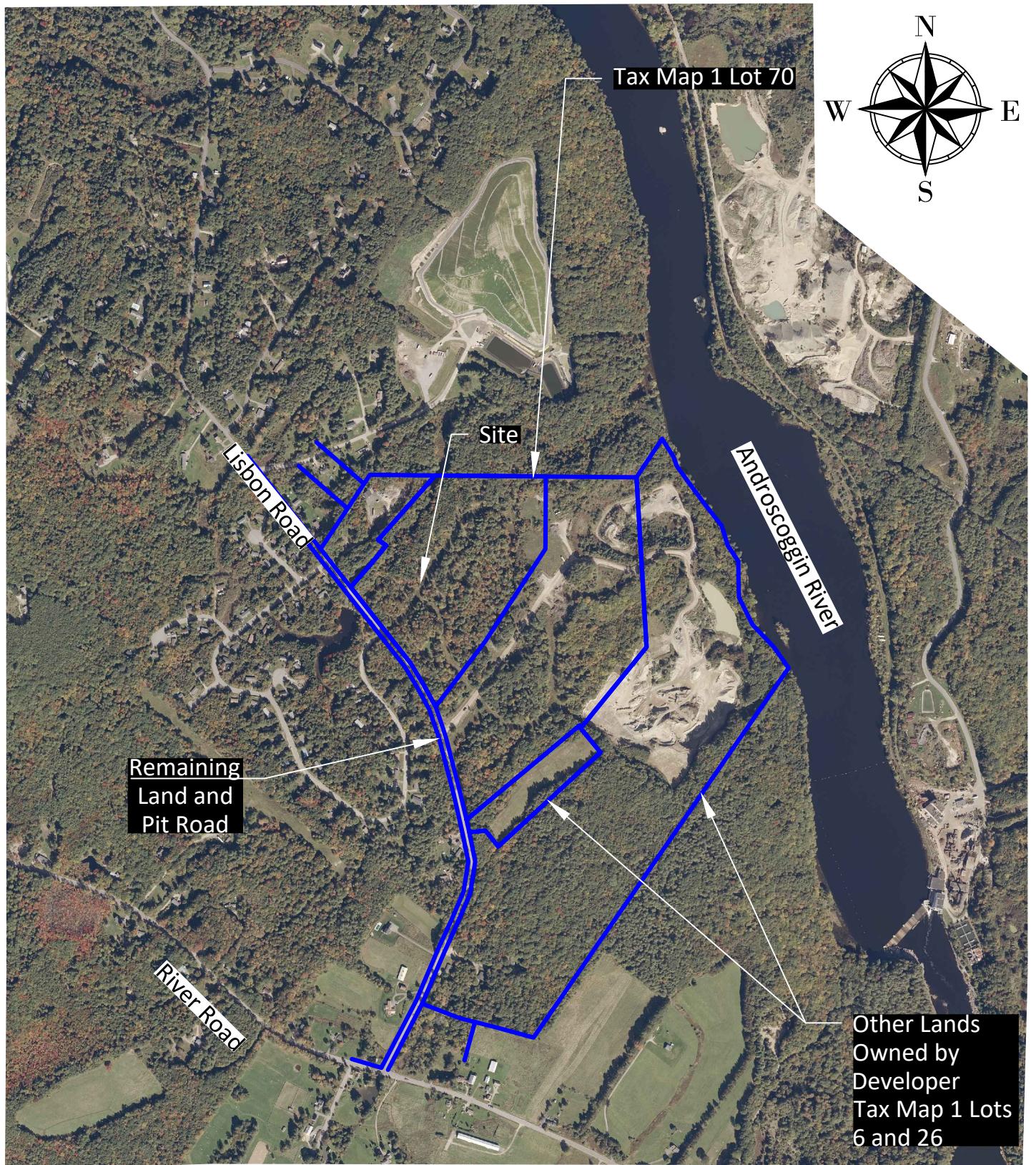
0 500 1000
1 inch = 1000 ft.

Scale: 1" = 1000'

Date: 1-2-2026

Project #: 162

Figure #: 1



Prepared For:
Jones Farm Subdivision
0 Lisbon Road
Brunswick, Maine

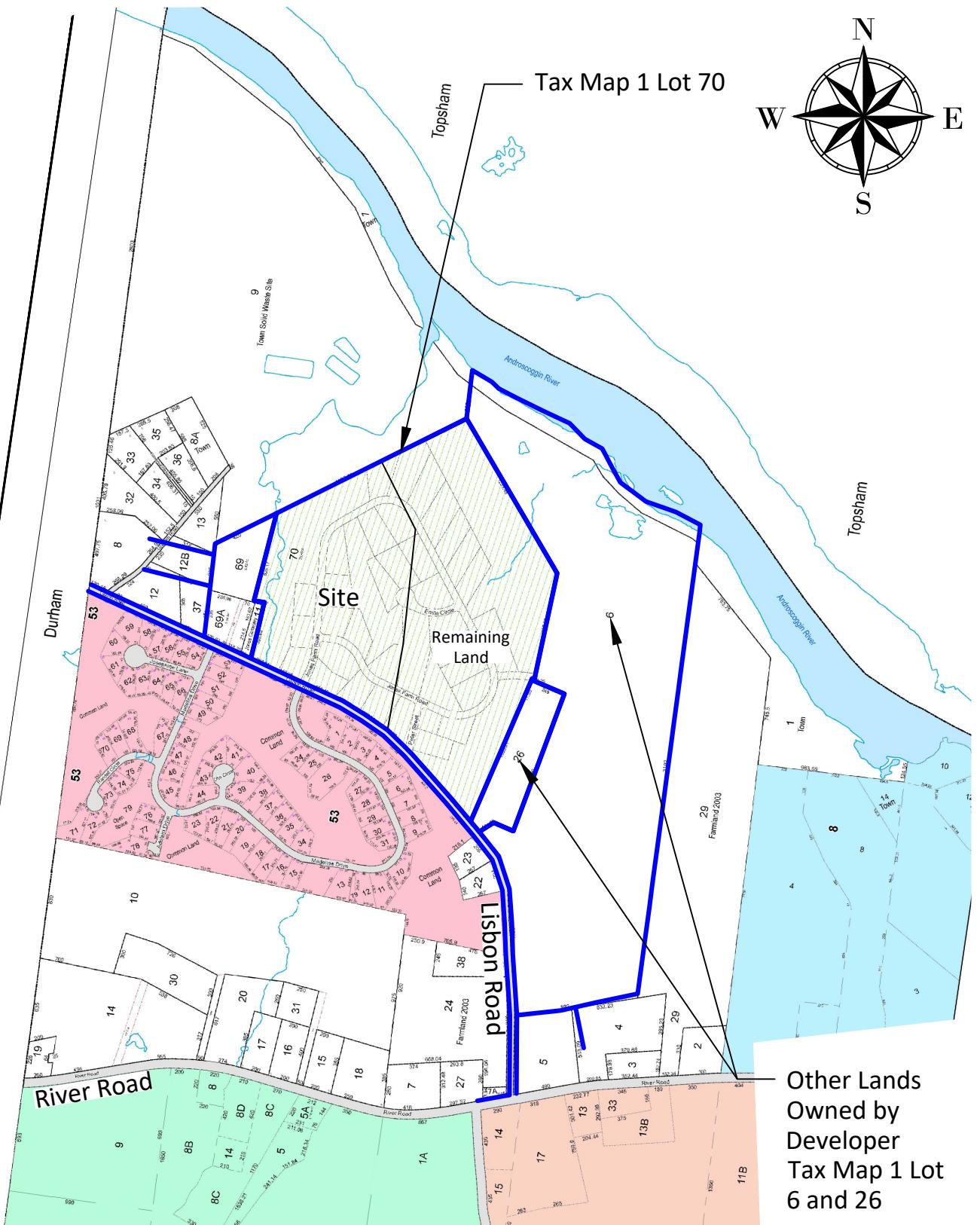
Scale: 1" = 1000'

Date: 1-2-2026

Project #: 162

Title:
Aerial Map Overlay

Figure #:
2



BELANGER
ENGINEERING
CONSULTING ENGINEERS

Prepared For:
Jones Farm Subdivision
0 Lisbon Road
Brunswick, Maine

Title:
Brunswick Tax Map 1 Overlay
Locus: Tax Map 1 Lot 70

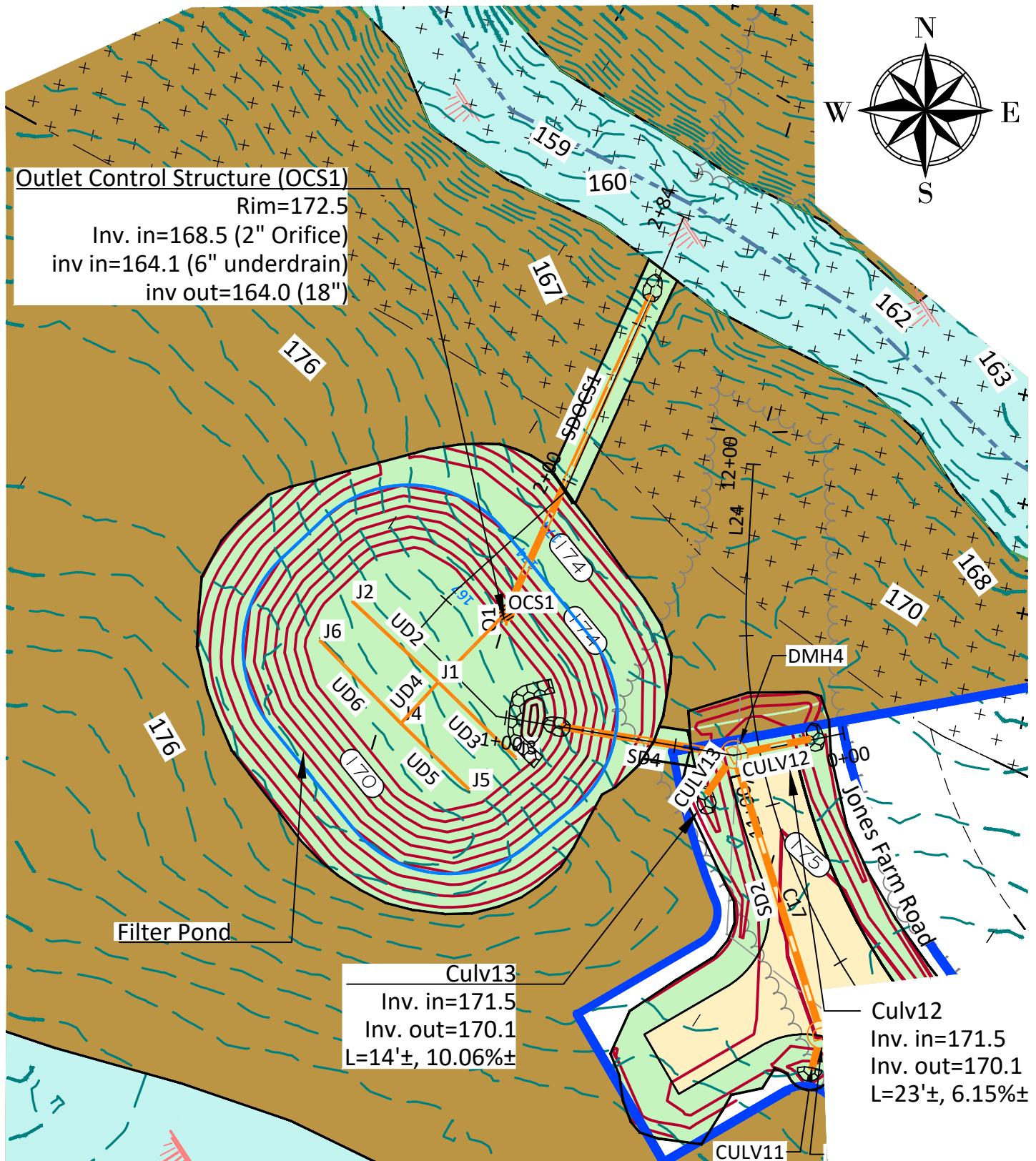
0 500 1000
1 inch = 1000 ft.

Scale: 1" = 1000'

Date: 1-2-2026

Project #: 162

Figure #: 3



BELANGER
ENGINEERING
 CONSULTING ENGINEERS

Prepared For:
 Jones Farm Subdivision
 0 Lisbon Road
 Brunswick, Maine

Title:
 Stormwater Filter Pond 10P

0 20 40
 1 inch = 40 ft.

Scale: 1"= 40'

Date: 1-2-2026

Project #: 162

Figure #: 5

Soils: Soils information to determine the hydrologic soil group for the site, are derived from the Soil Survey of Cumberland County by the United States Department of Agriculture Soil Conservation Service. A High Intensity Soil Survey was completed in 2003 to verify soil conditions on site. The soils and hydrologic group are listed below.

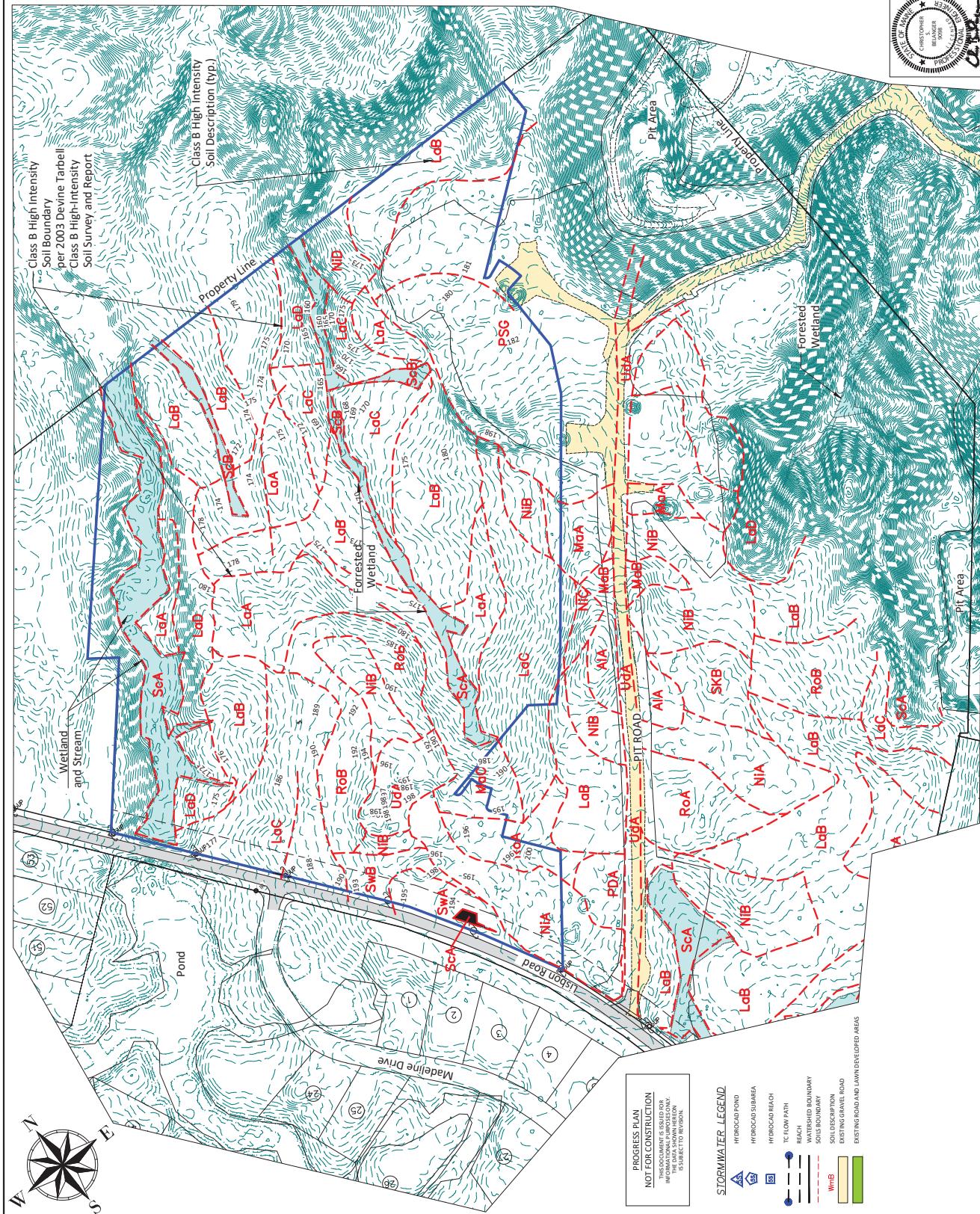
Endocrinologic Group

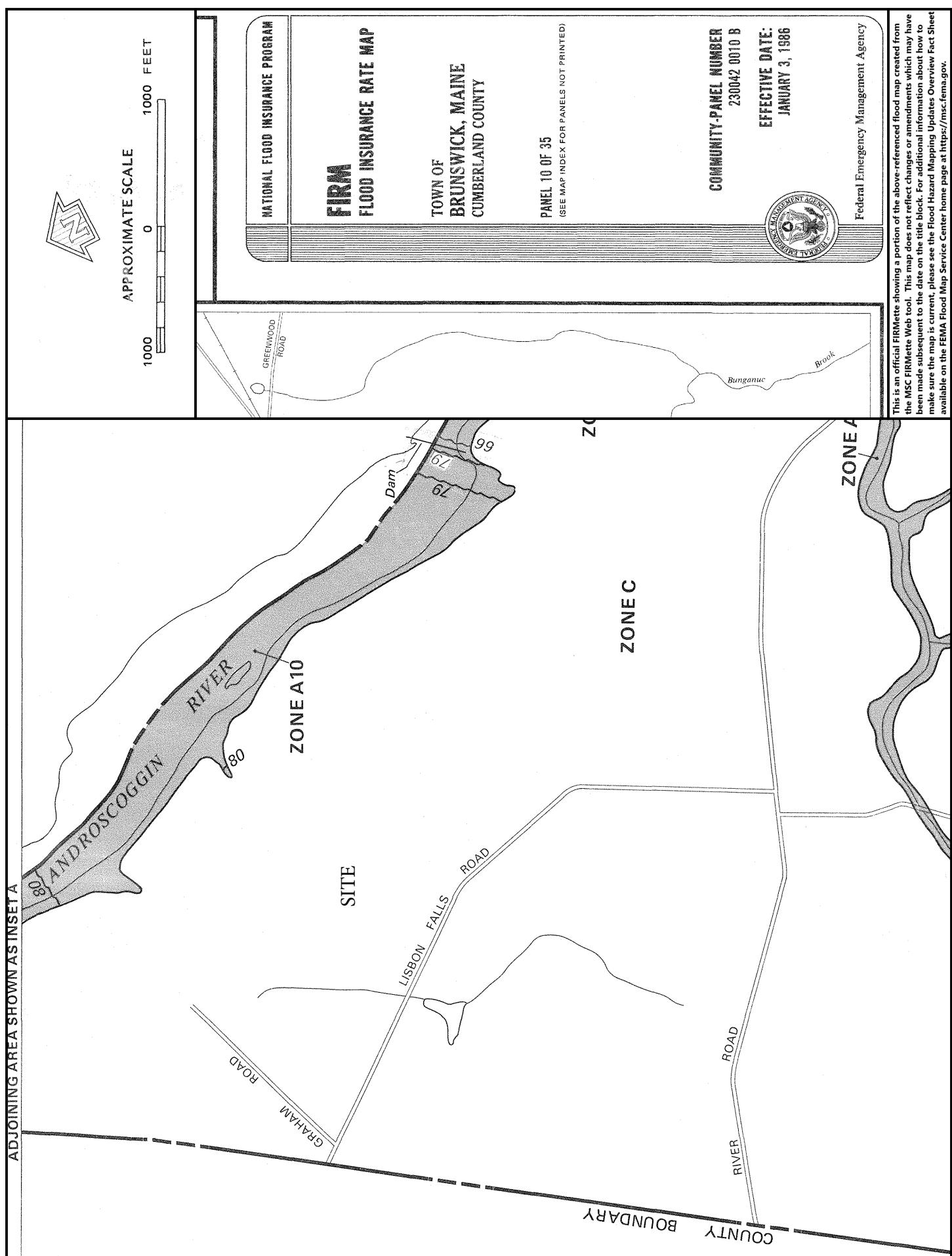
Soil Classification

Class B High Intensity Soils

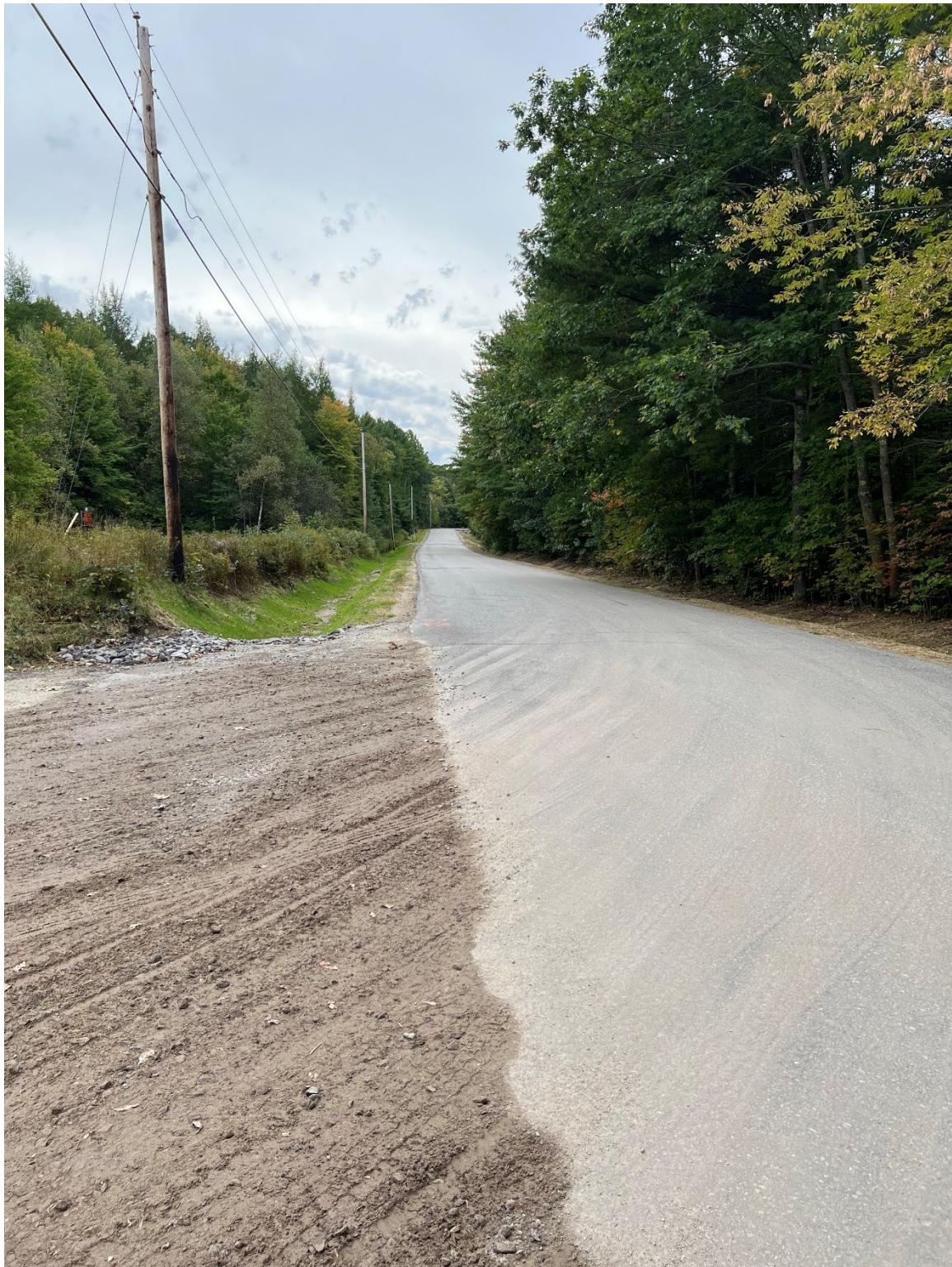
Jones Farm Development LLC
Tax Map 1 Lot 70

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Site Photos – Taken September 27, 2022



Standing at the Pit Road entrance looking left (Southwest)



Standing at the Pit Road entrance looking right (Northeast)



Pit Road and Gate



Pit Road



Approximate Entrance



Site Photos



Lisbon Road at Culvert Crossing



Lisbon Road at Pond Culvert Crossing



Off Site House



Madeline Drive



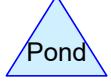
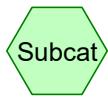
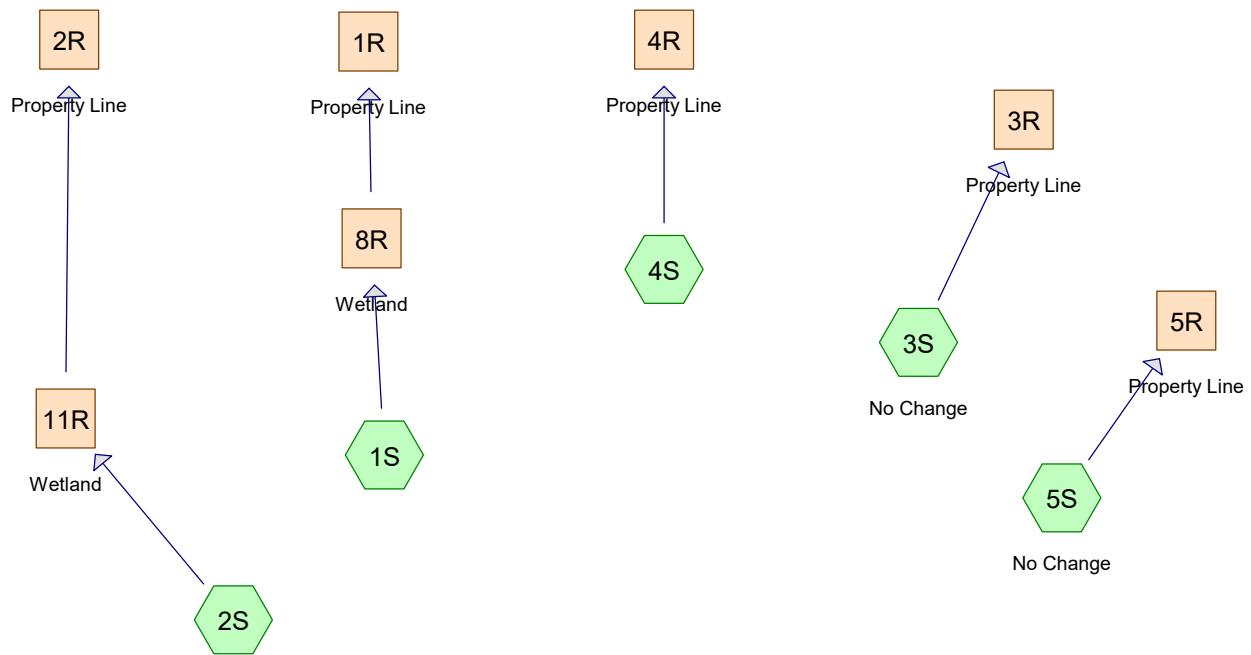
Existing Road across from Proposed Intersection (Madeline Drive)



Existing pond above site draining across Lisbon Road



Culvert Crossing Lisbon Road at Pond Outlet



Routing Diagram for PRE 1-2-2026
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.350	98	Existing Impervious On Site (2S, 3S, 4S, 5S)
0.740	74	Existing Lawn Off Site (2S, 5S)
1.350	74	Existing Lawn On Site (2S, 3S, 4S, 5S)
0.740	98	Existing Roads Off Site (2S, 5S)
9.670	30	Woods, Good, HSG A (1S, 2S, 4S)
15.860	55	Woods, Good, HSG B (1S, 2S, 3S, 4S, 5S)
50.060	70	Woods, Good, HSG C (1S, 2S, 3S, 4S, 5S)
8.400	77	Woods, Good, HSG D (1S, 2S, 3S, 5S)
88.170	64	TOTAL AREA

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Summary for Subcatchment 1S:

Runoff = 1.99 cfs @ 13.00 hrs, Volume= 0.477 af, Depth> 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description			
4.120	30	Woods, Good, HSG A			
3.940	55	Woods, Good, HSG B			
11.490	70	Woods, Good, HSG C			
0.900	77	Woods, Good, HSG D			
*	0.000	Existing Roads Off Site			
	0.000	>75% Grass cover, Good, HSG C			
*	0.000	Existing Impervious On Site			
*	74	Existing Lawn On Site			
20.450	59	Weighted Average			
20.450		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
50.1	100	0.0100	0.03		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
4.9	200	0.0750	0.68		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
55.0	300	Total			

Summary for Subcatchment 2S:

Runoff = 5.95 cfs @ 12.62 hrs, Volume= 0.887 af, Depth> 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description			
1.910	30	Woods, Good, HSG A			
0.940	55	Woods, Good, HSG B			
12.710	70	Woods, Good, HSG C			
2.020	77	Woods, Good, HSG D			
*	0.460	Existing Roads Off Site			
*	0.460	Existing Lawn Off Site			
*	0.300	Existing Impervious On Site			
*	74	Existing Lawn On Site			
19.100	67	Weighted Average			
18.340		96.02% Pervious Area			
0.760		3.98% Impervious Area			

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.8	100	0.0400	0.06		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
9.0	383	0.0800	0.71		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
37.8	483	Total			

Summary for Subcatchment 3S: No Change

Runoff = 6.05 cfs @ 12.98 hrs, Volume= 1.195 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
0.000	30	Woods, Good, HSG A
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.000	Existing Roads Off Site
*	0.000	Existing Lawn Off Site
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 0.02 cfs @ 17.64 hrs, Volume= 0.008 af, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
0.000	77	Woods, Good, HSG D		
*	0.000	Existing Roads Off Site		
*	0.000	Existing Lawn Off Site		
*	0.380	Existing Impervious On Site		
*	0.380	Existing Lawn On Site		
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S: No Change

Runoff = 3.94 cfs @ 13.29 hrs, Volume= 0.887 af, Depth> 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description		
0.000	30	Woods, Good, HSG A		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	Existing Roads Off Site		
*	0.280	Existing Lawn Off Site		
*	0.290	Existing Impervious On Site		
*	0.290	Existing Lawn On Site		
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

Summary for Reach 1R: Property Line

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 0.27" for 2 - YEAR event

Inflow = 1.85 cfs @ 13.41 hrs, Volume= 0.462 af

Outflow = 1.85 cfs @ 13.42 hrs, Volume= 0.461 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.87 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 2.07 fps, Avg. Travel Time= 0.4 min

Peak Storage= 32 cf @ 13.41 hrs

Average Depth at Peak Storage= 0.20'

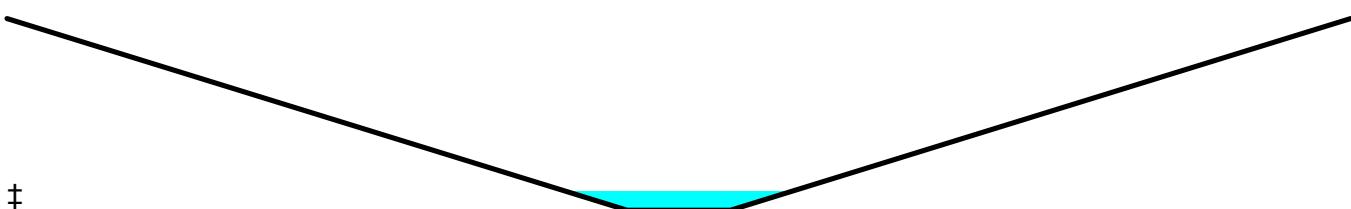
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 2R: Property Line

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 0.54" for 2 - YEAR event

Inflow = 5.24 cfs @ 13.02 hrs, Volume= 0.859 af

Outflow = 5.24 cfs @ 13.03 hrs, Volume= 0.859 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.83 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.37 fps, Avg. Travel Time= 0.4 min

Peak Storage= 68 cf @ 13.02 hrs

Average Depth at Peak Storage= 0.34'

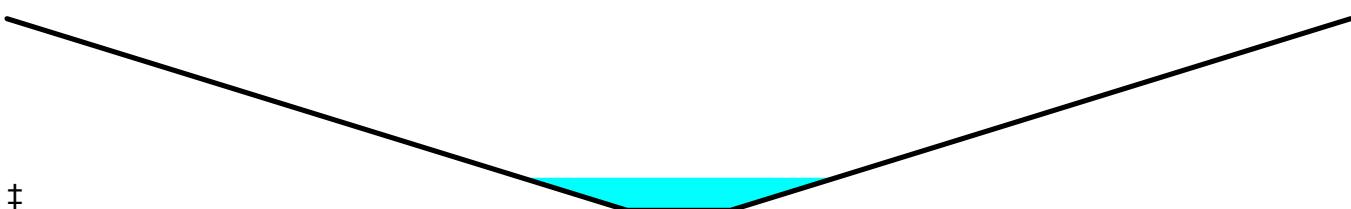
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 0.51" for 2 - YEAR event

Inflow = 6.05 cfs @ 12.98 hrs, Volume= 1.195 af

Outflow = 6.05 cfs @ 12.98 hrs, Volume= 1.194 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.98 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.62 fps, Avg. Travel Time= 0.3 min

Peak Storage= 76 cf @ 12.98 hrs

Average Depth at Peak Storage= 0.36'

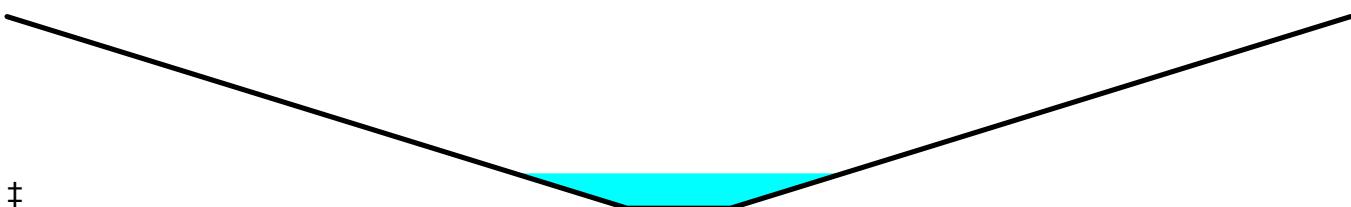
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'



Summary for Reach 4R: Property Line

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 0.02" for 2 - YEAR event

Inflow = 0.02 cfs @ 17.64 hrs, Volume= 0.008 af

Outflow = 0.02 cfs @ 17.65 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.74 fps, Min. Travel Time= 1.1 min

Avg. Velocity = 0.74 fps, Avg. Travel Time= 1.1 min

Peak Storage= 1 cf @ 17.50 hrs

Average Depth at Peak Storage= 0.01'

Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



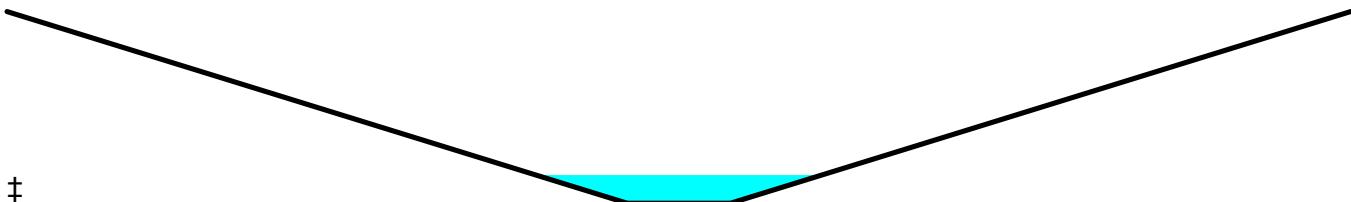
Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 0.71" for 2 - YEAR event
 Inflow = 3.94 cfs @ 13.29 hrs, Volume= 0.887 af
 Outflow = 3.94 cfs @ 13.30 hrs, Volume= 0.886 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 3.55 fps, Min. Travel Time= 0.2 min
 Avg. Velocity = 2.32 fps, Avg. Travel Time= 0.4 min

Peak Storage= 56 cf @ 13.30 hrs
 Average Depth at Peak Storage= 0.29'
 Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
 Side Slope Z-value= 6.0 '/' Top Width= 26.00'
 Length= 50.0' Slope= 0.0600 '/'
 Inlet Invert= 188.00', Outlet Invert= 185.00'



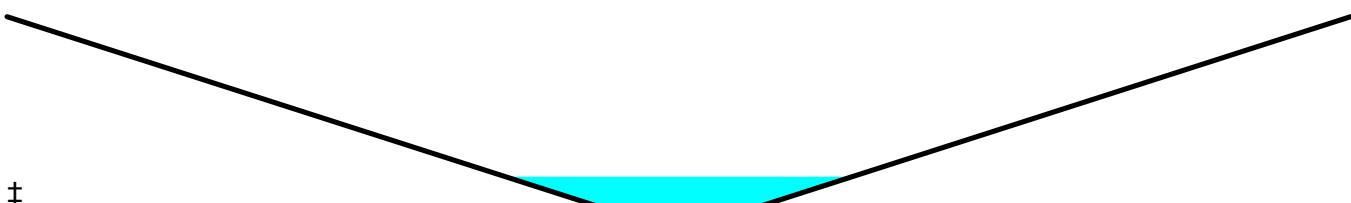
Summary for Reach 8R: Wetland

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 0.28" for 2 - YEAR event
 Inflow = 1.99 cfs @ 13.00 hrs, Volume= 0.477 af
 Outflow = 1.85 cfs @ 13.41 hrs, Volume= 0.462 af, Atten= 7%, Lag= 24.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Max. Velocity= 1.13 fps, Min. Travel Time= 13.2 min
 Avg. Velocity = 0.80 fps, Avg. Travel Time= 18.6 min

Peak Storage= 1,471 cf @ 13.19 hrs
 Average Depth at Peak Storage= 0.33'
 Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools
 Side Slope Z-value= 6.0 '/' Top Width= 27.00'
 Length= 895.0' Slope= 0.0223 '/'
 Inlet Invert= 183.00', Outlet Invert= 163.00'



Summary for Reach 11R: Wetland

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 0.56" for 2 - YEAR event
Inflow = 5.95 cfs @ 12.62 hrs, Volume= 0.887 af
Outflow = 5.24 cfs @ 13.02 hrs, Volume= 0.859 af, Atten= 12%, Lag= 24.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.34 fps, Min. Travel Time= 13.7 min
Avg. Velocity = 0.75 fps, Avg. Travel Time= 24.4 min

Peak Storage= 4,303 cf @ 12.79 hrs
Average Depth at Peak Storage= 0.33'
Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 '/' Top Width= 58.00'
Length= 1,100.0' Slope= 0.0055 '/'
Inlet Invert= 166.00', Outlet Invert= 160.00'



Summary for Subcatchment 1S:

Runoff = 8.49 cfs @ 12.86 hrs, Volume= 1.507 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
4.120	30	Woods, Good, HSG A
3.940	55	Woods, Good, HSG B
11.490	70	Woods, Good, HSG C
0.900	77	Woods, Good, HSG D
*	0.000	Existing Roads Off Site
*	0.000	>75% Grass cover, Good, HSG C
*	0.000	Existing Impervious On Site
*	74	Existing Lawn On Site
20.450	59	Weighted Average
20.450		100.00% Pervious Area
Tc (min)	Length (feet)	Slope (ft/ft)
50.1	100	0.0100
4.9	200	0.0750
55.0	300	Total
Velocity (ft/sec)	Capacity (cfs)	Description
0.03		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
0.68		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps

Summary for Subcatchment 2S:

Runoff = 16.47 cfs @ 12.56 hrs, Volume= 2.192 af, Depth> 1.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
1.910	30	Woods, Good, HSG A
0.940	55	Woods, Good, HSG B
12.710	70	Woods, Good, HSG C
2.020	77	Woods, Good, HSG D
*	0.460	Existing Roads Off Site
*	0.460	Existing Lawn Off Site
*	0.300	Existing Impervious On Site
*	74	Existing Lawn On Site
19.100	67	Weighted Average
18.340		96.02% Pervious Area
0.760		3.98% Impervious Area

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.8	100	0.0400	0.06		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
9.0	383	0.0800	0.71		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
37.8	483	Total			

Summary for Subcatchment 3S: No Change

Runoff = 17.48 cfs @ 12.88 hrs, Volume= 3.036 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
0.000	30	Woods, Good, HSG A
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.000	Existing Roads Off Site
*	0.000	Existing Lawn Off Site
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 0.32 cfs @ 13.65 hrs, Volume= 0.114 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
0.000	77	Woods, Good, HSG D		
*	0.000	Existing Roads Off Site		
*	0.000	Existing Lawn Off Site		
*	0.380	Existing Impervious On Site		
*	0.380	Existing Lawn On Site		
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S: No Change

Runoff = 9.56 cfs @ 13.21 hrs, Volume= 2.021 af, Depth> 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description		
0.000	30	Woods, Good, HSG A		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	Existing Roads Off Site		
*	0.280	Existing Lawn Off Site		
*	0.290	Existing Impervious On Site		
*	0.290	Existing Lawn On Site		
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

Summary for Reach 1R: Property Line

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 0.87" for 10 - YEAR event

Inflow = 8.18 cfs @ 13.12 hrs, Volume= 1.481 af

Outflow = 8.17 cfs @ 13.13 hrs, Volume= 1.481 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.31 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.76 fps, Avg. Travel Time= 0.3 min

Peak Storage= 95 cf @ 13.13 hrs

Average Depth at Peak Storage= 0.42'

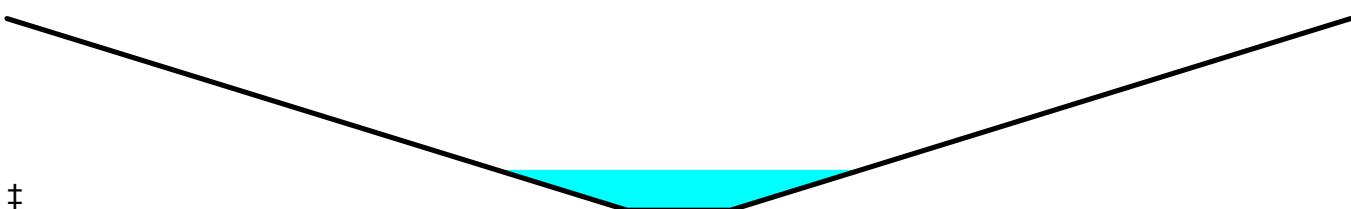
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 2R: Property Line

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 1.35" for 10 - YEAR event

Inflow = 15.40 cfs @ 12.85 hrs, Volume= 2.151 af

Outflow = 15.39 cfs @ 12.85 hrs, Volume= 2.151 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.09 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.82 fps, Avg. Travel Time= 0.3 min

Peak Storage= 151 cf @ 12.85 hrs

Average Depth at Peak Storage= 0.56'

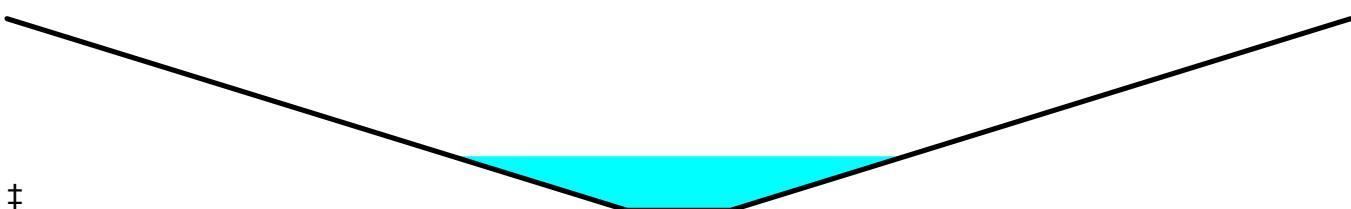
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 1.30" for 10 - YEAR event

Inflow = 17.48 cfs @ 12.88 hrs, Volume= 3.036 af

Outflow = 17.47 cfs @ 12.89 hrs, Volume= 3.035 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.26 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.13 fps, Avg. Travel Time= 0.3 min

Peak Storage= 166 cf @ 12.89 hrs

Average Depth at Peak Storage= 0.60'

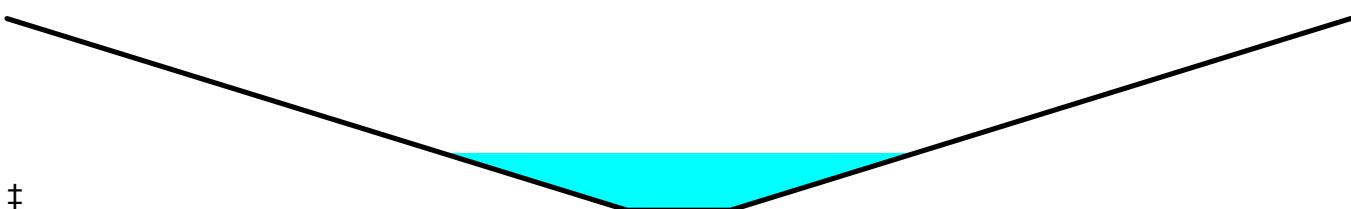
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'



Summary for Reach 4R: Property Line

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 0.25" for 10 - YEAR event

Inflow = 0.32 cfs @ 13.65 hrs, Volume= 0.114 af

Outflow = 0.32 cfs @ 13.66 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.68 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 1.34 fps, Avg. Travel Time= 0.6 min

Peak Storage= 9 cf @ 13.65 hrs

Average Depth at Peak Storage= 0.08'

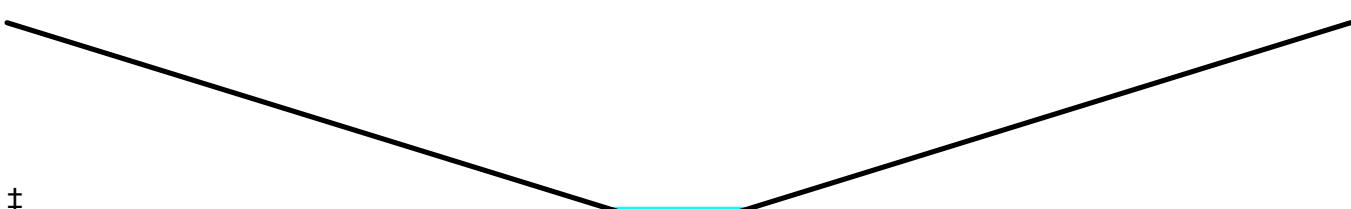
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 1.61" for 10 - YEAR event

Inflow = 9.56 cfs @ 13.21 hrs, Volume= 2.021 af

Outflow = 9.56 cfs @ 13.21 hrs, Volume= 2.020 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.49 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.69 fps, Avg. Travel Time= 0.3 min

Peak Storage= 106 cf @ 13.21 hrs

Average Depth at Peak Storage= 0.45'

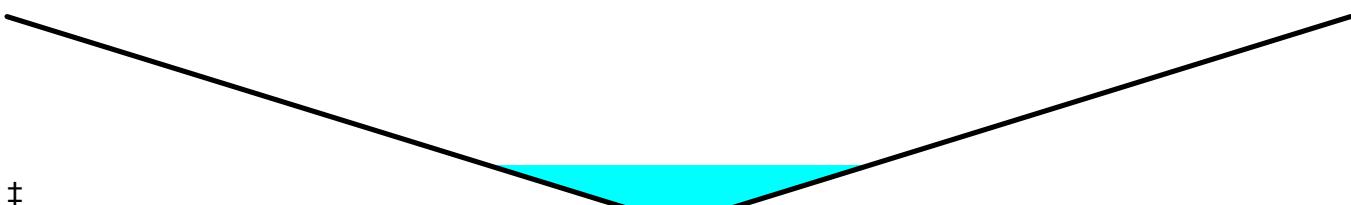
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'



Summary for Reach 8R: Wetland

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 0.88" for 10 - YEAR event

Inflow = 8.49 cfs @ 12.86 hrs, Volume= 1.507 af

Outflow = 8.18 cfs @ 13.12 hrs, Volume= 1.481 af, Atten= 4%, Lag= 15.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.68 fps, Min. Travel Time= 8.9 min

Avg. Velocity = 1.07 fps, Avg. Travel Time= 14.0 min

Peak Storage= 4,345 cf @ 12.98 hrs

Average Depth at Peak Storage= 0.68'

Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools

Side Slope Z-value= 6.0 '/' Top Width= 27.00'

Length= 895.0' Slope= 0.0223 '/'

Inlet Invert= 183.00', Outlet Invert= 163.00'



Summary for Reach 11R: Wetland

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 1.38" for 10 - YEAR event

Inflow = 16.47 cfs @ 12.56 hrs, Volume= 2.192 af

Outflow = 15.40 cfs @ 12.85 hrs, Volume= 2.151 af, Atten= 6%, Lag= 17.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.90 fps, Min. Travel Time= 9.7 min

Avg. Velocity = 0.94 fps, Avg. Travel Time= 19.5 min

Peak Storage= 8,946 cf @ 12.69 hrs

Average Depth at Peak Storage= 0.60'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'



Summary for Subcatchment 1S:

Runoff = 15.65 cfs @ 12.81 hrs, Volume= 2.587 af, Depth> 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
4.120	30	Woods, Good, HSG A
3.940	55	Woods, Good, HSG B
11.490	70	Woods, Good, HSG C
0.900	77	Woods, Good, HSG D
*	0.000	Existing Roads Off Site
*	0.000	>75% Grass cover, Good, HSG C
*	0.000	Existing Impervious On Site
*	74	Existing Lawn On Site
20.450	59	Weighted Average
20.450		100.00% Pervious Area
Tc (min)	Length (feet)	Slope (ft/ft)
50.1	100	0.0100
4.9	200	0.0750
55.0	300	Total
Velocity (ft/sec)	Capacity (cfs)	Description
0.03		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
0.68		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps

Summary for Subcatchment 2S:

Runoff = 26.44 cfs @ 12.55 hrs, Volume= 3.445 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
1.910	30	Woods, Good, HSG A
0.940	55	Woods, Good, HSG B
12.710	70	Woods, Good, HSG C
2.020	77	Woods, Good, HSG D
*	0.460	Existing Roads Off Site
*	0.460	Existing Lawn Off Site
*	0.300	Existing Impervious On Site
*	74	Existing Lawn On Site
19.100	67	Weighted Average
18.340		96.02% Pervious Area
0.760		3.98% Impervious Area

PRE 1-2-2026**Type III 24-hr 25 - YEAR Rainfall=5.80"**

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.8	100	0.0400	0.06		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
9.0	383	0.0800	0.71		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
37.8	483	Total			

Summary for Subcatchment 3S: No Change

Runoff = 28.57 cfs @ 12.86 hrs, Volume= 4.822 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
0.000	30	Woods, Good, HSG A
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.000	Existing Roads Off Site
*	0.000	Existing Lawn Off Site
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 0.98 cfs @ 13.41 hrs, Volume= 0.272 af, Depth> 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
0.000	77	Woods, Good, HSG D		
*	0.000	Existing Roads Off Site		
*	0.000	Existing Lawn Off Site		
*	0.380	Existing Impervious On Site		
*	0.380	Existing Lawn On Site		
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S: No Change

Runoff = 14.74 cfs @ 13.17 hrs, Volume= 3.075 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description		
0.000	30	Woods, Good, HSG A		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	Existing Roads Off Site		
*	0.280	Existing Lawn Off Site		
*	0.290	Existing Impervious On Site		
*	0.290	Existing Lawn On Site		
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

Summary for Reach 1R: Property Line

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 1.50" for 25 - YEAR event

Inflow = 15.21 cfs @ 13.04 hrs, Volume= 2.554 af

Outflow = 15.20 cfs @ 13.05 hrs, Volume= 2.553 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.07 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.05 fps, Avg. Travel Time= 0.3 min

Peak Storage= 150 cf @ 13.04 hrs

Average Depth at Peak Storage= 0.56'

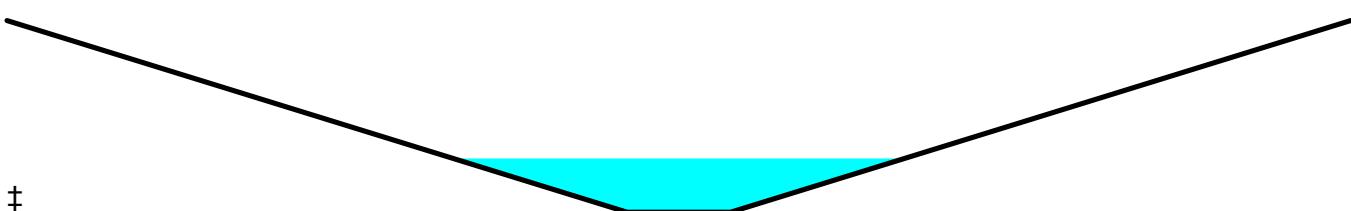
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 2R: Property Line

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 2.13" for 25 - YEAR event

Inflow = 25.12 cfs @ 12.79 hrs, Volume= 3.395 af

Outflow = 25.10 cfs @ 12.80 hrs, Volume= 3.394 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.77 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.05 fps, Avg. Travel Time= 0.3 min

Peak Storage= 218 cf @ 12.79 hrs

Average Depth at Peak Storage= 0.70'

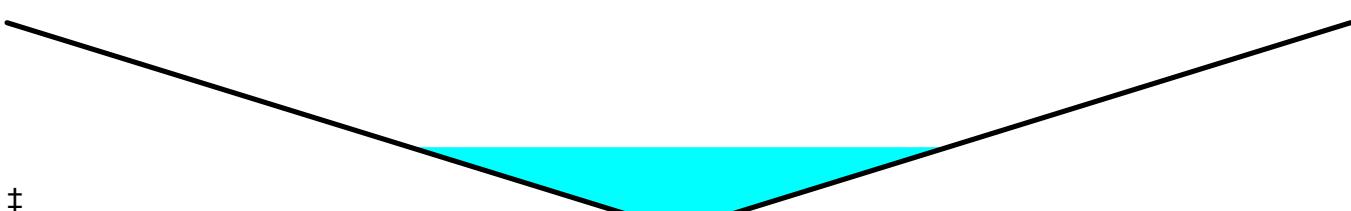
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 2.06" for 25 - YEAR event

Inflow = 28.57 cfs @ 12.86 hrs, Volume= 4.822 af

Outflow = 28.55 cfs @ 12.87 hrs, Volume= 4.821 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.96 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.40 fps, Avg. Travel Time= 0.2 min

Peak Storage= 239 cf @ 12.86 hrs

Average Depth at Peak Storage= 0.74'

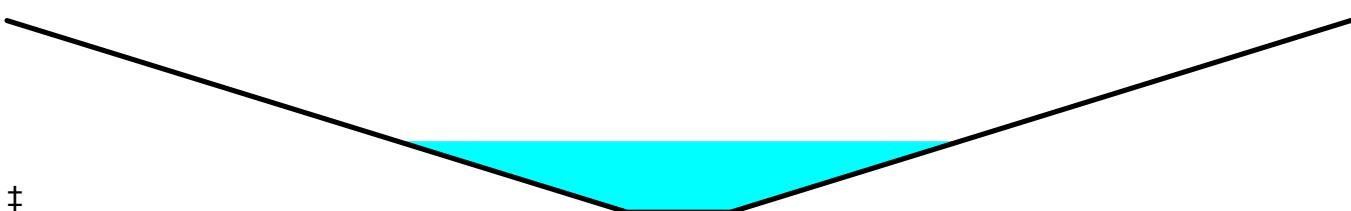
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'



‡

Summary for Reach 4R: Property Line

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 0.59" for 25 - YEAR event

Inflow = 0.98 cfs @ 13.41 hrs, Volume= 0.272 af

Outflow = 0.98 cfs @ 13.42 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.38 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 1.75 fps, Avg. Travel Time= 0.5 min

Peak Storage= 21 cf @ 13.41 hrs

Average Depth at Peak Storage= 0.14'

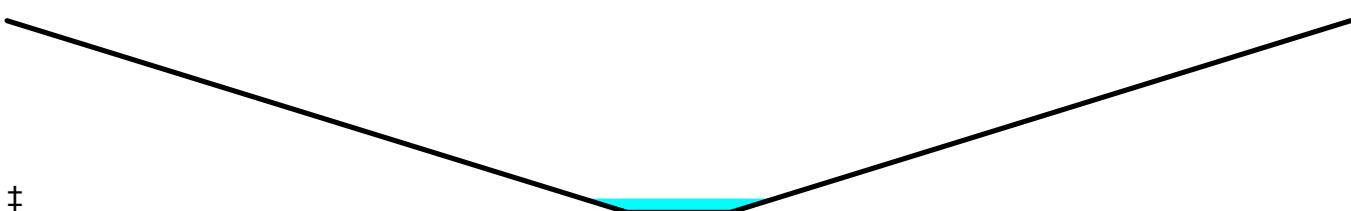
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



‡

Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 2.45" for 25 - YEAR event

Inflow = 14.74 cfs @ 13.17 hrs, Volume= 3.075 af

Outflow = 14.73 cfs @ 13.18 hrs, Volume= 3.074 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.03 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.90 fps, Avg. Travel Time= 0.3 min

Peak Storage= 147 cf @ 13.17 hrs

Average Depth at Peak Storage= 0.55'

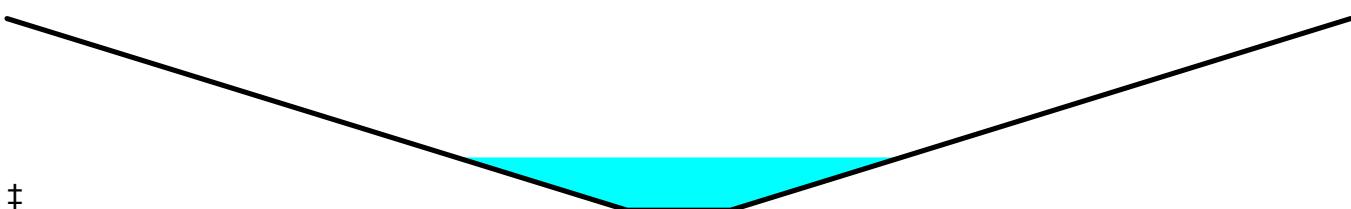
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'



‡

Summary for Reach 8R: Wetland

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 1.52" for 25 - YEAR event

Inflow = 15.65 cfs @ 12.81 hrs, Volume= 2.587 af

Outflow = 15.21 cfs @ 13.04 hrs, Volume= 2.554 af, Atten= 3%, Lag= 13.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.98 fps, Min. Travel Time= 7.5 min

Avg. Velocity = 1.18 fps, Avg. Travel Time= 12.7 min

Peak Storage= 6,884 cf @ 12.92 hrs

Average Depth at Peak Storage= 0.91'

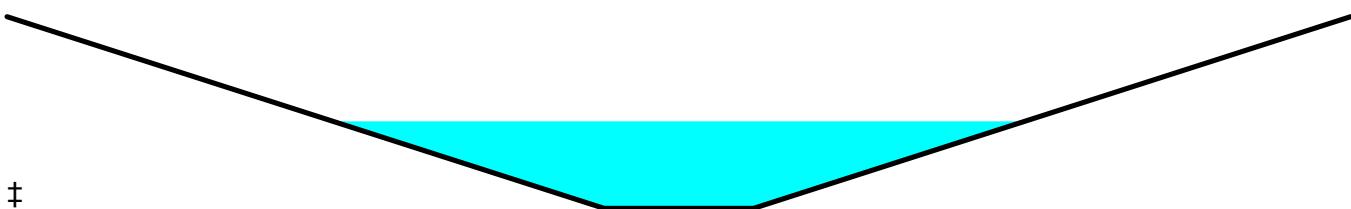
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools

Side Slope Z-value= 6.0 '/' Top Width= 27.00'

Length= 895.0' Slope= 0.0223 '/'

Inlet Invert= 183.00', Outlet Invert= 163.00'



‡

Summary for Reach 11R: Wetland

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 2.16" for 25 - YEAR event

Inflow = 26.44 cfs @ 12.55 hrs, Volume= 3.445 af

Outflow = 25.12 cfs @ 12.79 hrs, Volume= 3.395 af, Atten= 5%, Lag= 14.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.20 fps, Min. Travel Time= 8.3 min

Avg. Velocity = 1.04 fps, Avg. Travel Time= 17.6 min

Peak Storage= 12,587 cf @ 12.65 hrs

Average Depth at Peak Storage= 0.78'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'



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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Summary for Subcatchment 1S:

Runoff = 31.96 cfs @ 12.78 hrs, Volume= 5.068 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description			
4.120	30	Woods, Good, HSG A			
3.940	55	Woods, Good, HSG B			
11.490	70	Woods, Good, HSG C			
0.900	77	Woods, Good, HSG D			
*	0.000	Existing Roads Off Site			
	0.000	>75% Grass cover, Good, HSG C			
*	0.000	Existing Impervious On Site			
*	74	Existing Lawn On Site			
20.450	59	Weighted Average			
20.450		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
50.1	100	0.0100	0.03		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
4.9	200	0.0750	0.68		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
55.0	300	Total			

Summary for Subcatchment 2S:

Runoff = 47.56 cfs @ 12.53 hrs, Volume= 6.153 af, Depth> 3.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description			
1.910	30	Woods, Good, HSG A			
0.940	55	Woods, Good, HSG B			
12.710	70	Woods, Good, HSG C			
2.020	77	Woods, Good, HSG D			
*	0.460	Existing Roads Off Site			
*	0.460	Existing Lawn Off Site			
*	0.300	Existing Impervious On Site			
*	74	Existing Lawn On Site			
19.100	67	Weighted Average			
18.340		96.02% Pervious Area			
0.760		3.98% Impervious Area			

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.8	100	0.0400	0.06		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
9.0	383	0.0800	0.71		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
37.8	483	Total			

Summary for Subcatchment 3S: No Change

Runoff = 52.21 cfs @ 12.84 hrs, Volume= 8.711 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
0.000	30	Woods, Good, HSG A
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.000	Existing Roads Off Site
*	0.000	Existing Lawn Off Site
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 3.11 cfs @ 13.25 hrs, Volume= 0.703 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
0.000	77	Woods, Good, HSG D		
*	0.000	Existing Roads Off Site		
*	0.000	Existing Lawn Off Site		
*	0.380	Existing Impervious On Site		
*	0.380	Existing Lawn On Site		
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S: No Change

Runoff = 25.46 cfs @ 13.15 hrs, Volume= 5.300 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description		
0.000	30	Woods, Good, HSG A		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	Existing Roads Off Site		
*	0.280	Existing Lawn Off Site		
*	0.290	Existing Impervious On Site		
*	0.290	Existing Lawn On Site		
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

Summary for Reach 1R: Property Line

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 2.95" for 100 - YEAR event

Inflow = 31.34 cfs @ 12.97 hrs, Volume= 5.020 af

Outflow = 31.33 cfs @ 12.97 hrs, Volume= 5.019 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.11 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.42 fps, Avg. Travel Time= 0.2 min

Peak Storage= 257 cf @ 12.97 hrs

Average Depth at Peak Storage= 0.77'

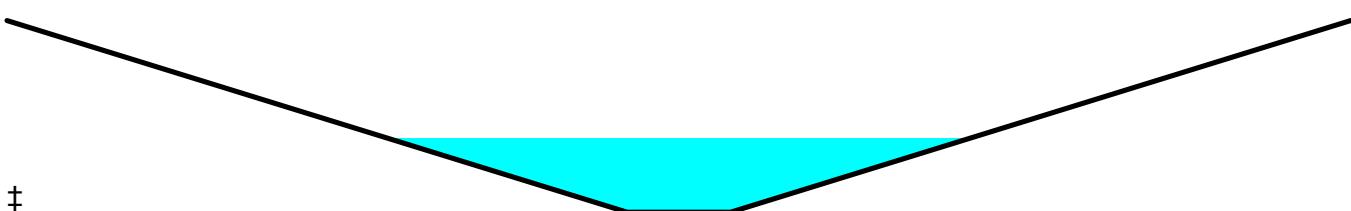
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



‡

Summary for Reach 2R: Property Line

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 3.82" for 100 - YEAR event

Inflow = 45.76 cfs @ 12.74 hrs, Volume= 6.086 af

Outflow = 45.73 cfs @ 12.74 hrs, Volume= 6.085 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.72 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.39 fps, Avg. Travel Time= 0.2 min

Peak Storage= 340 cf @ 12.74 hrs

Average Depth at Peak Storage= 0.91'

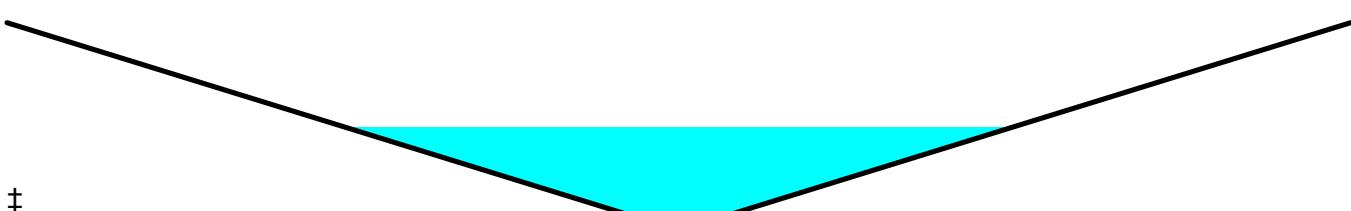
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



‡

Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 3.72" for 100 - YEAR event

Inflow = 52.21 cfs @ 12.84 hrs, Volume= 8.711 af

Outflow = 52.20 cfs @ 12.85 hrs, Volume= 8.710 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.95 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.78 fps, Avg. Travel Time= 0.2 min

Peak Storage= 375 cf @ 12.85 hrs

Average Depth at Peak Storage= 0.96'

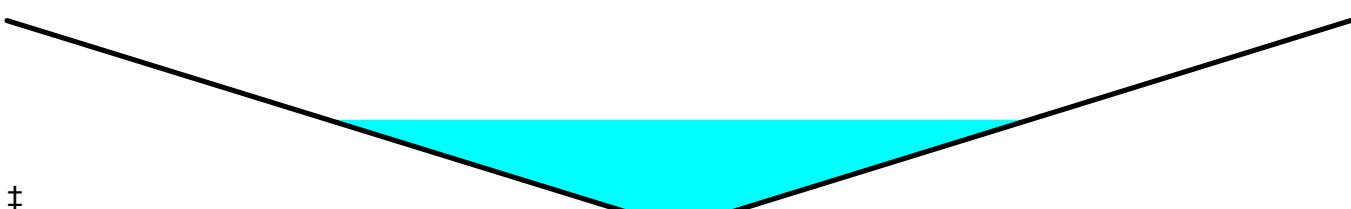
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'



‡

Summary for Reach 4R: Property Line

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 1.53" for 100 - YEAR event

Inflow = 3.11 cfs @ 13.25 hrs, Volume= 0.703 af

Outflow = 3.11 cfs @ 13.26 hrs, Volume= 0.703 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.32 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 2.24 fps, Avg. Travel Time= 0.4 min

Peak Storage= 47 cf @ 13.25 hrs

Average Depth at Peak Storage= 0.26'

Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



‡

Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 4.23" for 100 - YEAR event

Inflow = 25.46 cfs @ 13.15 hrs, Volume= 5.300 af

Outflow = 25.46 cfs @ 13.16 hrs, Volume= 5.299 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.79 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.20 fps, Avg. Travel Time= 0.3 min

Peak Storage= 220 cf @ 13.16 hrs

Average Depth at Peak Storage= 0.71'

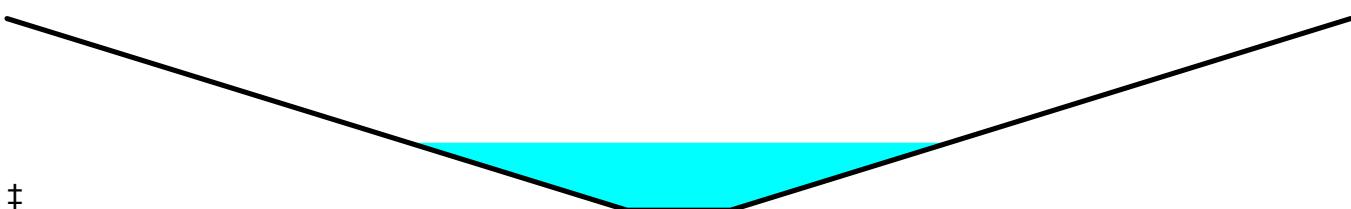
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'



‡

Summary for Reach 8R: Wetland

Inflow Area = 20.450 ac, 0.00% Impervious, Inflow Depth > 2.97" for 100 - YEAR event

Inflow = 31.96 cfs @ 12.78 hrs, Volume= 5.068 af

Outflow = 31.34 cfs @ 12.97 hrs, Volume= 5.020 af, Atten= 2%, Lag= 11.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.38 fps, Min. Travel Time= 6.3 min

Avg. Velocity = 1.33 fps, Avg. Travel Time= 11.2 min

Peak Storage= 11,777 cf @ 12.86 hrs

Average Depth at Peak Storage= 1.25'

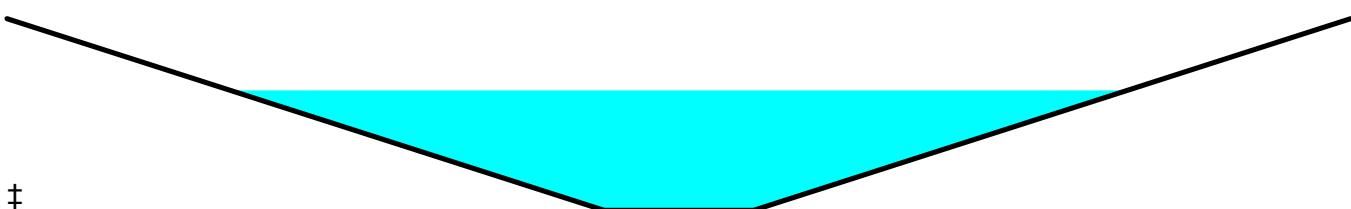
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools

Side Slope Z-value= 6.0 '/' Top Width= 27.00'

Length= 895.0' Slope= 0.0223 '/'

Inlet Invert= 183.00', Outlet Invert= 163.00'



‡

Summary for Reach 11R: Wetland

Inflow Area = 19.100 ac, 3.98% Impervious, Inflow Depth > 3.87" for 100 - YEAR event

Inflow = 47.56 cfs @ 12.53 hrs, Volume= 6.153 af

Outflow = 45.76 cfs @ 12.74 hrs, Volume= 6.086 af, Atten= 4%, Lag= 12.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.62 fps, Min. Travel Time= 7.0 min

Avg. Velocity = 1.19 fps, Avg. Travel Time= 15.5 min

Peak Storage= 19,286 cf @ 12.62 hrs

Average Depth at Peak Storage= 1.07'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

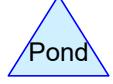
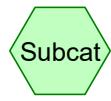
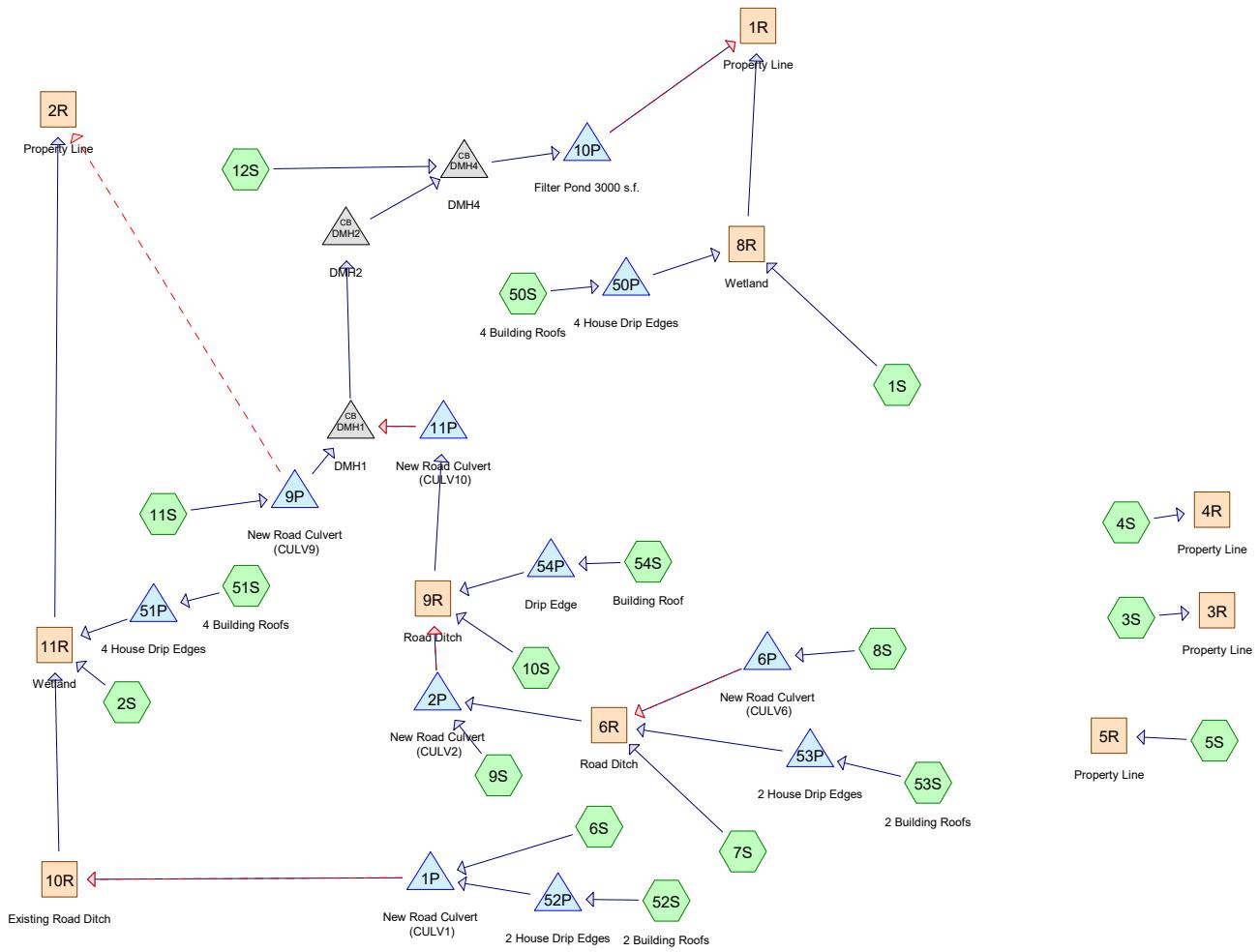
10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'





Routing Diagram for POST 1-2-2026
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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.650	98	Building Roof (50S, 51S, 52S, 53S, 54S)
1.350	98	Existing Impervious On Site (3S, 4S, 5S, 6S)
0.740	74	Existing Lawn Off Site (2S, 5S, 6S)
1.350	74	Existing Lawn On Site (3S, 4S, 5S, 6S)
0.740	98	Existing Roads Off Site (2S, 5S, 6S)
0.290	74	Filter Pond (12S)
0.650	98	New Lot Impervious (1S, 2S, 6S, 7S, 10S, 11S)
1.950	74	New Lot Lawn (1S, 2S, 6S, 7S, 10S)
0.880	98	New Road Impervious (1S, 2S, 6S, 7S, 8S, 9S, 10S, 11S, 12S)
1.120	74	New Road Lawn (1S, 2S, 6S, 7S, 8S, 9S, 10S, 11S, 12S)
9.670	30	Woods, Good, HSG A (1S, 4S, 6S)
16.060	55	Woods, Good, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 8S, 9S, 10S)
44.320	70	Woods, Good, HSG C (1S, 2S, 3S, 4S, 5S, 6S, 7S, 9S, 10S, 12S)
8.420	77	Woods, Good, HSG D (1S, 2S, 3S, 5S, 6S)
88.190	65	TOTAL AREA

Summary for Subcatchment 1S:

Runoff = 1.87 cfs @ 12.97 hrs, Volume= 0.440 af, Depth> 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description		
4.120	30	Woods, Good, HSG A		
3.940	55	Woods, Good, HSG B		
9.010	70	Woods, Good, HSG C		
0.900	77	Woods, Good, HSG D		
*	0.010	New Road Impervious		
*	0.040	New Road Lawn		
*	0.000	New Lot Buildings (0.20 to 50)		
*	0.200	New Lot Impervious		
*	0.600	New Lot Lawn		
18.820	59	Weighted Average		
18.610		98.88% Pervious Area		
0.210		1.12% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)		
		Velocity (ft/sec)	Capacity (cfs)	Description
50.1	100	0.0100	0.03	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
2.8	160	0.1500	0.97	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
52.9	260	Total		

Summary for Subcatchment 2S:

Runoff = 2.86 cfs @ 13.48 hrs, Volume= 0.692 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
0.240	55	Woods, Good, HSG B
7.540	70	Woods, Good, HSG C
2.010	77	Woods, Good, HSG D
*	0.170	Existing Roads Off Site
*	0.170	Existing Lawn Off Site
*	0.120	New Road Impervious
*	0.160	New Road Lawn
*	0.000	New Lot Buildings (0.20 to 51)
*	0.100	New Lot Impervious
*	0.600	New Lot Lawn
11.110	72	Weighted Average
10.720		96.49% Pervious Area
0.390		3.51% Impervious Area

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 3S:

Runoff = 6.05 cfs @ 12.98 hrs, Volume= 1.195 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 0.02 cfs @ 17.64 hrs, Volume= 0.008 af, Depth> 0.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
*	0.380	98	Existing Impervious On Site	
*	0.380	74	Existing Lawn On Site	
*	0.000	74	New Road Lawn	
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S:

Runoff = 3.94 cfs @ 13.29 hrs, Volume= 0.887 af, Depth> 0.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	98	Existing Roads Off Site	
*	0.280	74	Existing Lawn Off Site	
*	0.290	98	Existing Impervious On Site	
*	0.290	74	Existing Lawn On Site	
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Summary for Subcatchment 6S:

Runoff = 0.45 cfs @ 13.72 hrs, Volume= 0.139 af, Depth> 0.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
1.910	30	Woods, Good, HSG A
0.500	55	Woods, Good, HSG B
1.400	70	Woods, Good, HSG C
0.030	77	Woods, Good, HSG D
*	0.290	Existing Roads Off Site
*	0.290	Existing Lawn Off Site
*	0.300	Existing Impervious On Site
*	0.300	Existing Lawn On Site
*	0.070	New Road Impervious
*	0.100	New Road Lawn
*	0.000	New Lot Buildings (0.1 to 52)
*	0.100	New Lot Impervious
*	0.300	New Lot Lawn
5.590	60	Weighted Average
4.830		86.40% Pervious Area
0.760		13.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 7S:

Runoff = 0.53 cfs @ 12.54 hrs, Volume= 0.069 af, Depth> 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Area (ac)	CN	Description			
0.000	55	Woods, Good, HSG B			
0.140	70	Woods, Good, HSG C			
*	0.080	New Road Impervious			
*	0.100	New Road Lawn			
*	0.000	New Lot Buildings (0.1 to 53S)			
*	0.100	New Lot Impervious			
*	0.300	New Lot Lawn			
0.720	79	Weighted Average			
0.540		75.00% Pervious Area			
0.180		25.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
35.5	65	0.0100	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	250	0.0250	2.37		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
37.3	315	Total			Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps

Summary for Subcatchment 8S:

Runoff = 0.38 cfs @ 12.04 hrs, Volume= 0.023 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description			
0.010	55	Woods, Good, HSG B			
*	0.090	New Road Impervious			
*	0.070	New Road Lawn			
0.170	86	Weighted Average			
0.080		47.06% Pervious Area			
0.090		52.94% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
0.2	13	0.0400	Velocity (ft/sec)	Capacity (cfs)	Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
2.3	250	0.0150	1.84		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.5	263	Total			

Summary for Subcatchment 9S:

Runoff = 0.54 cfs @ 12.05 hrs, Volume= 0.034 af, Depth> 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Area (ac)	CN	Description
0.140	55	Woods, Good, HSG B
0.180	70	Woods, Good, HSG C
*	0.090	New Road Impervious
*	0.110	New Road Lawn
*	0.000	New Lot Buildings
*	0.000	New Lot Impervious
*	0.000	New Lot Lawn

0.520	72	Weighted Average
0.430		82.69% Pervious Area
0.090		17.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 10S:

Runoff = 1.25 cfs @ 12.05 hrs, Volume= 0.078 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
0.250	55	Woods, Good, HSG B
0.150	70	Woods, Good, HSG C
*	0.190	New Road Impervious
*	0.260	New Road Lawn
*	0.000	New Lot Buildings (.05 TO 54)
*	0.050	New Lot Impervious
*	0.150	New Lot Lawn

1.050	74	Weighted Average
0.810		77.14% Pervious Area
0.240		22.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 11S:

Runoff = 0.84 cfs @ 12.04 hrs, Volume= 0.051 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
*	0.100	98 New Road Impervious
*	0.130	74 New Road Lawn
*	0.000	98 New Lot Buildings
*	0.100	98 New Lot Impervious
*	0.000	74 New Lawn
0.330	89	Weighted Average
0.130		39.39% Pervious Area
0.200		60.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263				Total

Summary for Subcatchment 12S:

Runoff = 0.98 cfs @ 12.04 hrs, Volume= 0.059 af, Depth> 1.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
0.040	70	Woods, Good, HSG C
*	0.130	98 New Road Impervious
*	0.150	74 New Road Lawn
*	0.290	74 Filter Pond
*	0.000	98 New Lot Buildings
*	0.000	98 New Lot Impervious
*	0.000	74 New Lawn
0.610	79	Weighted Average
0.480		78.69% Pervious Area
0.130		21.31% Impervious Area

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 50S: 4 Building Roofs

Runoff = 0.69 cfs @ 12.00 hrs, Volume= 0.045 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 51S: 4 Building Roofs

Runoff = 0.69 cfs @ 12.00 hrs, Volume= 0.045 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 52S: 2 Building Roofs

Runoff = 0.34 cfs @ 12.00 hrs, Volume= 0.022 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Area (ac)	CN	Description
* 0.100	98	Building Roof
0.100		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 53S: 2 Building Roofs

Runoff = 0.34 cfs @ 12.00 hrs, Volume= 0.022 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
* 0.100	98	Building Roof
0.100		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 54S: Building Roof

Runoff = 0.17 cfs @ 12.00 hrs, Volume= 0.011 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 - YEAR Rainfall=3.10"

Area (ac)	CN	Description
* 0.050	98	Building Roof
0.050		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Reach 1R: Property Line

Inflow Area = 22.570 ac, 6.60% Impervious, Inflow Depth > 0.28" for 2 - YEAR event

Inflow = 1.86 cfs @ 13.39 hrs, Volume= 0.520 af

Outflow = 1.86 cfs @ 13.40 hrs, Volume= 0.520 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.87 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 1.64 fps, Avg. Travel Time= 0.5 min

Peak Storage= 32 cf @ 13.39 hrs

Average Depth at Peak Storage= 0.20'

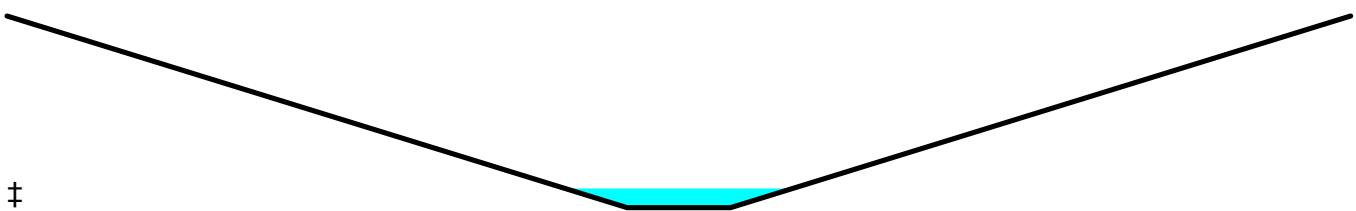
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 ' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 2R: Property Line

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 0.56" for 2 - YEAR event

Inflow = 3.16 cfs @ 13.98 hrs, Volume= 0.800 af

Outflow = 3.16 cfs @ 13.98 hrs, Volume= 0.800 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.34 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.28 fps, Avg. Travel Time= 0.4 min

Peak Storage= 47 cf @ 13.98 hrs

Average Depth at Peak Storage= 0.26'

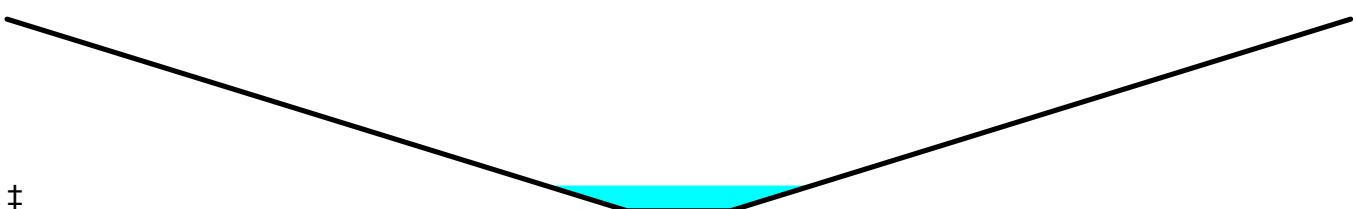
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 ' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 0.51" for 2 - YEAR event

Inflow = 6.05 cfs @ 12.98 hrs, Volume= 1.195 af

Outflow = 6.05 cfs @ 12.98 hrs, Volume= 1.194 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.98 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.62 fps, Avg. Travel Time= 0.3 min

Peak Storage= 76 cf @ 12.98 hrs

Average Depth at Peak Storage= 0.36'

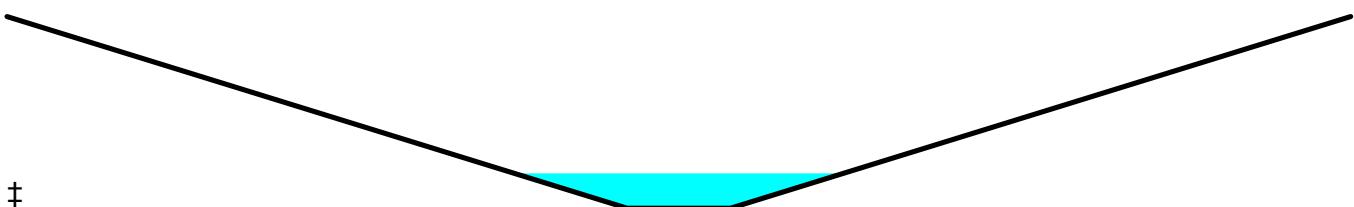
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'

**Summary for Reach 4R: Property Line**

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 0.02" for 2 - YEAR event

Inflow = 0.02 cfs @ 17.64 hrs, Volume= 0.008 af

Outflow = 0.02 cfs @ 17.65 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.74 fps, Min. Travel Time= 1.1 min

Avg. Velocity = 0.74 fps, Avg. Travel Time= 1.1 min

Peak Storage= 1 cf @ 17.50 hrs

Average Depth at Peak Storage= 0.01'

Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 0.71" for 2 - YEAR event

Inflow = 3.94 cfs @ 13.29 hrs, Volume= 0.887 af

Outflow = 3.94 cfs @ 13.30 hrs, Volume= 0.886 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.55 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.32 fps, Avg. Travel Time= 0.4 min

Peak Storage= 56 cf @ 13.30 hrs

Average Depth at Peak Storage= 0.29'

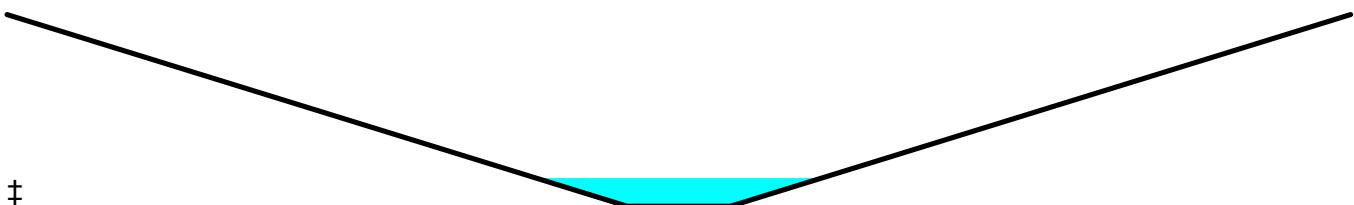
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'

**Summary for Reach 6R: Road Ditch**

Inflow Area = 0.990 ac, 37.37% Impervious, Inflow Depth > 1.11" for 2 - YEAR event

Inflow = 0.60 cfs @ 12.48 hrs, Volume= 0.092 af

Outflow = 0.59 cfs @ 12.56 hrs, Volume= 0.092 af, Atten= 1%, Lag= 5.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.34 fps, Min. Travel Time= 2.8 min

Avg. Velocity = 1.12 fps, Avg. Travel Time= 6.0 min

Peak Storage= 101 cf @ 12.52 hrs

Average Depth at Peak Storage= 0.18'

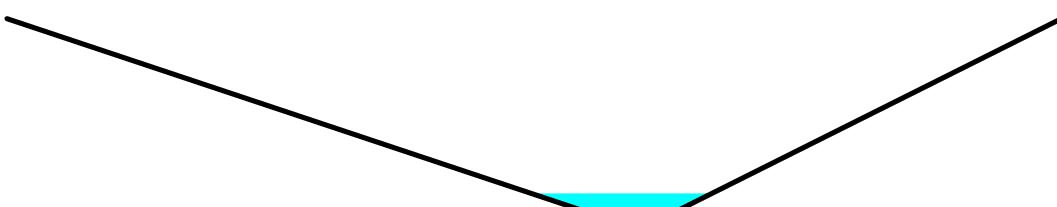
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 110.75 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0183 '/'

Inlet Invert= 193.00', Outlet Invert= 185.70'



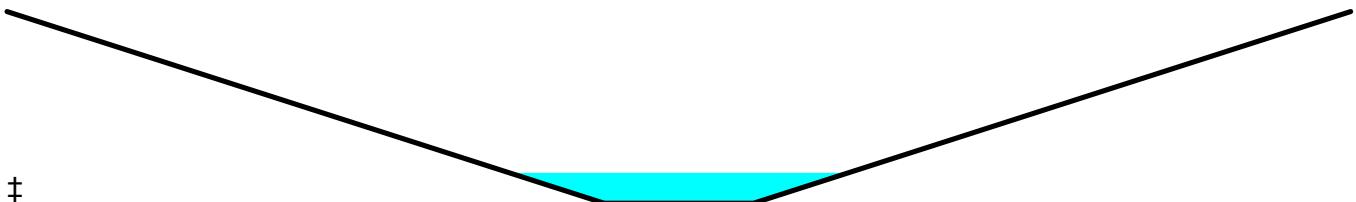
Summary for Reach 8R: Wetland

Inflow Area = 19.020 ac, 2.16% Impervious, Inflow Depth > 0.28" for 2 - YEAR event
Inflow = 1.87 cfs @ 12.97 hrs, Volume= 0.440 af
Outflow = 1.73 cfs @ 13.39 hrs, Volume= 0.425 af, Atten= 8%, Lag= 25.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.10 fps, Min. Travel Time= 13.5 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 19.1 min

Peak Storage= 1,400 cf @ 13.16 hrs
Average Depth at Peak Storage= 0.32'
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools
Side Slope Z-value= 6.0 '/' Top Width= 27.00'
Length= 895.0' Slope= 0.0223 '/'
Inlet Invert= 183.00', Outlet Invert= 163.00'

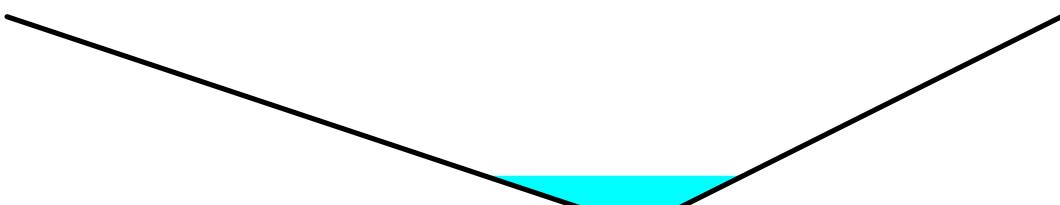
**Summary for Reach 9R: Road Ditch**

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 0.93" for 2 - YEAR event
Inflow = 2.07 cfs @ 12.05 hrs, Volume= 0.203 af
Outflow = 1.89 cfs @ 12.12 hrs, Volume= 0.202 af, Atten= 9%, Lag= 4.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.03 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 5.1 min

Peak Storage= 253 cf @ 12.09 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 100.41 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'
Length= 400.0' Slope= 0.0150 '/'
Inlet Invert= 184.50', Outlet Invert= 178.50'



Summary for Reach 10R: Existing Road Ditch

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 0.29" for 2 - YEAR event

Inflow = 0.44 cfs @ 13.73 hrs, Volume= 0.138 af

Outflow = 0.44 cfs @ 13.78 hrs, Volume= 0.138 af, Atten= 0%, Lag= 3.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.15 fps, Min. Travel Time= 1.9 min

Avg. Velocity = 1.59 fps, Avg. Travel Time= 2.6 min

Peak Storage= 52 cf @ 13.75 hrs

Average Depth at Peak Storage= 0.09'

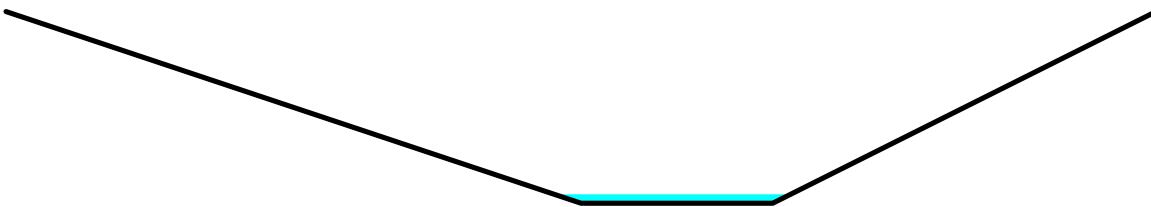
Bank-Full Depth= 2.00' Flow Area= 14.0 sf, Capacity= 168.01 cfs

2.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.00'

Length= 250.0' Slope= 0.0280 '/'

Inlet Invert= 180.00', Outlet Invert= 173.00'

**Summary for Reach 11R: Wetland**

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 0.59" for 2 - YEAR event

Inflow = 3.28 cfs @ 13.50 hrs, Volume= 0.830 af

Outflow = 3.16 cfs @ 13.98 hrs, Volume= 0.800 af, Atten= 4%, Lag= 28.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.13 fps, Min. Travel Time= 16.2 min

Avg. Velocity = 0.73 fps, Avg. Travel Time= 25.0 min

Peak Storage= 3,078 cf @ 13.70 hrs

Average Depth at Peak Storage= 0.24'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'



Summary for Pond 1P: New Road Culvert (CULV1)

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 0.29" for 2 - YEAR event
 Inflow = 0.45 cfs @ 13.72 hrs, Volume= 0.139 af
 Outflow = 0.44 cfs @ 13.73 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.9 min
 Primary = 0.44 cfs @ 13.73 hrs, Volume= 0.138 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 181.23' @ 13.73 hrs Surf.Area= 87 sf Storage= 23 cf

Plug-Flow detention time= 1.1 min calculated for 0.138 af (100% of inflow)
 Center-of-Mass det. time= 0.7 min (928.9 - 928.2)

Volume	Invert	Avail.Storage	Storage Description
#1	180.90'	561 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.90	50	0	0
182.00	175	124	124
183.00	100	138	261
184.00	125	113	374
185.00	250	188	561
Device	Routing	Invert	Outlet Devices
#1	Primary	180.90'	18.0" Round Culvert L= 53.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 180.90' / 180.37' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	183.50'	15.0' 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

Primary OutFlow Max=0.44 cfs @ 13.73 hrs HW=181.23' (Free Discharge)

↑ 1=Culvert (Inlet Controls 0.44 cfs @ 1.54 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.90' (Free Discharge)

↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2P: New Road Culvert (CULV2)

Inflow Area = 1.510 ac, 30.46% Impervious, Inflow Depth > 1.00" for 2 - YEAR event
 Inflow = 0.86 cfs @ 12.07 hrs, Volume= 0.126 af
 Outflow = 0.84 cfs @ 12.09 hrs, Volume= 0.126 af, Atten= 2%, Lag= 1.0 min
 Primary = 0.84 cfs @ 12.09 hrs, Volume= 0.126 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

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Type III 24-hr 2 - YEAR Rainfall=3.10"

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Peak Elev= 185.46' @ 12.09 hrs Surf.Area= 108 sf Storage= 36 cf

Plug-Flow detention time= 1.2 min calculated for 0.126 af (100% of inflow)
Center-of-Mass det. time= 0.8 min (825.6 - 824.8)

Volume	Invert	Avail.Storage	Storage Description
#1	185.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
185.00	50	0	0
186.00	175	113	113
187.00	100	138	250
188.00	125	113	363
189.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	18.0" Round Culvert L= 55.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 185.00' / 184.72' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	188.00'	15.0' 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

Primary OutFlow Max=0.83 cfs @ 12.09 hrs HW=185.46' (Free Discharge)

↑1=Culvert (Inlet Controls 0.83 cfs @ 1.82 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=185.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 6P: New Road Culvert (CULV6)

Inflow Area = 0.170 ac, 52.94% Impervious, Inflow Depth > 1.63" for 2 - YEAR event
 Inflow = 0.38 cfs @ 12.04 hrs, Volume= 0.023 af
 Outflow = 0.38 cfs @ 12.05 hrs, Volume= 0.023 af, Atten= 1%, Lag= 0.6 min
 Primary = 0.38 cfs @ 12.05 hrs, Volume= 0.023 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 192.08' @ 12.05 hrs Surf.Area= 79 sf Storage= 18 cf

Plug-Flow detention time= 1.6 min calculated for 0.023 af (100% of inflow)
Center-of-Mass det. time= 1.2 min (787.2 - 786.0)

Volume	Invert	Avail.Storage	Storage Description
#1	191.80'	572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
191.80	50	0	0
193.00	175	135	135
194.00	100	138	272
195.00	125	113	385
196.00	250	188	572

Device	Routing	Invert	Outlet Devices
#1	Primary	191.78'	18.0" Round Culvert L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 191.78' / 191.50' S= 0.0048 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	195.00'	15.0' 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

Primary OutFlow Max=0.37 cfs @ 12.05 hrs HW=192.08' (Free Discharge)
 ↑ 1=Culvert (Inlet Controls 0.37 cfs @ 1.47 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=191.80' (Free Discharge)
 ↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 9P: New Road Culvert (CULV9)

Inflow Area = 0.330 ac, 60.61% Impervious, Inflow Depth > 1.87" for 2 - YEAR event
 Inflow = 0.84 cfs @ 12.04 hrs, Volume= 0.051 af
 Outflow = 0.84 cfs @ 12.04 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.84 cfs @ 12.04 hrs, Volume= 0.051 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 180.03' @ 12.04 hrs Surf.Area= 54 sf Storage= 2 cf

Plug-Flow detention time= 0.0 min calculated for 0.051 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (776.0 - 776.0)

Volume	Invert	Avail.Storage	Storage Description
#1	180.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.00	50	0	0
181.00	175	113	113
182.00	100	138	250
183.00	125	113	363
184.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	179.50'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900

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Inlet / Outlet Invert= 179.50' / 175.00' S= 0.0789 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2 Secondary 182.00' 15.0' 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

Primary OutFlow Max=1.09 cfs @ 12.04 hrs HW=180.03' (Free Discharge)
 ↑1=Culvert (Inlet Controls 1.09 cfs @ 1.95 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: Filter Pond 3000 s.f.

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 1.06" for 2 - YEAR event
 Inflow = 3.16 cfs @ 12.07 hrs, Volume= 0.313 af
 Outflow = 0.15 cfs @ 17.42 hrs, Volume= 0.095 af, Atten= 95%, Lag= 320.8 min
 Primary = 0.15 cfs @ 17.42 hrs, Volume= 0.095 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Starting Elev= 168.50' Surf.Area= 4,019 sf Storage= 5,257 cf
 Peak Elev= 170.55' @ 17.42 hrs Surf.Area= 5,573 sf Storage= 15,030 cf (9,774 cf above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= 149.0 min (963.4 - 814.5)

Volume	Invert	Avail.Storage	Storage Description
#1	167.00'	39,518 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
167.00	3,000	0	0
168.00	3,669	3,335	3,335
169.00	4,369	4,019	7,354
170.00	5,127	4,748	12,102
171.00	5,941	5,534	17,636
172.00	6,811	6,376	24,012
173.00	7,739	7,275	31,287
174.00	8,723	8,231	39,518

Device	Routing	Invert	Outlet Devices
#1	Primary	164.00'	18.0" Round Culvert L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 164.00' / 163.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	168.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	172.50'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	173.00'	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=0.15 cfs @ 17.42 hrs HW=170.55' (Free Discharge)

↑
1=Culvert (Passes 0.15 cfs of 20.49 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.15 cfs @ 6.75 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=168.50' (Free Discharge)

↑
4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: New Road Culvert (CULV10)

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 0.93" for 2 - YEAR event
 Inflow = 1.89 cfs @ 12.12 hrs, Volume= 0.202 af
 Outflow = 1.87 cfs @ 12.14 hrs, Volume= 0.202 af, Atten= 1%, Lag= 0.8 min
 Primary = 1.87 cfs @ 12.14 hrs, Volume= 0.202 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 176.71' @ 12.14 hrs Surf.Area= 139 sf Storage= 67 cf

Plug-Flow detention time= 1.0 min calculated for 0.202 af (100% of inflow)
 Center-of-Mass det. time= 0.7 min (827.2 - 826.5)

Volume	Invert	Avail.Storage	Storage Description
#1	176.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
176.00	50	0	0
177.00	175	113	113
178.00	100	138	250
179.00	125	113	363
180.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	176.00'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 176.00' / 175.00' S= 0.0175 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	180.00'	15.0' 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

Primary OutFlow Max=1.84 cfs @ 12.14 hrs HW=176.70' (Free Discharge)

↑
1=Culvert (Inlet Controls 1.84 cfs @ 2.26 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=176.00' (Free Discharge)

↑
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 50P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 2.68" for 2 - YEAR event
 Inflow = 0.69 cfs @ 12.00 hrs, Volume= 0.045 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 184.06' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 1,947 cf

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	183.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	188.50'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=183.00' (Free Discharge)
 ↑=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 2.68" for 2 - YEAR event
 Inflow = 0.69 cfs @ 12.00 hrs, Volume= 0.045 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 168.06' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 1,947 cf

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	167.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=167.00' (Free Discharge)

↑ 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 52P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 2.68" for 2 - YEAR event
 Inflow = 0.34 cfs @ 12.00 hrs, Volume= 0.022 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 180.11' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 973 cf

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	178.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=178.00' (Free Discharge)

↑ 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 2.68" for 2 - YEAR event
 Inflow = 0.34 cfs @ 12.00 hrs, Volume= 0.022 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 198.11' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 973 cf

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	196.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

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Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=196.00' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 54P: Drip Edge

Inflow Area = 0.050 ac, 100.00% Impervious, Inflow Depth > 2.68" for 2 - YEAR event
 Inflow = 0.17 cfs @ 12.00 hrs, Volume= 0.011 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 185.22' @ 20.00 hrs Surf.Area= 288 sf Storage= 487 cf

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	181.00'	691 cf	3.00'W x 96.00'L x 6.00'H Prismatoid 1,728 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	186.00'	48.0' 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=0.00 cfs @ 5.00 hrs HW=181.00' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond DMH1: DMH1

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 1.04" for 2 - YEAR event
 Inflow = 2.36 cfs @ 12.11 hrs, Volume= 0.254 af
 Outflow = 2.36 cfs @ 12.11 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.36 cfs @ 12.11 hrs, Volume= 0.254 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 175.61' @ 12.11 hrs
 Flood Elev= 182.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	174.90'	18.0" Round Culvert L= 253.0' RCP, square edge headwall, Ke= 0.500

Inlet / Outlet Invert= 174.90' / 170.60' S= 0.0170 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.33 cfs @ 12.11 hrs HW=175.60' (Free Discharge)

↑**1=Culvert** (Inlet Controls 2.33 cfs @ 2.86 fps)

Summary for Pond DMH2: DMH2

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 1.04" for 2 - YEAR event
 Inflow = 2.36 cfs @ 12.11 hrs, Volume= 0.254 af
 Outflow = 2.36 cfs @ 12.11 hrs, Volume= 0.254 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.36 cfs @ 12.11 hrs, Volume= 0.254 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 171.27' @ 12.11 hrs

Flood Elev= 175.09'

Device	Routing	Invert	Outlet Devices
#1	Primary	170.50'	18.0" Round Culvert L= 85.5' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.10' S= 0.0047 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=2.33 cfs @ 12.11 hrs HW=171.26' (Free Discharge)

↑**1=Culvert** (Barrel Controls 2.33 cfs @ 3.76 fps)

Summary for Pond DMH4: DMH4

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 1.06" for 2 - YEAR event
 Inflow = 3.16 cfs @ 12.07 hrs, Volume= 0.313 af
 Outflow = 3.16 cfs @ 12.07 hrs, Volume= 0.313 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.16 cfs @ 12.07 hrs, Volume= 0.313 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 170.77' @ 12.07 hrs

Flood Elev= 174.24'

Device	Routing	Invert	Outlet Devices
#1	Primary	169.90'	18.0" Round Culvert L= 51.3' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.90' / 169.50' S= 0.0078 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.08 cfs @ 12.07 hrs HW=170.75' (Free Discharge)

↑**1=Culvert** (Barrel Controls 3.08 cfs @ 4.29 fps)

Summary for Subcatchment 1S:

Runoff = 8.00 cfs @ 12.83 hrs, Volume= 1.389 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description		
4.120	30	Woods, Good, HSG A		
3.940	55	Woods, Good, HSG B		
9.010	70	Woods, Good, HSG C		
0.900	77	Woods, Good, HSG D		
*	0.010	New Road Impervious		
*	0.040	New Road Lawn		
*	0.000	New Lot Buildings (0.20 to 50)		
*	0.200	New Lot Impervious		
*	0.600	New Lot Lawn		
18.820	59	Weighted Average		
18.610		98.88% Pervious Area		
0.210		1.12% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft) Velocity (ft/sec) Capacity (cfs) Description		
50.1	100	0.0100	0.03	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
2.8	160	0.1500	0.97	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
52.9	260	Total		

Summary for Subcatchment 2S:

Runoff = 6.74 cfs @ 13.38 hrs, Volume= 1.550 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
0.240	55	Woods, Good, HSG B
7.540	70	Woods, Good, HSG C
2.010	77	Woods, Good, HSG D
*	0.170	Existing Roads Off Site
*	0.170	Existing Lawn Off Site
*	0.120	New Road Impervious
*	0.160	New Road Lawn
*	0.000	New Lot Buildings (0.20 to 51)
*	0.100	New Lot Impervious
*	0.600	New Lot Lawn
11.110	72	Weighted Average
10.720		96.49% Pervious Area
0.390		3.51% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 3S:

Runoff = 17.48 cfs @ 12.88 hrs, Volume= 3.036 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 0.32 cfs @ 13.65 hrs, Volume= 0.114 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
*	0.380	98	Existing Impervious On Site	
*	0.380	74	Existing Lawn On Site	
*	0.000	74	New Road Lawn	
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S:

Runoff = 9.56 cfs @ 13.21 hrs, Volume= 2.021 af, Depth> 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	98	Existing Roads Off Site	
*	0.280	74	Existing Lawn Off Site	
*	0.290	98	Existing Impervious On Site	
*	0.290	74	Existing Lawn On Site	
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

Summary for Subcatchment 6S:

Runoff = 1.69 cfs @ 13.50 hrs, Volume= 0.426 af, Depth> 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description			
1.910	30	Woods, Good, HSG A			
0.500	55	Woods, Good, HSG B			
1.400	70	Woods, Good, HSG C			
0.030	77	Woods, Good, HSG D			
*	0.290	Existing Roads Off Site			
*	0.290	Existing Lawn Off Site			
*	0.300	Existing Impervious On Site			
*	0.300	Existing Lawn On Site			
*	0.070	New Road Impervious			
*	0.100	New Road Lawn			
*	0.000	New Lot Buildings (0.1 to 52)			
*	0.100	New Lot Impervious			
*	0.300	New Lot Lawn			
5.590	60	Weighted Average			
4.830		86.40% Pervious Area			
0.760		13.60% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
38.0	100	0.0200	Velocity (ft/sec)	Capacity (cfs)	Description
61.1	1,450	0.0250	0.40		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
1.3	1,100	0.0400	13.91	111.28	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
100.4	2,650	Total			Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight

Summary for Subcatchment 7S:

Runoff = 1.06 cfs @ 12.52 hrs, Volume= 0.136 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Area (ac)	CN	Description			
0.000	55	Woods, Good, HSG B			
0.140	70	Woods, Good, HSG C			
*	0.080	New Road Impervious			
*	0.100	New Road Lawn			
*	0.000	New Lot Buildings (0.1 to 53S)			
*	0.100	New Lot Impervious			
*	0.300	New Lot Lawn			
0.720	79	Weighted Average			
0.540		75.00% Pervious Area			
0.180		25.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
35.5	65	0.0100	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	250	0.0250	2.37		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
37.3	315	Total			Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps

Summary for Subcatchment 8S:

Runoff = 0.67 cfs @ 12.04 hrs, Volume= 0.041 af, Depth> 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description			
0.010	55	Woods, Good, HSG B			
*	0.090	New Road Impervious			
*	0.070	New Road Lawn			
0.170	86	Weighted Average			
0.080		47.06% Pervious Area			
0.090		52.94% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
0.2	13	0.0400	Velocity (ft/sec)	Capacity (cfs)	Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
2.3	250	0.0150	1.84		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.5	263	Total			

Summary for Subcatchment 9S:

Runoff = 1.25 cfs @ 12.04 hrs, Volume= 0.076 af, Depth> 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Area (ac)	CN	Description
0.140	55	Woods, Good, HSG B
0.180	70	Woods, Good, HSG C
*	0.090	New Road Impervious
*	0.110	New Road Lawn
*	0.000	New Lot Buildings
*	0.000	New Lot Impervious
*	0.000	New Lot Lawn
0.520	72	Weighted Average
0.430		82.69% Pervious Area
0.090		17.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 10S:

Runoff = 2.75 cfs @ 12.04 hrs, Volume= 0.166 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
0.250	55	Woods, Good, HSG B
0.150	70	Woods, Good, HSG C
*	0.190	New Road Impervious
*	0.260	New Road Lawn
*	0.000	New Lot Buildings (.05 TO 54)
*	0.050	New Lot Impervious
*	0.150	New Lot Lawn
1.050	74	Weighted Average
0.810		77.14% Pervious Area
0.240		22.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 11S:

Runoff = 1.40 cfs @ 12.03 hrs, Volume= 0.088 af, Depth> 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
*	0.100	98 New Road Impervious
*	0.130	74 New Road Lawn
*	0.000	98 New Lot Buildings
*	0.100	98 New Lot Impervious
*	0.000	74 New Lawn
0.330	89	Weighted Average
0.130		39.39% Pervious Area
0.200		60.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263				Total

Summary for Subcatchment 12S:

Runoff = 1.93 cfs @ 12.04 hrs, Volume= 0.117 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
0.040	70	Woods, Good, HSG C
*	0.130	98 New Road Impervious
*	0.150	74 New Road Lawn
*	0.290	74 Filter Pond
*	0.000	98 New Lot Buildings
*	0.000	98 New Lot Impervious
*	0.000	74 New Lawn
0.610	79	Weighted Average
0.480		78.69% Pervious Area
0.130		21.31% Impervious Area

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 50S: 4 Building Roofs

Runoff = 1.03 cfs @ 12.00 hrs, Volume= 0.068 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 51S: 4 Building Roofs

Runoff = 1.03 cfs @ 12.00 hrs, Volume= 0.068 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 52S: 2 Building Roofs

Runoff = 0.51 cfs @ 12.00 hrs, Volume= 0.034 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

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Type III 24-hr 10 - YEAR Rainfall=4.60"

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Area (ac)	CN	Description
* 0.100	98	Building Roof
0.100		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 53S: 2 Building Roofs

Runoff = 0.51 cfs @ 12.00 hrs, Volume= 0.034 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
* 0.100	98	Building Roof
0.100		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 54S: Building Roof

Runoff = 0.26 cfs @ 12.00 hrs, Volume= 0.017 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 - YEAR Rainfall=4.60"

Area (ac)	CN	Description
* 0.050	98	Building Roof
0.050		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Reach 1R: Property Line

Inflow Area = 22.570 ac, 6.60% Impervious, Inflow Depth > 0.80" for 10 - YEAR event

Inflow = 7.86 cfs @ 13.10 hrs, Volume= 1.502 af

Outflow = 7.85 cfs @ 13.10 hrs, Volume= 1.501 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.27 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.95 fps, Avg. Travel Time= 0.4 min

Peak Storage= 92 cf @ 13.10 hrs

Average Depth at Peak Storage= 0.41'

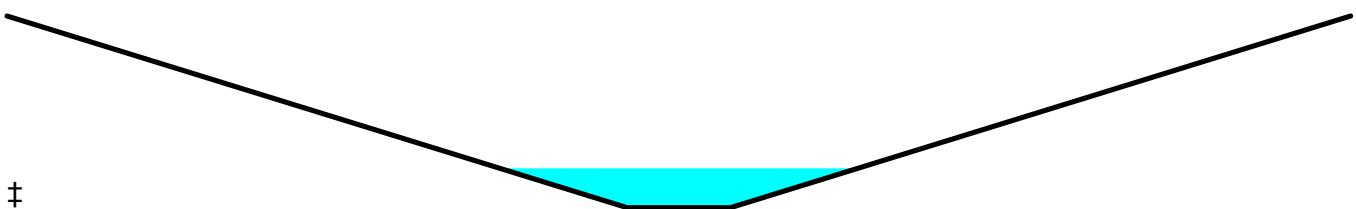
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 2R: Property Line

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 1.36" for 10 - YEAR event

Inflow = 8.24 cfs @ 13.76 hrs, Volume= 1.930 af

Outflow = 8.24 cfs @ 13.77 hrs, Volume= 1.929 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.32 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.64 fps, Avg. Travel Time= 0.3 min

Peak Storage= 95 cf @ 13.76 hrs

Average Depth at Peak Storage= 0.42'

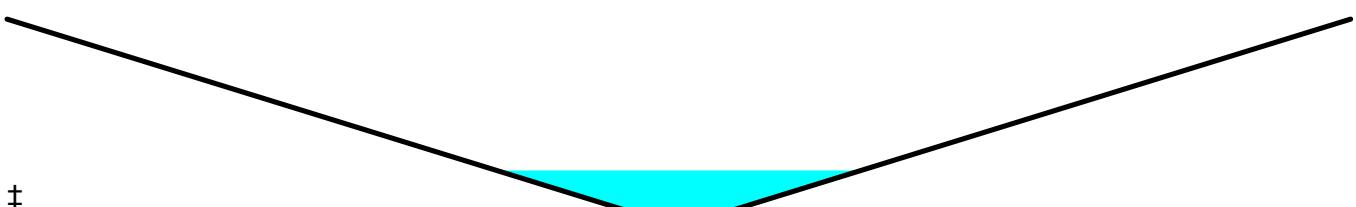
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 1.30" for 10 - YEAR event

Inflow = 17.48 cfs @ 12.88 hrs, Volume= 3.036 af

Outflow = 17.47 cfs @ 12.89 hrs, Volume= 3.035 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.26 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.13 fps, Avg. Travel Time= 0.3 min

Peak Storage= 166 cf @ 12.89 hrs

Average Depth at Peak Storage= 0.60'

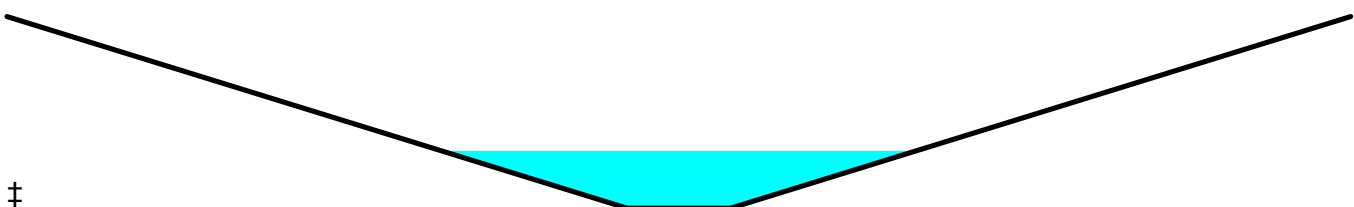
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'

**Summary for Reach 4R: Property Line**

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 0.25" for 10 - YEAR event

Inflow = 0.32 cfs @ 13.65 hrs, Volume= 0.114 af

Outflow = 0.32 cfs @ 13.66 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.68 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 1.34 fps, Avg. Travel Time= 0.6 min

Peak Storage= 9 cf @ 13.65 hrs

Average Depth at Peak Storage= 0.08'

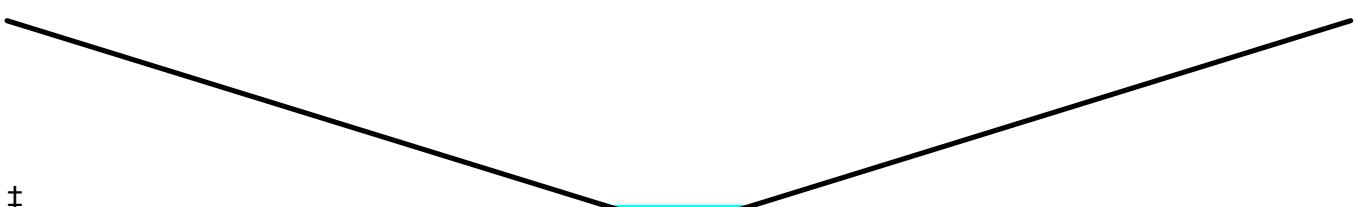
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 1.61" for 10 - YEAR event

Inflow = 9.56 cfs @ 13.21 hrs, Volume= 2.021 af

Outflow = 9.56 cfs @ 13.21 hrs, Volume= 2.020 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.49 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.69 fps, Avg. Travel Time= 0.3 min

Peak Storage= 106 cf @ 13.21 hrs

Average Depth at Peak Storage= 0.45'

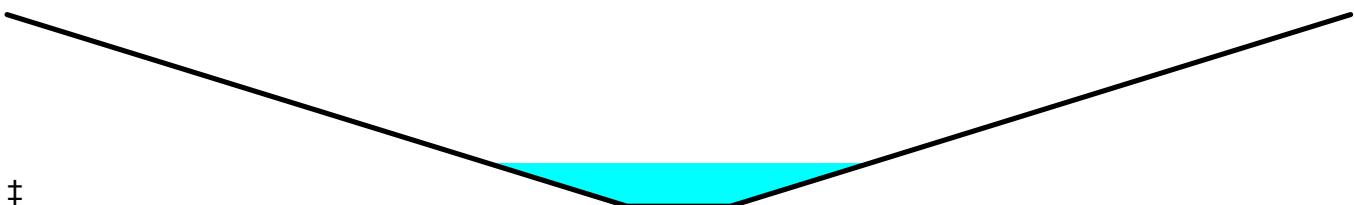
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'

**Summary for Reach 6R: Road Ditch**

Inflow Area = 0.990 ac, 37.37% Impervious, Inflow Depth > 2.15" for 10 - YEAR event

Inflow = 1.17 cfs @ 12.47 hrs, Volume= 0.177 af

Outflow = 1.17 cfs @ 12.54 hrs, Volume= 0.177 af, Atten= 1%, Lag= 4.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.85 fps, Min. Travel Time= 2.3 min

Avg. Velocity = 1.28 fps, Avg. Travel Time= 5.2 min

Peak Storage= 164 cf @ 12.50 hrs

Average Depth at Peak Storage= 0.25'

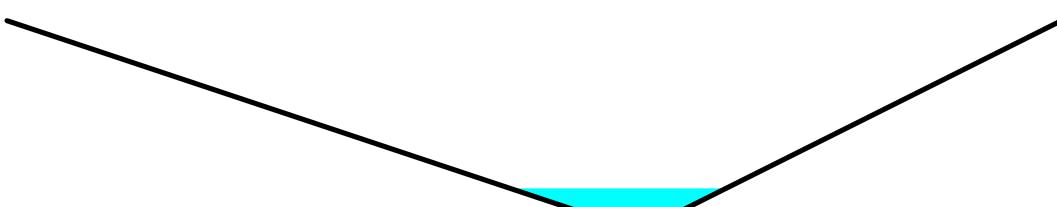
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 110.75 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0183 '/'

Inlet Invert= 193.00', Outlet Invert= 185.70'



Summary for Reach 8R: Wetland

Inflow Area = 19.020 ac, 2.16% Impervious, Inflow Depth > 0.88" for 10 - YEAR event

Inflow = 8.00 cfs @ 12.83 hrs, Volume= 1.389 af

Outflow = 7.67 cfs @ 13.10 hrs, Volume= 1.365 af, Atten= 4%, Lag= 16.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.66 fps, Min. Travel Time= 9.0 min

Avg. Velocity = 1.04 fps, Avg. Travel Time= 14.3 min

Peak Storage= 4,146 cf @ 12.95 hrs

Average Depth at Peak Storage= 0.66'

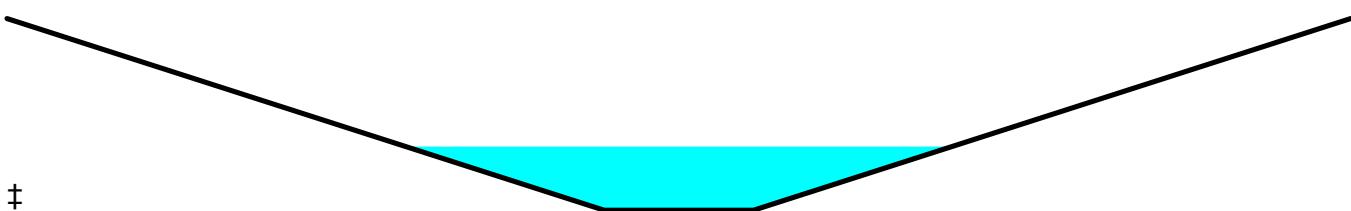
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools

Side Slope Z-value= 6.0 '/' Top Width= 27.00'

Length= 895.0' Slope= 0.0223 '/'

Inlet Invert= 183.00', Outlet Invert= 163.00'



‡

Summary for Reach 9R: Road Ditch

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 1.94" for 10 - YEAR event

Inflow = 4.61 cfs @ 12.05 hrs, Volume= 0.422 af

Outflow = 4.25 cfs @ 12.11 hrs, Volume= 0.421 af, Atten= 8%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.76 fps, Min. Travel Time= 1.8 min

Avg. Velocity = 1.52 fps, Avg. Travel Time= 4.4 min

Peak Storage= 465 cf @ 12.07 hrs

Average Depth at Peak Storage= 0.51'

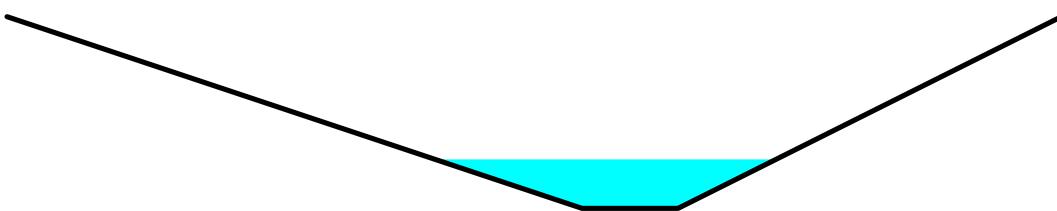
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 100.41 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0150 '/'

Inlet Invert= 184.50', Outlet Invert= 178.50'



Summary for Reach 10R: Existing Road Ditch

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 0.90" for 10 - YEAR event

Inflow = 1.69 cfs @ 13.51 hrs, Volume= 0.425 af

Outflow = 1.69 cfs @ 13.55 hrs, Volume= 0.424 af, Atten= 0%, Lag= 2.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.37 fps, Min. Travel Time= 1.2 min

Avg. Velocity = 2.25 fps, Avg. Travel Time= 1.9 min

Peak Storage= 125 cf @ 13.53 hrs

Average Depth at Peak Storage= 0.20'

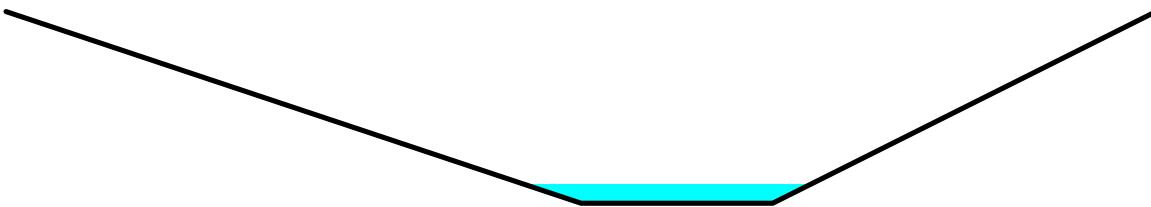
Bank-Full Depth= 2.00' Flow Area= 14.0 sf, Capacity= 168.01 cfs

2.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.00'

Length= 250.0' Slope= 0.0280 '/'

Inlet Invert= 180.00', Outlet Invert= 173.00'

**Summary for Reach 11R: Wetland**

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 1.39" for 10 - YEAR event

Inflow = 8.39 cfs @ 13.42 hrs, Volume= 1.974 af

Outflow = 8.24 cfs @ 13.76 hrs, Volume= 1.930 af, Atten= 2%, Lag= 20.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.56 fps, Min. Travel Time= 11.8 min

Avg. Velocity = 0.89 fps, Avg. Travel Time= 20.6 min

Peak Storage= 5,821 cf @ 13.56 hrs

Average Depth at Peak Storage= 0.42'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'



‡

Summary for Pond 1P: New Road Culvert (CULV1)

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 0.90" for 10 - YEAR event
 Inflow = 1.69 cfs @ 13.50 hrs, Volume= 0.426 af
 Outflow = 1.69 cfs @ 13.51 hrs, Volume= 0.425 af, Atten= 0%, Lag= 0.5 min
 Primary = 1.69 cfs @ 13.51 hrs, Volume= 0.425 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 181.57' @ 13.51 hrs Surf.Area= 126 sf Storage= 59 cf

Plug-Flow detention time= 0.7 min calculated for 0.425 af (100% of inflow)
 Center-of-Mass det. time= 0.5 min (901.8 - 901.3)

Volume	Invert	Avail.Storage	Storage Description
#1	180.90'	561 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.90	50	0	0
182.00	175	124	124
183.00	100	138	261
184.00	125	113	374
185.00	250	188	561
Device	Routing	Invert	Outlet Devices
#1	Primary	180.90'	18.0" Round Culvert L= 53.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 180.90' / 180.37' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	183.50'	15.0' 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

Primary OutFlow Max=1.69 cfs @ 13.51 hrs HW=181.57' (Free Discharge)

↑ 1=Culvert (Inlet Controls 1.69 cfs @ 2.20 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.90' (Free Discharge)

↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2P: New Road Culvert (CULV2)

Inflow Area = 1.510 ac, 30.46% Impervious, Inflow Depth > 2.01" for 10 - YEAR event
 Inflow = 1.92 cfs @ 12.06 hrs, Volume= 0.252 af
 Outflow = 1.91 cfs @ 12.07 hrs, Volume= 0.252 af, Atten= 1%, Lag= 0.5 min
 Primary = 1.91 cfs @ 12.07 hrs, Volume= 0.252 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

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Peak Elev= 185.72' @ 12.07 hrs Surf.Area= 140 sf Storage= 69 cf

Plug-Flow detention time= 0.9 min calculated for 0.252 af (100% of inflow)
Center-of-Mass det. time= 0.7 min (809.8 - 809.1)

Volume	Invert	Avail.Storage	Storage Description
#1	185.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
185.00	50	0	0
186.00	175	113	113
187.00	100	138	250
188.00	125	113	363
189.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	18.0" Round Culvert L= 55.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 185.00' / 184.72' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	188.00'	15.0' 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

Primary OutFlow Max=1.85 cfs @ 12.07 hrs HW=185.71' (Free Discharge)

↑1=Culvert (Barrel Controls 1.85 cfs @ 3.29 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=185.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 6P: New Road Culvert (CULV6)

Inflow Area = 0.170 ac, 52.94% Impervious, Inflow Depth > 2.91" for 10 - YEAR event
 Inflow = 0.67 cfs @ 12.04 hrs, Volume= 0.041 af
 Outflow = 0.66 cfs @ 12.05 hrs, Volume= 0.041 af, Atten= 1%, Lag= 0.5 min
 Primary = 0.66 cfs @ 12.05 hrs, Volume= 0.041 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 192.19' @ 12.05 hrs Surf.Area= 90 sf Storage= 27 cfPlug-Flow detention time= 1.4 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (773.5 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1	191.80'	572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
191.80	50	0	0
193.00	175	135	135
194.00	100	138	272
195.00	125	113	385
196.00	250	188	572

Device	Routing	Invert	Outlet Devices
#1	Primary	191.78'	18.0" Round Culvert L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 191.78' / 191.50' S= 0.0048 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	195.00'	15.0' 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

Primary OutFlow Max=0.66 cfs @ 12.05 hrs HW=192.18' (Free Discharge)
 ↑ 1=Culvert (Inlet Controls 0.66 cfs @ 1.71 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=191.80' (Free Discharge)
 ↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 9P: New Road Culvert (CULV9)

Inflow Area = 0.330 ac, 60.61% Impervious, Inflow Depth > 3.20" for 10 - YEAR event
 Inflow = 1.40 cfs @ 12.03 hrs, Volume= 0.088 af
 Outflow = 1.39 cfs @ 12.04 hrs, Volume= 0.088 af, Atten= 1%, Lag= 0.1 min
 Primary = 1.39 cfs @ 12.04 hrs, Volume= 0.088 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 180.10' @ 12.04 hrs Surf.Area= 63 sf Storage= 6 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.0 min (763.2 - 763.1)

Volume	Invert	Avail.Storage	Storage Description
#1	180.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.00	50	0	0
181.00	175	113	113
182.00	100	138	250
183.00	125	113	363
184.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	179.50'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 179.50' / 175.00' S= 0.0789 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2 Secondary 182.00' 15.0' 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

Primary OutFlow Max=1.34 cfs @ 12.04 hrs HW=180.09' (Free Discharge)
 ↑1=Culvert (Inlet Controls 1.34 cfs @ 2.07 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: Filter Pond 3000 s.f.

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 2.11" for 10 - YEAR event
 Inflow = 6.79 cfs @ 12.07 hrs, Volume= 0.625 af
 Outflow = 0.20 cfs @ 18.52 hrs, Volume= 0.138 af, Atten= 97%, Lag= 387.1 min
 Primary = 0.20 cfs @ 18.52 hrs, Volume= 0.138 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Starting Elev= 168.50' Surf.Area= 4,019 sf Storage= 5,257 cf
 Peak Elev= 172.37' @ 18.52 hrs Surf.Area= 7,153 sf Storage= 26,585 cf (21,329 cf above start)

Plug-Flow detention time= 599.0 min calculated for 0.017 af (3% of inflow)
 Center-of-Mass det. time= 150.5 min (950.7 - 800.2)

Volume	Invert	Avail.Storage	Storage Description
#1	167.00'	39,518 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
167.00	3,000	0	0
168.00	3,669	3,335	3,335
169.00	4,369	4,019	7,354
170.00	5,127	4,748	12,102
171.00	5,941	5,534	17,636
172.00	6,811	6,376	24,012
173.00	7,739	7,275	31,287
174.00	8,723	8,231	39,518

Device	Routing	Invert	Outlet Devices
#1	Primary	164.00'	18.0" Round Culvert $L= 100.0'$ RCP, square edge headwall, $Ke= 0.500$ Inlet / Outlet Invert= 164.00' / 163.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	168.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	172.50'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	173.00'	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=0.20 cfs @ 18.52 hrs HW=172.37' (Free Discharge)

↑
1=Culvert (Passes 0.20 cfs of 23.49 cfs potential flow)
 └─2=Orifice/Grate (Orifice Controls 0.20 cfs @ 9.37 fps)
 └─3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=168.50' (Free Discharge)

↑
4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: New Road Culvert (CULV10)

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 1.93" for 10 - YEAR event
 Inflow = 4.25 cfs @ 12.11 hrs, Volume= 0.421 af
 Outflow = 4.22 cfs @ 12.11 hrs, Volume= 0.421 af, Atten= 1%, Lag= 0.5 min
 Primary = 4.22 cfs @ 12.11 hrs, Volume= 0.421 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 177.16' @ 12.11 hrs Surf.Area= 163 sf Storage= 139 cf

Plug-Flow detention time= 0.8 min calculated for 0.419 af (100% of inflow)

Center-of-Mass det. time= 0.6 min (811.1 - 810.5)

Volume	Invert	Avail.Storage	Storage Description
#1	176.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
176.00	50	0	0
177.00	175	113	113
178.00	100	138	250
179.00	125	113	363
180.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	176.00'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 176.00' / 175.00' S= 0.0175 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf 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	Secondary	180.00'	15.0' 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

Primary OutFlow Max=4.12 cfs @ 12.11 hrs HW=177.14' (Free Discharge)

↑
1=Culvert (Inlet Controls 4.12 cfs @ 2.87 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=176.00' (Free Discharge)

↑
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 50P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 4.05" for 10 - YEAR event
 Inflow = 1.03 cfs @ 12.00 hrs, Volume= 0.068 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 184.60' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 2,942 cf

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	183.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	188.50'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=183.00' (Free Discharge)
 ↑=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 4.05" for 10 - YEAR event
 Inflow = 1.03 cfs @ 12.00 hrs, Volume= 0.068 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 168.60' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 2,942 cf

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	167.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=167.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 52P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 4.05" for 10 - YEAR event
 Inflow = 0.51 cfs @ 12.00 hrs, Volume= 0.034 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 181.19' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 1,471 cf

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	178.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=178.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 4.05" for 10 - YEAR event
 Inflow = 0.51 cfs @ 12.00 hrs, Volume= 0.034 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 199.19' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 1,471 cf

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	196.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

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Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=196.00' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 54P: Drip Edge

Inflow Area = 0.050 ac, 100.00% Impervious, Inflow Depth > 4.05" for 10 - YEAR event
 Inflow = 0.26 cfs @ 12.00 hrs, Volume= 0.017 af
 Outflow = 0.03 cfs @ 13.27 hrs, Volume= 0.004 af, Atten= 90%, Lag= 76.1 min
 Primary = 0.03 cfs @ 13.27 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 186.00' @ 13.25 hrs Surf.Area= 288 sf Storage= 576 cf

Plug-Flow detention time= 389.8 min calculated for 0.004 af (22% of inflow)
 Center-of-Mass det. time= 204.7 min (936.0 - 731.3)

Volume	Invert	Avail.Storage	Storage Description
#1	181.00'	691 cf	3.00'W x 96.00'L x 6.00'H Prismatoid 1,728 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	186.00'	48.0' 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=0.00 cfs @ 13.27 hrs HW=186.00' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Weir Controls 0.00 cfs @ 0.08 fps)

Summary for Pond DMH1: DMH1

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 2.08" for 10 - YEAR event
 Inflow = 5.17 cfs @ 12.10 hrs, Volume= 0.509 af
 Outflow = 5.17 cfs @ 12.10 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.17 cfs @ 12.10 hrs, Volume= 0.509 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 176.03' @ 12.10 hrs
 Flood Elev= 182.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	174.90'	18.0" Round Culvert L= 253.0' RCP, square edge headwall, Ke= 0.500

Inlet / Outlet Invert= 174.90' / 170.60' S= 0.0170 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.13 cfs @ 12.10 hrs HW=176.02' (Free Discharge)

↑
1=Culvert (Inlet Controls 5.13 cfs @ 3.61 fps)

Summary for Pond DMH2: DMH2

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 2.08" for 10 - YEAR event
 Inflow = 5.17 cfs @ 12.10 hrs, Volume= 0.509 af
 Outflow = 5.17 cfs @ 12.10 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.17 cfs @ 12.10 hrs, Volume= 0.509 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 171.74' @ 12.10 hrs

Flood Elev= 175.09'

Device	Routing	Invert	Outlet Devices
#1	Primary	170.50'	18.0" Round Culvert L= 85.5' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.10' S= 0.0047 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=5.13 cfs @ 12.10 hrs HW=171.74' (Free Discharge)

↑
1=Culvert (Barrel Controls 5.13 cfs @ 4.47 fps)

Summary for Pond DMH4: DMH4

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 2.11" for 10 - YEAR event
 Inflow = 6.79 cfs @ 12.07 hrs, Volume= 0.625 af
 Outflow = 6.79 cfs @ 12.07 hrs, Volume= 0.625 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.79 cfs @ 12.07 hrs, Volume= 0.625 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 171.33' @ 12.07 hrs

Flood Elev= 174.24'

Device	Routing	Invert	Outlet Devices
#1	Primary	169.90'	18.0" Round Culvert L= 51.3' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.90' / 169.50' S= 0.0078 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.60 cfs @ 12.07 hrs HW=171.30' (Free Discharge)

↑
1=Culvert (Barrel Controls 6.60 cfs @ 4.99 fps)

Summary for Subcatchment 1S:

Runoff = 14.74 cfs @ 12.78 hrs, Volume= 2.384 af, Depth> 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description			
4.120	30	Woods, Good, HSG A			
3.940	55	Woods, Good, HSG B			
9.010	70	Woods, Good, HSG C			
0.900	77	Woods, Good, HSG D			
*	0.010	New Road Impervious			
*	0.040	New Road Lawn			
*	0.000	New Lot Buildings (0.20 to 50)			
*	0.200	New Lot Impervious			
*	0.600	New Lot Lawn			
18.820	59	Weighted Average			
18.610		98.88% Pervious Area			
0.210		1.12% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
50.1	100	0.0100	0.03		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
2.8	160	0.1500	0.97		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
52.9	260	Total			

Summary for Subcatchment 2S:

Runoff = 10.27 cfs @ 13.33 hrs, Volume= 2.340 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
0.240	55	Woods, Good, HSG B
7.540	70	Woods, Good, HSG C
2.010	77	Woods, Good, HSG D
*	0.170	Existing Roads Off Site
*	0.170	Existing Lawn Off Site
*	0.120	New Road Impervious
*	0.160	New Road Lawn
*	0.000	New Lot Buildings (0.20 to 51)
*	0.100	New Lot Impervious
*	0.600	New Lot Lawn
11.110	72	Weighted Average
10.720		96.49% Pervious Area
0.390		3.51% Impervious Area

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 3S:

Runoff = 28.57 cfs @ 12.86 hrs, Volume= 4.822 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 0.98 cfs @ 13.41 hrs, Volume= 0.272 af, Depth> 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Area (ac)	CN	Description		
3.640	30	Woods, Good, HSG A		
0.250	55	Woods, Good, HSG B		
0.850	70	Woods, Good, HSG C		
*	0.380	98	Existing Impervious On Site	
*	0.380	74	Existing Lawn On Site	
*	0.000	74	New Road Lawn	
5.500	45	Weighted Average		
5.120		93.09% Pervious Area		
0.380		6.91% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total		

Summary for Subcatchment 5S:

Runoff = 14.74 cfs @ 13.17 hrs, Volume= 3.075 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description		
1.850	55	Woods, Good, HSG B		
7.520	70	Woods, Good, HSG C		
4.520	77	Woods, Good, HSG D		
*	0.280	98	Existing Roads Off Site	
*	0.280	74	Existing Lawn Off Site	
*	0.290	98	Existing Impervious On Site	
*	0.290	74	Existing Lawn On Site	
15.030	71	Weighted Average		
14.460		96.21% Pervious Area		
0.570		3.79% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
38.0	100	0.0200	0.04	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total		

Summary for Subcatchment 6S:

Runoff = 3.04 cfs @ 13.46 hrs, Volume= 0.724 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
1.910	30	Woods, Good, HSG A
0.500	55	Woods, Good, HSG B
1.400	70	Woods, Good, HSG C
0.030	77	Woods, Good, HSG D
*	0.290	Existing Roads Off Site
*	0.290	Existing Lawn Off Site
*	0.300	Existing Impervious On Site
*	0.300	Existing Lawn On Site
*	0.070	New Road Impervious
*	0.100	New Road Lawn
*	0.000	New Lot Buildings (0.1 to 52)
*	0.100	New Lot Impervious
*	0.300	New Lot Lawn
5.590	60	Weighted Average
4.830		86.40% Pervious Area
0.760		13.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 7S:

Runoff = 1.50 cfs @ 12.51 hrs, Volume= 0.195 af, Depth> 3.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Area (ac)	CN	Description			
0.000	55	Woods, Good, HSG B			
0.140	70	Woods, Good, HSG C			
*	0.080	New Road Impervious			
*	0.100	New Road Lawn			
*	0.000	New Lot Buildings (0.1 to 53S)			
*	0.100	New Lot Impervious			
*	0.300	New Lot Lawn			
0.720	79	Weighted Average			
0.540		75.00% Pervious Area			
0.180		25.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
35.5	65	0.0100	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	250	0.0250	2.37		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
37.3	315	Total			Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps

Summary for Subcatchment 8S:

Runoff = 0.90 cfs @ 12.04 hrs, Volume= 0.056 af, Depth> 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description			
0.010	55	Woods, Good, HSG B			
*	0.090	New Road Impervious			
*	0.070	New Road Lawn			
0.170	86	Weighted Average			
0.080		47.06% Pervious Area			
0.090		52.94% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
0.2	13	0.0400	Velocity (ft/sec)	Capacity (cfs)	Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
2.3	250	0.0150	1.84		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.5	263	Total			

Summary for Subcatchment 9S:

Runoff = 1.89 cfs @ 12.04 hrs, Volume= 0.114 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Area (ac)	CN	Description
0.140	55	Woods, Good, HSG B
0.180	70	Woods, Good, HSG C
*	0.090	New Road Impervious
*	0.110	New Road Lawn
*	0.000	New Lot Buildings
*	0.000	New Lot Impervious
*	0.000	New Lot Lawn

0.520	72	Weighted Average
0.430		82.69% Pervious Area
0.090		17.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 10S:

Runoff = 4.08 cfs @ 12.04 hrs, Volume= 0.246 af, Depth> 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
0.250	55	Woods, Good, HSG B
0.150	70	Woods, Good, HSG C
*	0.190	New Road Impervious
*	0.260	New Road Lawn
*	0.000	New Lot Buildings (.05 TO 54)
*	0.050	New Lot Impervious
*	0.150	New Lot Lawn

1.050	74	Weighted Average
0.810		77.14% Pervious Area
0.240		22.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 11S:

Runoff = 1.84 cfs @ 12.03 hrs, Volume= 0.118 af, Depth> 4.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
*	0.100	98 New Road Impervious
*	0.130	74 New Road Lawn
*	0.000	98 New Lot Buildings
*	0.100	98 New Lot Impervious
*	0.000	74 New Lawn
0.330	89	Weighted Average
0.130		39.39% Pervious Area
0.200		60.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 12S:

Runoff = 2.74 cfs @ 12.04 hrs, Volume= 0.167 af, Depth> 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
0.040	70	Woods, Good, HSG C
*	0.130	98 New Road Impervious
*	0.150	74 New Road Lawn
*	0.290	74 Filter Pond
*	0.000	98 New Lot Buildings
*	0.000	98 New Lot Impervious
*	0.000	74 New Lawn
0.610	79	Weighted Average
0.480		78.69% Pervious Area
0.130		21.31% Impervious Area

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 50S: 4 Building Roofs

Runoff = 1.30 cfs @ 12.00 hrs, Volume= 0.086 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 51S: 4 Building Roofs

Runoff = 1.30 cfs @ 12.00 hrs, Volume= 0.086 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 52S: 2 Building Roofs

Runoff = 0.65 cfs @ 12.00 hrs, Volume= 0.043 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

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Type III 24-hr 25 - YEAR Rainfall=5.80"

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Area (ac)	CN	Description			
* 0.100	98	Building Roof			
0.100		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 53S: 2 Building Roofs

Runoff = 0.65 cfs @ 12.00 hrs, Volume= 0.043 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description			
* 0.100	98	Building Roof			
0.100		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 54S: Building Roof

Runoff = 0.33 cfs @ 12.00 hrs, Volume= 0.021 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 - YEAR Rainfall=5.80"

Area (ac)	CN	Description			
* 0.050	98	Building Roof			
0.050		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Reach 1R: Property LineInflow Area = 22.570 ac, 6.60% Impervious, Inflow Depth > 1.46" for 25 - YEAR event
Inflow = 16.09 cfs @ 13.03 hrs, Volume= 2.743 af
Outflow = 16.08 cfs @ 13.04 hrs, Volume= 2.742 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.14 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.20 fps, Avg. Travel Time= 0.4 min

Peak Storage= 156 cf @ 13.03 hrs

Average Depth at Peak Storage= 0.57'

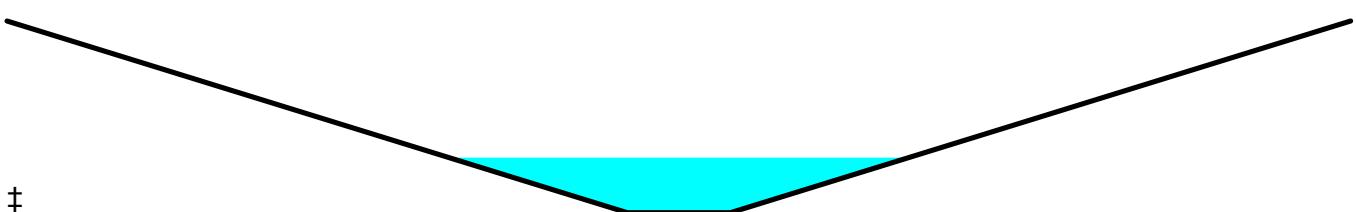
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



‡

Summary for Reach 2R: Property Line

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 2.12" for 25 - YEAR event

Inflow = 13.09 cfs @ 13.68 hrs, Volume= 3.008 af

Outflow = 13.09 cfs @ 13.69 hrs, Volume= 3.007 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.88 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.86 fps, Avg. Travel Time= 0.3 min

Peak Storage= 134 cf @ 13.68 hrs

Average Depth at Peak Storage= 0.52'

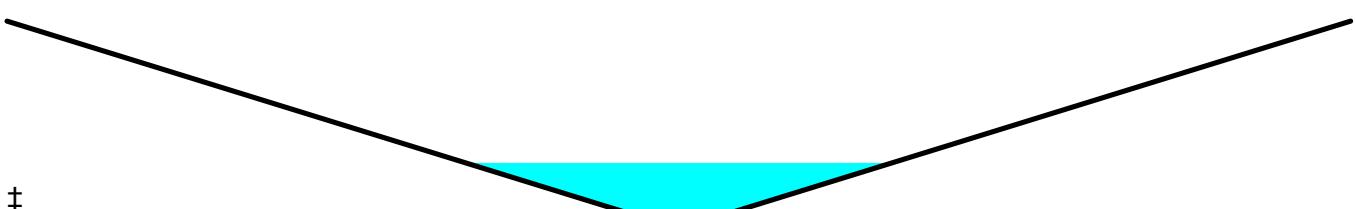
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 158.00', Outlet Invert= 155.00'



‡

Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 2.06" for 25 - YEAR event

Inflow = 28.57 cfs @ 12.86 hrs, Volume= 4.822 af

Outflow = 28.55 cfs @ 12.87 hrs, Volume= 4.821 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.96 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.40 fps, Avg. Travel Time= 0.2 min

Peak Storage= 239 cf @ 12.86 hrs

Average Depth at Peak Storage= 0.74'

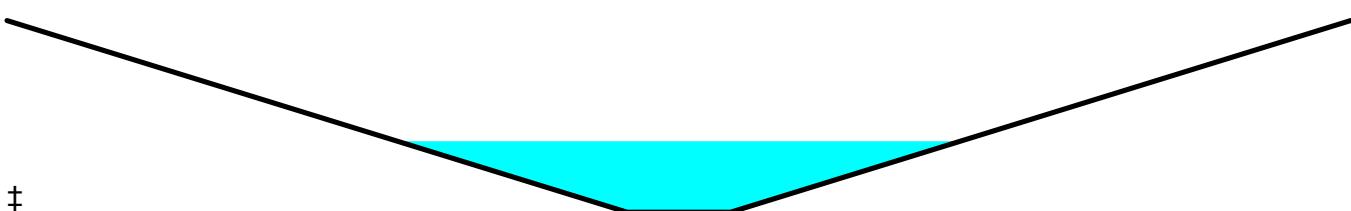
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'

**Summary for Reach 4R: Property Line**

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 0.59" for 25 - YEAR event

Inflow = 0.98 cfs @ 13.41 hrs, Volume= 0.272 af

Outflow = 0.98 cfs @ 13.42 hrs, Volume= 0.271 af, Atten= 0%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.38 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 1.75 fps, Avg. Travel Time= 0.5 min

Peak Storage= 21 cf @ 13.41 hrs

Average Depth at Peak Storage= 0.14'

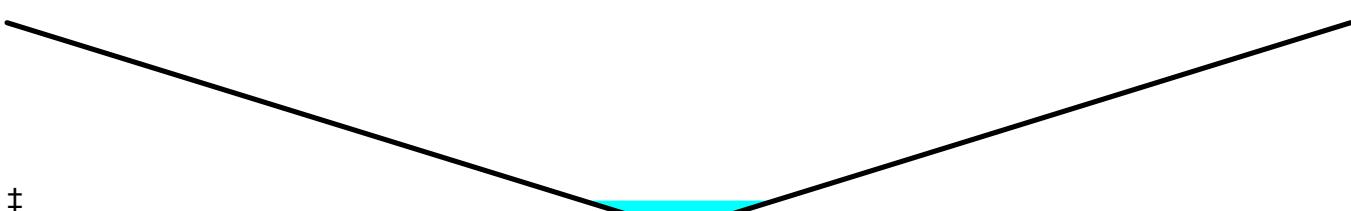
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 2.45" for 25 - YEAR event

Inflow = 14.74 cfs @ 13.17 hrs, Volume= 3.075 af

Outflow = 14.73 cfs @ 13.18 hrs, Volume= 3.074 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.03 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.90 fps, Avg. Travel Time= 0.3 min

Peak Storage= 147 cf @ 13.17 hrs

Average Depth at Peak Storage= 0.55'

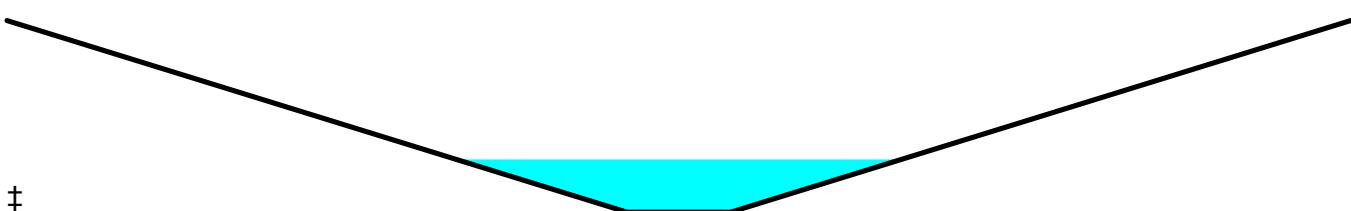
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'



‡

Summary for Reach 6R: Road Ditch

Inflow Area = 0.990 ac, 37.37% Impervious, Inflow Depth > 3.04" for 25 - YEAR event

Inflow = 1.66 cfs @ 12.46 hrs, Volume= 0.251 af

Outflow = 1.65 cfs @ 12.53 hrs, Volume= 0.250 af, Atten= 1%, Lag= 3.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.13 fps, Min. Travel Time= 2.1 min

Avg. Velocity = 1.37 fps, Avg. Travel Time= 4.9 min

Peak Storage= 211 cf @ 12.49 hrs

Average Depth at Peak Storage= 0.30'

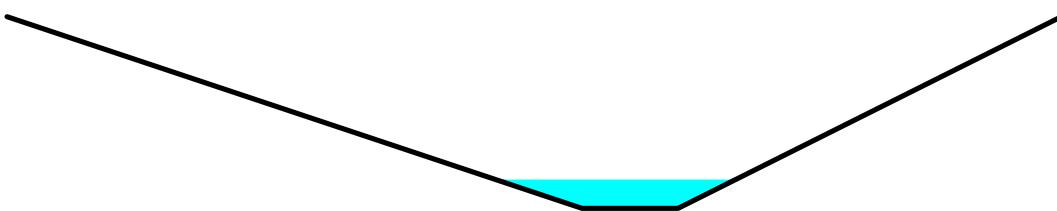
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 110.75 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0183 '/'

Inlet Invert= 193.00', Outlet Invert= 185.70'



Summary for Reach 8R: Wetland

Inflow Area = 19.020 ac, 2.16% Impervious, Inflow Depth > 1.50" for 25 - YEAR event

Inflow = 14.74 cfs @ 12.78 hrs, Volume= 2.384 af

Outflow = 14.28 cfs @ 13.02 hrs, Volume= 2.352 af, Atten= 3%, Lag= 14.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.95 fps, Min. Travel Time= 7.7 min

Avg. Velocity = 1.15 fps, Avg. Travel Time= 12.9 min

Peak Storage= 6,570 cf @ 12.89 hrs

Average Depth at Peak Storage= 0.88'

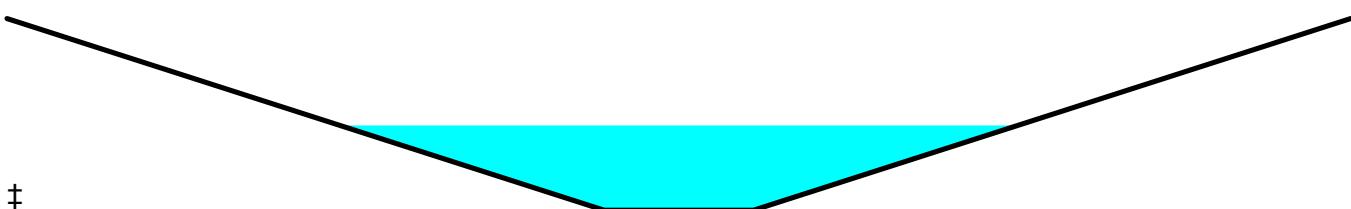
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools

Side Slope Z-value= 6.0 '/' Top Width= 27.00'

Length= 895.0' Slope= 0.0223 '/'

Inlet Invert= 183.00', Outlet Invert= 163.00'

**Summary for Reach 9R: Road Ditch**

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 2.85" for 25 - YEAR event

Inflow = 6.86 cfs @ 12.05 hrs, Volume= 0.619 af

Outflow = 6.33 cfs @ 12.10 hrs, Volume= 0.618 af, Atten= 8%, Lag= 3.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.19 fps, Min. Travel Time= 1.6 min

Avg. Velocity = 1.64 fps, Avg. Travel Time= 4.1 min

Peak Storage= 628 cf @ 12.07 hrs

Average Depth at Peak Storage= 0.62'

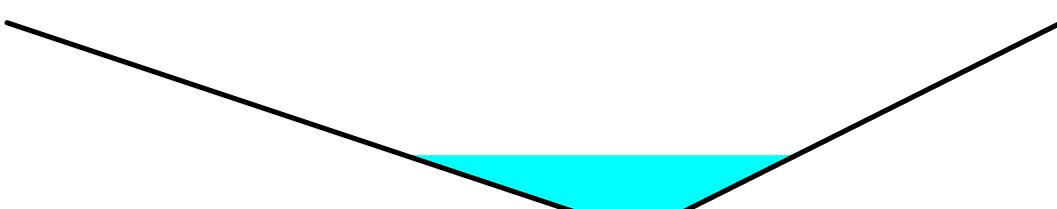
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 100.41 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0150 '/'

Inlet Invert= 184.50', Outlet Invert= 178.50'



Summary for Reach 10R: Existing Road Ditch

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 1.53" for 25 - YEAR event

Inflow = 3.04 cfs @ 13.46 hrs, Volume= 0.723 af

Outflow = 3.04 cfs @ 13.49 hrs, Volume= 0.722 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.05 fps, Min. Travel Time= 1.0 min

Avg. Velocity = 2.54 fps, Avg. Travel Time= 1.6 min

Peak Storage= 188 cf @ 13.47 hrs

Average Depth at Peak Storage= 0.28'

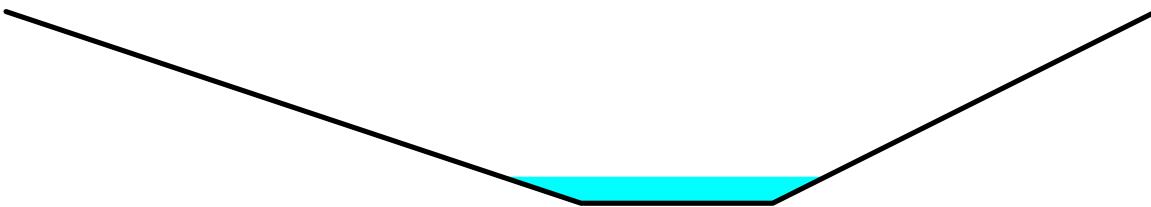
Bank-Full Depth= 2.00' Flow Area= 14.0 sf, Capacity= 168.01 cfs

2.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.00'

Length= 250.0' Slope= 0.0280 '/'

Inlet Invert= 180.00', Outlet Invert= 173.00'

**Summary for Reach 11R: Wetland**

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 2.16" for 25 - YEAR event

Inflow = 13.28 cfs @ 13.38 hrs, Volume= 3.062 af

Outflow = 13.09 cfs @ 13.68 hrs, Volume= 3.008 af, Atten= 1%, Lag= 18.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 1.80 fps, Min. Travel Time= 10.2 min

Avg. Velocity = 0.98 fps, Avg. Travel Time= 18.7 min

Peak Storage= 7,985 cf @ 13.51 hrs

Average Depth at Peak Storage= 0.55'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'



Summary for Pond 1P: New Road Culvert (CULV1)

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 1.53" for 25 - YEAR event
 Inflow = 3.04 cfs @ 13.46 hrs, Volume= 0.724 af
 Outflow = 3.04 cfs @ 13.46 hrs, Volume= 0.723 af, Atten= 0%, Lag= 0.3 min
 Primary = 3.04 cfs @ 13.46 hrs, Volume= 0.723 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 181.84' @ 13.46 hrs Surf.Area= 157 sf Storage= 97 cf

Plug-Flow detention time= 0.6 min calculated for 0.721 af (100% of inflow)
 Center-of-Mass det. time= 0.5 min (891.1 - 890.7)

Volume	Invert	Avail.Storage	Storage Description
#1	180.90'	561 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.90	50	0	0
182.00	175	124	124
183.00	100	138	261
184.00	125	113	374
185.00	250	188	561
Device	Routing	Invert	Outlet Devices
#1	Primary	180.90'	18.0" Round Culvert L= 53.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 180.90' / 180.37' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	183.50'	15.0' 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

Primary OutFlow Max=3.04 cfs @ 13.46 hrs HW=181.84' (Free Discharge)

↑ 1=Culvert (Inlet Controls 3.04 cfs @ 2.61 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.90' (Free Discharge)

↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2P: New Road Culvert (CULV2)

Inflow Area = 1.510 ac, 30.46% Impervious, Inflow Depth > 2.89" for 25 - YEAR event
 Inflow = 2.86 cfs @ 12.06 hrs, Volume= 0.364 af
 Outflow = 2.85 cfs @ 12.06 hrs, Volume= 0.364 af, Atten= 1%, Lag= 0.5 min
 Primary = 2.85 cfs @ 12.06 hrs, Volume= 0.364 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

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Peak Elev= 185.92' @ 12.06 hrs Surf.Area= 165 sf Storage= 99 cf

Plug-Flow detention time= 0.8 min calculated for 0.364 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (801.3 - 800.7)

Volume	Invert	Avail.Storage	Storage Description
#1	185.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
185.00	50	0	0
186.00	175	113	113
187.00	100	138	250
188.00	125	113	363
189.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	18.0" Round Culvert L= 55.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 185.00' / 184.72' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	188.00'	15.0' 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

Primary OutFlow Max=2.77 cfs @ 12.06 hrs HW=185.90' (Free Discharge)

↑1=Culvert (Barrel Controls 2.77 cfs @ 3.57 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=185.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 6P: New Road Culvert (CULV6)

Inflow Area = 0.170 ac, 52.94% Impervious, Inflow Depth > 3.98" for 25 - YEAR event
 Inflow = 0.90 cfs @ 12.04 hrs, Volume= 0.056 af
 Outflow = 0.89 cfs @ 12.05 hrs, Volume= 0.056 af, Atten= 1%, Lag= 0.5 min
 Primary = 0.89 cfs @ 12.05 hrs, Volume= 0.056 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 192.26' @ 12.05 hrs Surf.Area= 97 sf Storage= 34 cfPlug-Flow detention time= 1.3 min calculated for 0.056 af (100% of inflow)
Center-of-Mass det. time= 1.0 min (765.9 - 764.9)

Volume	Invert	Avail.Storage	Storage Description
#1	191.80'	572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
191.80	50	0	0
193.00	175	135	135
194.00	100	138	272
195.00	125	113	385
196.00	250	188	572

Device	Routing	Invert	Outlet Devices
#1	Primary	191.78'	18.0" Round Culvert L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 191.78' / 191.50' S= 0.0048 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	195.00'	15.0' 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

Primary OutFlow Max=0.89 cfs @ 12.05 hrs HW=192.26' (Free Discharge)
 ↗ 1=Culvert (Inlet Controls 0.89 cfs @ 1.85 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=191.80' (Free Discharge)
 ↗ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 9P: New Road Culvert (CULV9)

Inflow Area = 0.330 ac, 60.61% Impervious, Inflow Depth > 4.30" for 25 - YEAR event
 Inflow = 1.84 cfs @ 12.03 hrs, Volume= 0.118 af
 Outflow = 1.85 cfs @ 12.04 hrs, Volume= 0.118 af, Atten= 0%, Lag= 0.4 min
 Primary = 1.85 cfs @ 12.04 hrs, Volume= 0.118 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 180.21' @ 12.04 hrs Surf.Area= 76 sf Storage= 13 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.0 min (756.5 - 756.5)

Volume	Invert	Avail.Storage	Storage Description
#1	180.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.00	50	0	0
181.00	175	113	113
182.00	100	138	250
183.00	125	113	363
184.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	179.50'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 179.50' / 175.00' S= 0.0789 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2 Secondary 182.00' 15.0' 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

Primary OutFlow Max=1.79 cfs @ 12.04 hrs HW=180.19' (Free Discharge)
 ↑1=Culvert (Inlet Controls 1.79 cfs @ 2.24 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: Filter Pond 3000 s.f.

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 3.05" for 25 - YEAR event
 Inflow = 9.99 cfs @ 12.07 hrs, Volume= 0.902 af
 Outflow = 1.84 cfs @ 13.07 hrs, Volume= 0.390 af, Atten= 82%, Lag= 60.0 min
 Primary = 1.84 cfs @ 13.07 hrs, Volume= 0.390 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Starting Elev= 168.50' Surf.Area= 4,019 sf Storage= 5,257 cf
 Peak Elev= 172.61' @ 13.07 hrs Surf.Area= 7,381 sf Storage= 28,372 cf (23,116 cf above start)

Plug-Flow detention time= 269.5 min calculated for 0.270 af (30% of inflow)
 Center-of-Mass det. time= 106.6 min (898.5 - 791.9)

Volume	Invert	Avail.Storage	Storage Description
#1	167.00'	39,518 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
167.00	3,000	0	0
168.00	3,669	3,335	3,335
169.00	4,369	4,019	7,354
170.00	5,127	4,748	12,102
171.00	5,941	5,534	17,636
172.00	6,811	6,376	24,012
173.00	7,739	7,275	31,287
174.00	8,723	8,231	39,518

Device	Routing	Invert	Outlet Devices
#1	Primary	164.00'	18.0" Round Culvert L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 164.00' / 163.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	168.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	172.50'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	173.00'	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=1.79 cfs @ 13.07 hrs HW=172.61' (Free Discharge)

↑
1=Culvert (Passes 1.79 cfs of 23.86 cfs potential flow)
 └─2=Orifice/Grate (Orifice Controls 0.21 cfs @ 9.67 fps)
 └─3=Orifice/Grate (Weir Controls 1.58 cfs @ 1.10 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=168.50' (Free Discharge)

↑
4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: New Road Culvert (CULV10)

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 2.84" for 25 - YEAR event
 Inflow = 6.33 cfs @ 12.10 hrs, Volume= 0.618 af
 Outflow = 6.26 cfs @ 12.11 hrs, Volume= 0.617 af, Atten= 1%, Lag= 0.6 min
 Primary = 6.26 cfs @ 12.11 hrs, Volume= 0.617 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 177.62' @ 12.11 hrs Surf.Area= 129 sf Storage= 206 cf

Plug-Flow detention time= 0.7 min calculated for 0.617 af (100% of inflow)

Center-of-Mass det. time= 0.5 min (801.6 - 801.1)

Volume	Invert	Avail.Storage	Storage Description
#1	176.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
176.00	50	0	0
177.00	175	113	113
178.00	100	138	250
179.00	125	113	363
180.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	176.00'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 176.00' / 175.00' S= 0.0175 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	180.00'	15.0' 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

Primary OutFlow Max=6.16 cfs @ 12.11 hrs HW=177.59' (Free Discharge)

↑
1=Culvert (Inlet Controls 6.16 cfs @ 3.49 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=176.00' (Free Discharge)

↑
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 50P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25 - YEAR event
 Inflow = 1.30 cfs @ 12.00 hrs, Volume= 0.086 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 185.03' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 3,735 cf

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	183.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	188.50'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=183.00' (Free Discharge)
 ↑=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25 - YEAR event
 Inflow = 1.30 cfs @ 12.00 hrs, Volume= 0.086 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 169.03' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 3,735 cf

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	167.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=167.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 52P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25 - YEAR event
 Inflow = 0.65 cfs @ 12.00 hrs, Volume= 0.043 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 182.05' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 1,868 cf

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	178.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=178.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25 - YEAR event
 Inflow = 0.65 cfs @ 12.00 hrs, Volume= 0.043 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 200.05' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 1,868 cf

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	196.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

POST 1-2-2026**Type III 24-hr 25 - YEAR Rainfall=5.80"**

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Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=196.00' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 54P: Drip Edge

Inflow Area = 0.050 ac, 100.00% Impervious, Inflow Depth > 5.15" for 25 - YEAR event
 Inflow = 0.33 cfs @ 12.00 hrs, Volume= 0.021 af
 Outflow = 0.21 cfs @ 12.22 hrs, Volume= 0.009 af, Atten= 35%, Lag= 12.9 min
 Primary = 0.21 cfs @ 12.22 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 186.01' @ 12.20 hrs Surf.Area= 288 sf Storage= 577 cf

Plug-Flow detention time= 224.3 min calculated for 0.009 af (43% of inflow)
 Center-of-Mass det. time= 114.2 min (844.2 - 730.0)

Volume	Invert	Avail.Storage	Storage Description
#1	181.00'	691 cf	3.00'W x 96.00'L x 6.00'H Prismatoid 1,728 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	186.00'	48.0' 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=0.08 cfs @ 12.22 hrs HW=186.01' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Weir Controls 0.08 cfs @ 0.22 fps)

Summary for Pond DMH1: DMH1

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 3.00" for 25 - YEAR event
 Inflow = 7.57 cfs @ 12.09 hrs, Volume= 0.736 af
 Outflow = 7.57 cfs @ 12.09 hrs, Volume= 0.736 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.57 cfs @ 12.09 hrs, Volume= 0.736 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 176.44' @ 12.09 hrs
 Flood Elev= 182.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	174.90'	18.0" Round Culvert L= 253.0' RCP, square edge headwall, Ke= 0.500

Inlet / Outlet Invert= 174.90' / 170.60' S= 0.0170 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.45 cfs @ 12.09 hrs HW=176.42' (Free Discharge)
 ↑1=Culvert (Inlet Controls 7.45 cfs @ 4.22 fps)

Summary for Pond DMH2: DMH2

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 3.00" for 25 - YEAR event
 Inflow = 7.57 cfs @ 12.09 hrs, Volume= 0.736 af
 Outflow = 7.57 cfs @ 12.09 hrs, Volume= 0.736 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.57 cfs @ 12.09 hrs, Volume= 0.736 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 172.15' @ 12.09 hrs
 Flood Elev= 175.09'

Device	Routing	Invert	Outlet Devices
#1	Primary	170.50'	18.0" Round Culvert L= 85.5' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.10' S= 0.0047 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=7.46 cfs @ 12.09 hrs HW=172.13' (Free Discharge)
 ↑1=Culvert (Barrel Controls 7.46 cfs @ 4.85 fps)

Summary for Pond DMH4: DMH4

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 3.05" for 25 - YEAR event
 Inflow = 9.99 cfs @ 12.07 hrs, Volume= 0.902 af
 Outflow = 9.99 cfs @ 12.07 hrs, Volume= 0.902 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.99 cfs @ 12.07 hrs, Volume= 0.902 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 172.03' @ 12.07 hrs
 Flood Elev= 174.24'

Device	Routing	Invert	Outlet Devices
#1	Primary	169.90'	18.0" Round Culvert L= 51.3' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.90' / 169.50' S= 0.0078 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=9.70 cfs @ 12.07 hrs HW=171.96' (Free Discharge)
 ↑1=Culvert (Barrel Controls 9.70 cfs @ 5.49 fps)

Summary for Subcatchment 1S:

Runoff = 30.10 cfs @ 12.75 hrs, Volume= 4.668 af, Depth> 2.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description		
4.120	30	Woods, Good, HSG A		
3.940	55	Woods, Good, HSG B		
9.010	70	Woods, Good, HSG C		
0.900	77	Woods, Good, HSG D		
*	0.010	New Road Impervious		
*	0.040	New Road Lawn		
*	0.000	New Lot Buildings (0.20 to 50)		
*	0.200	New Lot Impervious		
*	0.600	New Lot Lawn		
18.820	59	Weighted Average		
18.610		98.88% Pervious Area		
0.210		1.12% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft) Velocity (ft/sec) Capacity (cfs) Description		
50.1	100	0.0100	0.03	Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
2.8	160	0.1500	0.97	Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
52.9	260	Total		

Summary for Subcatchment 2S:

Runoff = 17.58 cfs @ 13.31 hrs, Volume= 4.000 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
0.240	55	Woods, Good, HSG B
7.540	70	Woods, Good, HSG C
2.010	77	Woods, Good, HSG D
*	0.170	Existing Roads Off Site
*	0.170	Existing Lawn Off Site
*	0.120	New Road Impervious
*	0.160	New Road Lawn
*	0.000	New Lot Buildings (0.20 to 51)
*	0.100	New Lot Impervious
*	0.600	New Lot Lawn
11.110	72	Weighted Average
10.720		96.49% Pervious Area
0.390		3.51% Impervious Area

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 3S:

Runoff = 52.21 cfs @ 12.84 hrs, Volume= 8.711 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
8.880	55	Woods, Good, HSG B
17.490	70	Woods, Good, HSG C
0.960	77	Woods, Good, HSG D
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
28.090	66	Weighted Average
27.710		98.65% Pervious Area
0.380		1.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	100	0.0600	0.07		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
36.7	1,350	0.0600	0.61		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
61.2	1,450	Total			

Summary for Subcatchment 4S:

Runoff = 3.11 cfs @ 13.25 hrs, Volume= 0.703 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

POST 1-2-2026**Type III 24-hr 100 - YEAR Rainfall=8.10"**

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Area (ac)	CN	Description
3.640	30	Woods, Good, HSG A
0.250	55	Woods, Good, HSG B
0.850	70	Woods, Good, HSG C
*	0.380	Existing Impervious On Site
*	0.380	Existing Lawn On Site
*	0.000	New Road Lawn

5.500 45 Weighted Average
 5.120 93.09% Pervious Area
 0.380 6.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
44.3	1,050	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
82.3	1,150	Total			

Summary for Subcatchment 5S:

Runoff = 25.46 cfs @ 13.15 hrs, Volume= 5.300 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
1.850	55	Woods, Good, HSG B
7.520	70	Woods, Good, HSG C
4.520	77	Woods, Good, HSG D
*	0.280	Existing Roads Off Site
*	0.280	Existing Lawn Off Site
*	0.290	Existing Impervious On Site
*	0.290	Existing Lawn On Site

15.030 71 Weighted Average
 14.460 96.21% Pervious Area
 0.570 3.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
49.5	1,050	0.0200	0.35		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
87.5	1,150	Total			

Summary for Subcatchment 6S:

Runoff = 6.12 cfs @ 13.38 hrs, Volume= 1.405 af, Depth> 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
1.910	30	Woods, Good, HSG A
0.500	55	Woods, Good, HSG B
1.400	70	Woods, Good, HSG C
0.030	77	Woods, Good, HSG D
*	290	Existing Roads Off Site
*	290	Existing Lawn Off Site
*	300	Existing Impervious On Site
*	300	Existing Lawn On Site
*	0.070	New Road Impervious
*	0.100	New Road Lawn
*	0.000	New Lot Buildings (0.1 to 52)
*	0.100	New Lot Impervious
*	0.300	New Lot Lawn
5.590	60	Weighted Average
4.830		86.40% Pervious Area
0.760		13.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
38.0	100	0.0200	0.04		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
61.1	1,450	0.0250	0.40		Shallow Concentrated Flow, BC Forest w/Heavy Litter Kv= 2.5 fps
1.3	1,100	0.0400	13.91	111.28	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=2.00' Z= 1.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
100.4	2,650	Total			

Summary for Subcatchment 7S:

Runoff = 2.39 cfs @ 12.51 hrs, Volume= 0.313 af, Depth> 5.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Area (ac)	CN	Description			
0.000	55	Woods, Good, HSG B			
0.140	70	Woods, Good, HSG C			
*	0.080	New Road Impervious			
*	0.100	New Road Lawn			
*	0.000	New Lot Buildings (0.1 to 53S)			
*	0.100	New Lot Impervious			
*	0.300	New Lot Lawn			
0.720	79	Weighted Average			
0.540		75.00% Pervious Area			
0.180		25.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
35.5	65	0.0100	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	250	0.0250	2.37		Sheet Flow, AB Woods: Dense underbrush n= 0.800 P2= 3.10"
37.3	315	Total			Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps

Summary for Subcatchment 8S:

Runoff = 1.34 cfs @ 12.04 hrs, Volume= 0.086 af, Depth> 6.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description			
0.010	55	Woods, Good, HSG B			
*	0.090	New Road Impervious			
*	0.070	New Road Lawn			
0.170	86	Weighted Average			
0.080		47.06% Pervious Area			
0.090		52.94% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)			
0.2	13	0.0400	Velocity (ft/sec)	Capacity (cfs)	Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
2.3	250	0.0150	1.84		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.5	263	Total			

Summary for Subcatchment 9S:

Runoff = 3.19 cfs @ 12.04 hrs, Volume= 0.194 af, Depth> 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Area (ac)	CN	Description		
0.140	55	Woods, Good, HSG B		
0.180	70	Woods, Good, HSG C		
*	0.090	98	New Road Impervious	
*	0.110	74	New Road Lawn	
*	0.000	98	New Lot Buildings	
*	0.000	98	New Lot Impervious	
*	0.000	74	New Lot Lawn	
0.520	72	Weighted Average		
0.430		82.69% Pervious Area		
0.090		17.31% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
0.2	13	0.0400	1.19	Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37	Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total		

Summary for Subcatchment 10S:

Runoff = 6.74 cfs @ 12.04 hrs, Volume= 0.412 af, Depth> 4.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description		
0.250	55	Woods, Good, HSG B		
0.150	70	Woods, Good, HSG C		
*	0.190	98	New Road Impervious	
*	0.260	74	New Road Lawn	
*	0.000	98	New Lot Buildings (.05 TO 54)	
*	0.050	98	New Lot Impervious	
*	0.150	74	New Lot Lawn	
1.050	74	Weighted Average		
0.810		77.14% Pervious Area		
0.240		22.86% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)
0.2	13	0.0400	1.19	Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37	Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total		

Summary for Subcatchment 11S:

Runoff = 2.69 cfs @ 12.03 hrs, Volume= 0.176 af, Depth> 6.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
*	0.100	98 New Road Impervious
*	0.130	74 New Road Lawn
*	0.000	98 New Lot Buildings
*	0.100	98 New Lot Impervious
*	0.000	74 New Lawn
0.330	89	Weighted Average
0.130		39.39% Pervious Area
0.200		60.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263				Total

Summary for Subcatchment 12S:

Runoff = 4.31 cfs @ 12.04 hrs, Volume= 0.268 af, Depth> 5.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
0.040	70	Woods, Good, HSG C
*	0.130	98 New Road Impervious
*	0.150	74 New Road Lawn
*	0.290	74 Filter Pond
*	0.000	98 New Lot Buildings
*	0.000	98 New Lot Impervious
*	0.000	74 New Lawn
0.610	79	Weighted Average
0.480		78.69% Pervious Area
0.130		21.31% Impervious Area

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	13	0.0400	1.19		Sheet Flow, AB Smooth surfaces n= 0.011 P2= 3.10"
1.8	250	0.0250	2.37		Shallow Concentrated Flow, BC Grassed Waterway Kv= 15.0 fps
2.0	263	Total			

Summary for Subcatchment 50S: 4 Building Roofs

Runoff = 1.82 cfs @ 12.00 hrs, Volume= 0.121 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 51S: 4 Building Roofs

Runoff = 1.82 cfs @ 12.00 hrs, Volume= 0.121 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description
* 0.200	98	Building Roof
0.200		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 52S: 2 Building Roofs

Runoff = 0.91 cfs @ 12.00 hrs, Volume= 0.060 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Area (ac)	CN	Description			
* 0.100	98	Building Roof			
0.100		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 53S: 2 Building Roofs

Runoff = 0.91 cfs @ 12.00 hrs, Volume= 0.060 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description			
* 0.100	98	Building Roof			
0.100		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Subcatchment 54S: Building Roof

Runoff = 0.45 cfs @ 12.00 hrs, Volume= 0.030 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 - YEAR Rainfall=8.10"

Area (ac)	CN	Description			
* 0.050	98	Building Roof			
0.050		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	24	0.2500	2.80		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.10"

Summary for Reach 1R: Property Line

Inflow Area = 22.570 ac, 6.60% Impervious, Inflow Depth > 2.97" for 100 - YEAR event

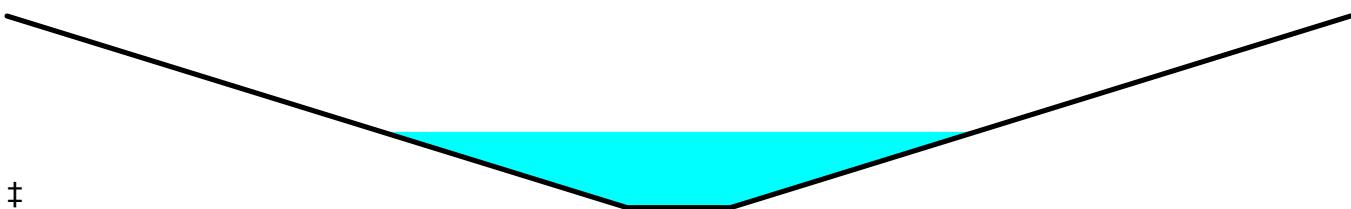
Inflow = 33.15 cfs @ 12.92 hrs, Volume= 5.577 af

Outflow = 33.13 cfs @ 12.92 hrs, Volume= 5.576 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.19 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.64 fps, Avg. Travel Time= 0.3 min

Peak Storage= 267 cf @ 12.92 hrs
Average Depth at Peak Storage= 0.79'
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 '/' Top Width= 26.00'
Length= 50.0' Slope= 0.0600 '/'
Inlet Invert= 158.00', Outlet Invert= 155.00'



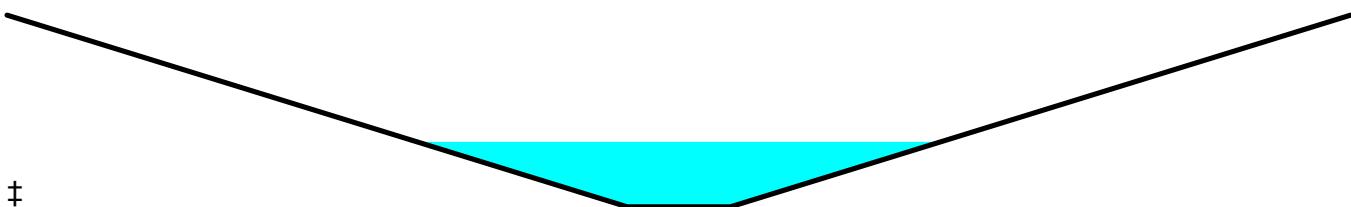
Summary for Reach 2R: Property Line

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 3.76" for 100 - YEAR event
Inflow = 23.38 cfs @ 13.60 hrs, Volume= 5.330 af
Outflow = 23.38 cfs @ 13.60 hrs, Volume= 5.329 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.67 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.15 fps, Avg. Travel Time= 0.3 min

Peak Storage= 206 cf @ 13.60 hrs
Average Depth at Peak Storage= 0.68'
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 '/' Top Width= 26.00'
Length= 50.0' Slope= 0.0600 '/'
Inlet Invert= 158.00', Outlet Invert= 155.00'



Summary for Reach 3R: Property Line

Inflow Area = 28.090 ac, 1.35% Impervious, Inflow Depth > 3.72" for 100 - YEAR event

Inflow = 52.21 cfs @ 12.84 hrs, Volume= 8.711 af

Outflow = 52.20 cfs @ 12.85 hrs, Volume= 8.710 af, Atten= 0%, Lag= 0.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 6.95 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.78 fps, Avg. Travel Time= 0.2 min

Peak Storage= 375 cf @ 12.85 hrs

Average Depth at Peak Storage= 0.96'

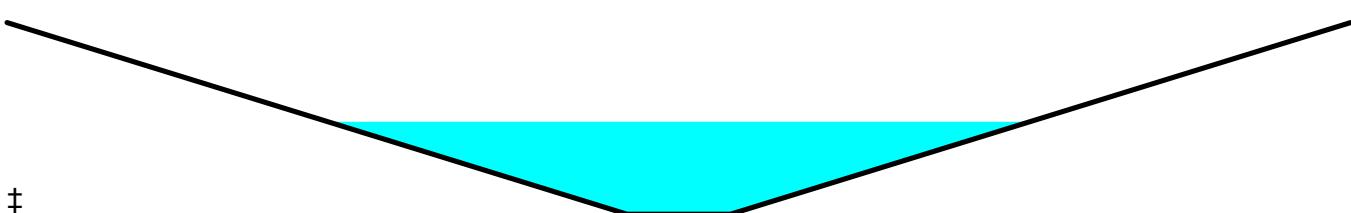
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 98.00', Outlet Invert= 95.00'

**Summary for Reach 4R: Property Line**

Inflow Area = 5.500 ac, 6.91% Impervious, Inflow Depth > 1.53" for 100 - YEAR event

Inflow = 3.11 cfs @ 13.25 hrs, Volume= 0.703 af

Outflow = 3.11 cfs @ 13.26 hrs, Volume= 0.703 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.32 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 2.24 fps, Avg. Travel Time= 0.4 min

Peak Storage= 47 cf @ 13.25 hrs

Average Depth at Peak Storage= 0.26'

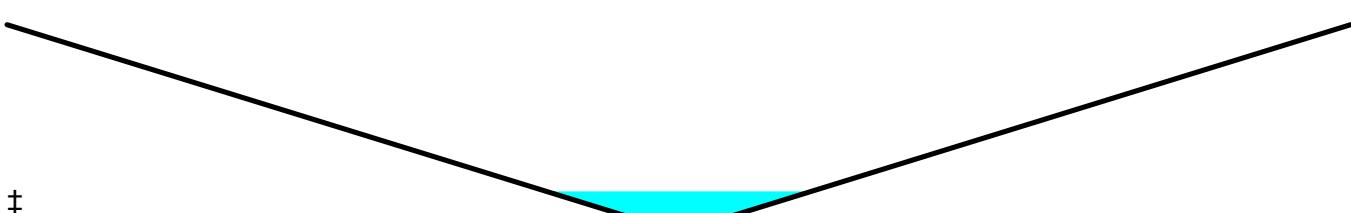
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 168.00', Outlet Invert= 165.00'



Summary for Reach 5R: Property Line

Inflow Area = 15.030 ac, 3.79% Impervious, Inflow Depth > 4.23" for 100 - YEAR event

Inflow = 25.46 cfs @ 13.15 hrs, Volume= 5.300 af

Outflow = 25.46 cfs @ 13.16 hrs, Volume= 5.299 af, Atten= 0%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.79 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 3.20 fps, Avg. Travel Time= 0.3 min

Peak Storage= 220 cf @ 13.16 hrs

Average Depth at Peak Storage= 0.71'

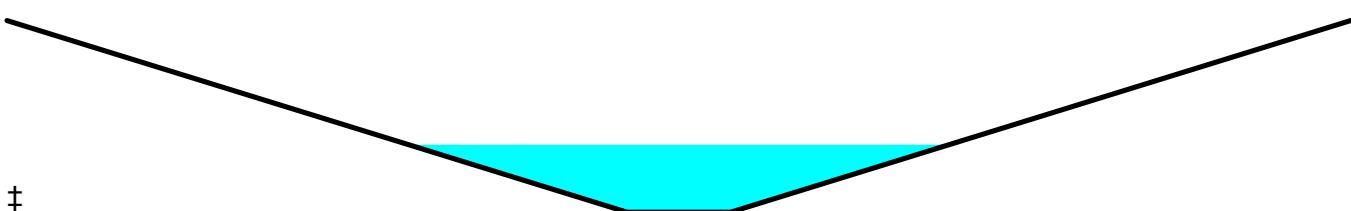
Bank-Full Depth= 2.00' Flow Area= 28.0 sf, Capacity= 303.37 cfs

2.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 26.00'

Length= 50.0' Slope= 0.0600 '/'

Inlet Invert= 188.00', Outlet Invert= 185.00'



‡

Summary for Reach 6R: Road Ditch

Inflow Area = 0.990 ac, 37.37% Impervious, Inflow Depth > 4.93" for 100 - YEAR event

Inflow = 2.62 cfs @ 12.46 hrs, Volume= 0.407 af

Outflow = 2.61 cfs @ 12.52 hrs, Volume= 0.406 af, Atten= 1%, Lag= 3.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 3.54 fps, Min. Travel Time= 1.9 min

Avg. Velocity = 1.61 fps, Avg. Travel Time= 4.1 min

Peak Storage= 295 cf @ 12.48 hrs

Average Depth at Peak Storage= 0.38'

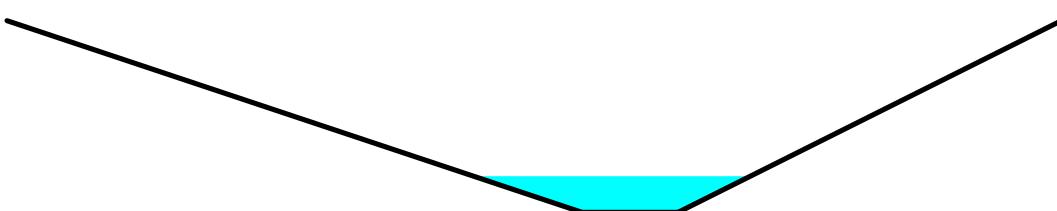
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 110.75 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0183 '/'

Inlet Invert= 193.00', Outlet Invert= 185.70'



Summary for Reach 8R: Wetland

Inflow Area = 19.020 ac, 2.16% Impervious, Inflow Depth > 2.95" for 100 - YEAR event

Inflow = 30.10 cfs @ 12.75 hrs, Volume= 4.668 af

Outflow = 29.44 cfs @ 12.94 hrs, Volume= 4.624 af, Atten= 2%, Lag= 11.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.35 fps, Min. Travel Time= 6.4 min

Avg. Velocity = 1.30 fps, Avg. Travel Time= 11.5 min

Peak Storage= 11,242 cf @ 12.84 hrs

Average Depth at Peak Storage= 1.22'

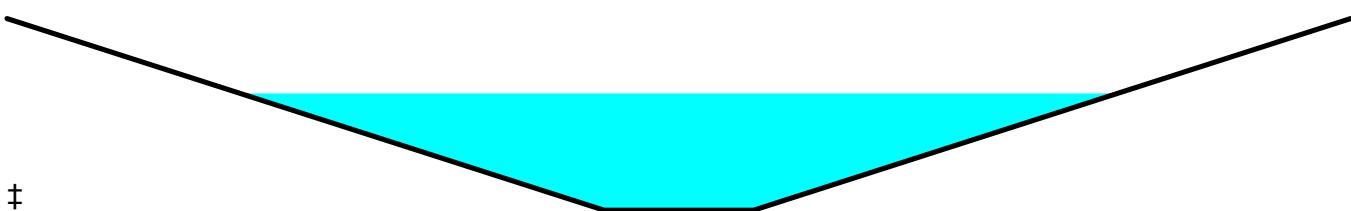
Bank-Full Depth= 2.00' Flow Area= 30.0 sf, Capacity= 94.55 cfs

3.00' x 2.00' deep channel, n= 0.075 Very weedy reaches w/pools

Side Slope Z-value= 6.0 '/' Top Width= 27.00'

Length= 895.0' Slope= 0.0223 '/'

Inlet Invert= 183.00', Outlet Invert= 163.00'



‡

Summary for Reach 9R: Road Ditch

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 4.72" for 100 - YEAR event

Inflow = 11.72 cfs @ 12.04 hrs, Volume= 1.027 af

Outflow = 10.82 cfs @ 12.09 hrs, Volume= 1.025 af, Atten= 8%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.83 fps, Min. Travel Time= 1.4 min

Avg. Velocity = 1.93 fps, Avg. Travel Time= 3.5 min

Peak Storage= 945 cf @ 12.06 hrs

Average Depth at Peak Storage= 0.79'

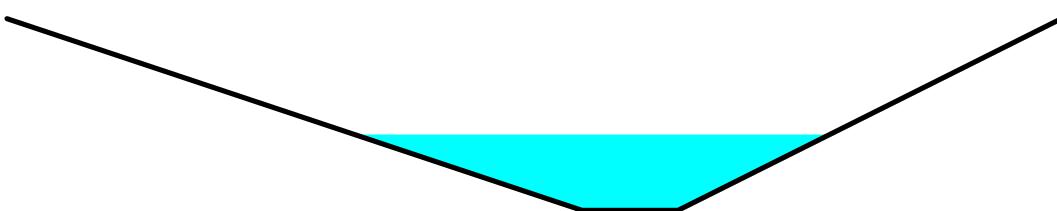
Bank-Full Depth= 2.00' Flow Area= 12.0 sf, Capacity= 100.41 cfs

1.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 11.00'

Length= 400.0' Slope= 0.0150 '/'

Inlet Invert= 184.50', Outlet Invert= 178.50'



Summary for Reach 10R: Existing Road Ditch

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 2.96" for 100 - YEAR event

Inflow = 6.12 cfs @ 13.38 hrs, Volume= 1.404 af

Outflow = 6.11 cfs @ 13.41 hrs, Volume= 1.402 af, Atten= 0%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 4.98 fps, Min. Travel Time= 0.8 min

Avg. Velocity = 2.89 fps, Avg. Travel Time= 1.4 min

Peak Storage= 307 cf @ 13.39 hrs

Average Depth at Peak Storage= 0.41'

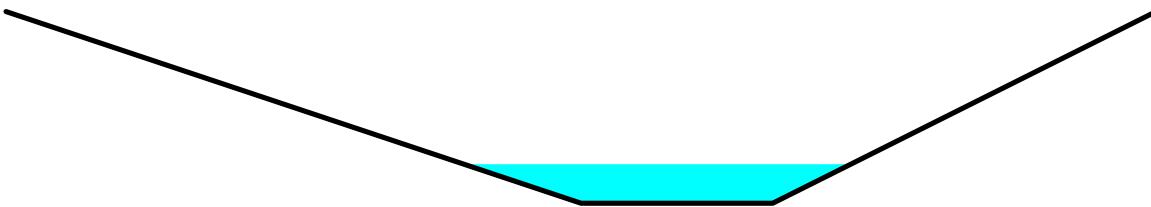
Bank-Full Depth= 2.00' Flow Area= 14.0 sf, Capacity= 168.01 cfs

2.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight

Side Slope Z-value= 3.0 2.0 '/' Top Width= 12.00'

Length= 250.0' Slope= 0.0280 '/'

Inlet Invert= 180.00', Outlet Invert= 173.00'

**Summary for Reach 11R: Wetland**

Inflow Area = 17.000 ac, 8.53% Impervious, Inflow Depth > 3.81" for 100 - YEAR event

Inflow = 23.64 cfs @ 13.33 hrs, Volume= 5.402 af

Outflow = 23.38 cfs @ 13.60 hrs, Volume= 5.330 af, Atten= 1%, Lag= 16.2 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Max. Velocity= 2.15 fps, Min. Travel Time= 8.5 min

Avg. Velocity = 1.10 fps, Avg. Travel Time= 16.6 min

Peak Storage= 11,955 cf @ 13.46 hrs

Average Depth at Peak Storage= 0.75'

Bank-Full Depth= 4.00' Flow Area= 136.0 sf, Capacity= 747.00 cfs

10.00' x 4.00' deep channel, n= 0.035 Earth, dense weeds

Side Slope Z-value= 6.0 '/' Top Width= 58.00'

Length= 1,100.0' Slope= 0.0055 '/'

Inlet Invert= 166.00', Outlet Invert= 160.00'



‡

Summary for Pond 1P: New Road Culvert (CULV1)

Inflow Area = 5.690 ac, 15.11% Impervious, Inflow Depth > 2.96" for 100 - YEAR event
 Inflow = 6.12 cfs @ 13.38 hrs, Volume= 1.405 af
 Outflow = 6.12 cfs @ 13.38 hrs, Volume= 1.404 af, Atten= 0%, Lag= 0.1 min
 Primary = 6.12 cfs @ 13.38 hrs, Volume= 1.404 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 182.48' @ 13.38 hrs Surf.Area= 139 sf Storage= 199 cf

Plug-Flow detention time= 0.6 min calculated for 1.399 af (100% of inflow)
 Center-of-Mass det. time= 0.4 min (878.3 - 877.8)

Volume	Invert	Avail.Storage	Storage Description
#1	180.90'	561 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.90	50	0	0
182.00	175	124	124
183.00	100	138	261
184.00	125	113	374
185.00	250	188	561
Device	Routing	Invert	Outlet Devices
#1	Primary	180.90'	18.0" Round Culvert L= 53.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 180.90' / 180.37' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	183.50'	15.0' 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

Primary OutFlow Max=6.11 cfs @ 13.38 hrs HW=182.48' (Free Discharge)

↑ 1=Culvert (Inlet Controls 6.11 cfs @ 3.46 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.90' (Free Discharge)

↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2P: New Road Culvert (CULV2)

Inflow Area = 1.510 ac, 30.46% Impervious, Inflow Depth > 4.77" for 100 - YEAR event
 Inflow = 4.78 cfs @ 12.05 hrs, Volume= 0.600 af
 Outflow = 4.78 cfs @ 12.06 hrs, Volume= 0.600 af, Atten= 0%, Lag= 0.5 min
 Primary = 4.78 cfs @ 12.06 hrs, Volume= 0.600 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

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Type III 24-hr 100 - YEAR Rainfall=8.10"

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Peak Elev= 186.28' @ 12.06 hrs Surf.Area= 154 sf Storage= 158 cf

Plug-Flow detention time= 0.8 min calculated for 0.600 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (792.7 - 792.1)

Volume	Invert	Avail.Storage	Storage Description
#1	185.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
185.00	50	0	0
186.00	175	113	113
187.00	100	138	250
188.00	125	113	363
189.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	18.0" Round Culvert L= 55.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 185.00' / 184.72' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	188.00'	15.0' 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

Primary OutFlow Max=4.67 cfs @ 12.06 hrs HW=186.26' (Free Discharge)

↑1=Culvert (Barrel Controls 4.67 cfs @ 3.99 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=185.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 6P: New Road Culvert (CULV6)

Inflow Area = 0.170 ac, 52.94% Impervious, Inflow Depth > 6.08" for 100 - YEAR event
 Inflow = 1.34 cfs @ 12.04 hrs, Volume= 0.086 af
 Outflow = 1.33 cfs @ 12.05 hrs, Volume= 0.086 af, Atten= 1%, Lag= 0.4 min
 Primary = 1.33 cfs @ 12.05 hrs, Volume= 0.086 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 192.37' @ 12.05 hrs Surf.Area= 109 sf Storage= 45 cfPlug-Flow detention time= 1.2 min calculated for 0.086 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (756.3 - 755.4)

Volume	Invert	Avail.Storage	Storage Description
#1	191.80'	572 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
191.80	50	0	0
193.00	175	135	135
194.00	100	138	272
195.00	125	113	385
196.00	250	188	572

Device	Routing	Invert	Outlet Devices
#1	Primary	191.78'	18.0" Round Culvert L= 58.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 191.78' / 191.50' S= 0.0048 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	195.00'	15.0' 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

Primary OutFlow Max=1.32 cfs @ 12.05 hrs HW=192.37' (Free Discharge)
 ↑ 1=Culvert (Barrel Controls 1.32 cfs @ 3.05 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=191.80' (Free Discharge)
 ↑ 2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 9P: New Road Culvert (CULV9)

Inflow Area = 0.330 ac, 60.61% Impervious, Inflow Depth > 6.41" for 100 - YEAR event
 Inflow = 2.69 cfs @ 12.03 hrs, Volume= 0.176 af
 Outflow = 2.69 cfs @ 12.04 hrs, Volume= 0.176 af, Atten= 0%, Lag= 0.3 min
 Primary = 2.69 cfs @ 12.04 hrs, Volume= 0.176 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 180.38' @ 12.04 hrs Surf.Area= 97 sf Storage= 28 cf

Plug-Flow detention time= 0.1 min calculated for 0.176 af (100% of inflow)
 Center-of-Mass det. time= 0.0 min (748.7 - 748.6)

Volume	Invert	Avail.Storage	Storage Description
#1	180.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
180.00	50	0	0
181.00	175	113	113
182.00	100	138	250
183.00	125	113	363
184.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	179.50'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 179.50' / 175.00' S= 0.0789 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2 Secondary 182.00' 15.0' 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

Primary OutFlow Max=2.60 cfs @ 12.04 hrs HW=180.36' (Free Discharge)
 ↑1=Culvert (Inlet Controls 2.60 cfs @ 2.49 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=180.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 10P: Filter Pond 3000 s.f.

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 4.97" for 100 - YEAR event
 Inflow = 16.51 cfs @ 12.07 hrs, Volume= 1.469 af
 Outflow = 8.42 cfs @ 12.28 hrs, Volume= 0.954 af, Atten= 49%, Lag= 13.0 min
 Primary = 8.42 cfs @ 12.28 hrs, Volume= 0.954 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Starting Elev= 168.50' Surf.Area= 4,019 sf Storage= 5,257 cf
 Peak Elev= 172.84' @ 12.28 hrs Surf.Area= 7,591 sf Storage= 30,065 cf (24,809 cf above start)

Plug-Flow detention time= 156.8 min calculated for 0.830 af (57% of inflow)
 Center-of-Mass det. time= 58.0 min (840.1 - 782.1)

Volume	Invert	Avail.Storage	Storage Description
#1	167.00'	39,518 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
167.00	3,000	0	0
168.00	3,669	3,335	3,335
169.00	4,369	4,019	7,354
170.00	5,127	4,748	12,102
171.00	5,941	5,534	17,636
172.00	6,811	6,376	24,012
173.00	7,739	7,275	31,287
174.00	8,723	8,231	39,518

Device	Routing	Invert	Outlet Devices
#1	Primary	164.00'	18.0" Round Culvert L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 164.00' / 163.00' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Device 1	168.50'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	172.50'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	173.00'	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=8.34 cfs @ 12.28 hrs HW=172.84' (Free Discharge)

↑
1=Culvert (Passes 8.34 cfs of 24.20 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.22 cfs @ 9.93 fps)
 3=Orifice/Grate (Weir Controls 8.12 cfs @ 1.90 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=168.50' (Free Discharge)

↑
4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 11P: New Road Culvert (CULV10)

Inflow Area = 2.610 ac, 28.74% Impervious, Inflow Depth > 4.71" for 100 - YEAR event
 Inflow = 10.82 cfs @ 12.09 hrs, Volume= 1.025 af
 Outflow = 10.63 cfs @ 12.10 hrs, Volume= 1.024 af, Atten= 2%, Lag= 0.9 min
 Primary = 10.63 cfs @ 12.10 hrs, Volume= 1.024 af
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Peak Elev= 179.25' @ 12.10 hrs Surf.Area= 157 sf Storage= 398 cf

Plug-Flow detention time= 0.7 min calculated for 1.021 af (100% of inflow)

Center-of-Mass det. time= 0.5 min (791.1 - 790.6)

Volume	Invert	Avail.Storage	Storage Description
#1	176.00'	550 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
176.00	50	0	0
177.00	175	113	113
178.00	100	138	250
179.00	125	113	363
180.00	250	188	550

Device	Routing	Invert	Outlet Devices
#1	Primary	176.00'	18.0" Round Culvert L= 57.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 176.00' / 175.00' S= 0.0175 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf
#2	Secondary	180.00'	15.0' 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

Primary OutFlow Max=10.58 cfs @ 12.10 hrs HW=179.23' (Free Discharge)

↑
1=Culvert (Inlet Controls 10.58 cfs @ 5.98 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=176.00' (Free Discharge)

↑
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 50P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 7.24" for 100 - YEAR event
 Inflow = 1.82 cfs @ 12.00 hrs, Volume= 0.121 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 185.85' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 5,250 cf

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	183.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	188.50'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=183.00' (Free Discharge)
 ↑=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 51P: 4 House Drip Edges

Inflow Area = 0.200 ac, 100.00% Impervious, Inflow Depth > 7.24" for 100 - YEAR event
 Inflow = 1.82 cfs @ 12.00 hrs, Volume= 0.121 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 169.85' @ 20.00 hrs Surf.Area= 4,608 sf Storage= 5,250 cf

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	167.00'	2,765 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 4 6,912 cf Overall x 40.0% Voids
2,765 cf x 4.00 = 11,059 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 4.00 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=0.00 cfs @ 5.00 hrs HW=167.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 52P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 7.24" for 100 - YEAR event
 Inflow = 0.91 cfs @ 12.00 hrs, Volume= 0.060 af
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 183.70' @ 20.00 hrs Surf.Area= 1,152 sf Storage= 2,625 cf

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	178.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	185.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.00 cfs @ 5.00 hrs HW=178.00' (Free Discharge)

↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 53P: 2 House Drip Edges

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 7.24" for 100 - YEAR event
 Inflow = 0.91 cfs @ 12.00 hrs, Volume= 0.060 af
 Outflow = 0.04 cfs @ 14.87 hrs, Volume= 0.007 af, Atten= 95%, Lag= 172.1 min
 Primary = 0.04 cfs @ 14.87 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 201.00' @ 14.85 hrs Surf.Area= 1,152 sf Storage= 2,304 cf

Plug-Flow detention time= 546.3 min calculated for 0.007 af (12% of inflow)

Center-of-Mass det. time= 285.9 min (1,014.7 - 728.7)

Volume	Invert	Avail.Storage	Storage Description
#1	196.00'	1,382 cf	3.00'W x 96.00'L x 6.00'H Prismatoid x 2 3,456 cf Overall x 40.0% Voids
1,382 cf x 2.00 = 2,765 cf Total Available Storage			

POST 1-2-2026

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Device	Routing	Invert	Outlet Devices
#1	Primary	201.00'	48.0' long x 3.0' breadth Broad-Crested Rectangular Weir X 2.00 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=0.01 cfs @ 14.87 hrs HW=201.00' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Weir Controls 0.01 cfs @ 0.07 fps)

Summary for Pond 54P: Drip Edge

Inflow Area = 0.050 ac, 100.00% Impervious, Inflow Depth > 7.24" for 100 - YEAR event
 Inflow = 0.45 cfs @ 12.00 hrs, Volume= 0.030 af
 Outflow = 0.39 cfs @ 12.02 hrs, Volume= 0.015 af, Atten= 14%, Lag= 0.9 min
 Primary = 0.39 cfs @ 12.02 hrs, Volume= 0.015 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 186.02' @ 12.00 hrs Surf.Area= 288 sf Storage= 578 cf

Plug-Flow detention time= 188.5 min calculated for 0.015 af (51% of inflow)
 Center-of-Mass det. time= 94.4 min (823.1 - 728.7)

Volume	Invert	Avail.Storage	Storage Description
#1	181.00'	691 cf	3.00'W x 96.00'L x 6.00'H Prismatoid 1,728 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	186.00'	48.0' 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=0.21 cfs @ 12.02 hrs HW=186.01' (Free Discharge)
 ↑ 1=Broad-Crested Rectangular Weir (Weir Controls 0.21 cfs @ 0.29 fps)

Summary for Pond DMH1: DMH1

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 4.90" for 100 - YEAR event
 Inflow = 12.62 cfs @ 12.09 hrs, Volume= 1.201 af
 Outflow = 12.62 cfs @ 12.09 hrs, Volume= 1.201 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.62 cfs @ 12.09 hrs, Volume= 1.201 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 177.85' @ 12.09 hrs
 Flood Elev= 182.96'

Device	Routing	Invert	Outlet Devices
#1	Primary	174.90'	18.0" Round Culvert L= 253.0' RCP, square edge headwall, Ke= 0.500

Inlet / Outlet Invert= 174.90' / 170.60' S= 0.0170 '/' Cc= 0.900
 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=12.40 cfs @ 12.09 hrs HW=177.77' (Free Discharge)
 ↑1=Culvert (Inlet Controls 12.40 cfs @ 7.02 fps)

Summary for Pond DMH2: DMH2

Inflow Area = 2.940 ac, 32.31% Impervious, Inflow Depth > 4.90" for 100 - YEAR event
 Inflow = 12.62 cfs @ 12.09 hrs, Volume= 1.201 af
 Outflow = 12.62 cfs @ 12.09 hrs, Volume= 1.201 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.62 cfs @ 12.09 hrs, Volume= 1.201 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 173.52' @ 12.09 hrs
 Flood Elev= 175.09'

Device	Routing	Invert	Outlet Devices
#1	Primary	170.50'	18.0" Round Culvert L= 85.5' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 170.50' / 170.10' S= 0.0047 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=12.40 cfs @ 12.09 hrs HW=173.45' (Free Discharge)
 ↑1=Culvert (Barrel Controls 12.40 cfs @ 7.02 fps)

Summary for Pond DMH4: DMH4

Inflow Area = 3.550 ac, 30.42% Impervious, Inflow Depth > 4.97" for 100 - YEAR event
 Inflow = 16.51 cfs @ 12.07 hrs, Volume= 1.469 af
 Outflow = 16.51 cfs @ 12.07 hrs, Volume= 1.469 af, Atten= 0%, Lag= 0.0 min
 Primary = 16.51 cfs @ 12.07 hrs, Volume= 1.469 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 174.40' @ 12.06 hrs
 Flood Elev= 174.24'

Device	Routing	Invert	Outlet Devices
#1	Primary	169.90'	18.0" Round Culvert L= 51.3' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.90' / 169.50' S= 0.0078 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=16.06 cfs @ 12.07 hrs HW=174.21' (Free Discharge)
 ↑1=Culvert (Inlet Controls 16.06 cfs @ 9.09 fps)

APPENDIX H. 24-hour duration rainfalls for various return periods

COUNTY	Storm Type	1-YR	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR
ANDROSCOGGIN	III	2.5	3.0	3.7	4.3	5.4	6.4	7.6	11.1
AROOSTOOK C (Presque Isle Area)	II	1.9	2.3	2.8	3.2	3.9	4.6	5.3	7.6
AROOSTOOK N (Fort Kent Area)	II	1.9	2.2	2.7	3.1	3.7	4.3	5.0	7.0
AROOSTOOKS (Houlton Area)	II	2.1	2.5	3.0	3.4	4.1	4.7	5.4	7.5
CUMBERLAND NW (Bridgton Area)	III	2.5	3.0	3.7	4.3	5.4	6.3	7.5	10.9
CUMBERLAND SE (N Windham Area)	III	2.6	3.1	3.9	4.6	5.8	6.9	8.1	12.1
FRANKLIN	II	2.0	2.4	2.9	3.4	4.2	4.9	5.7	8.2
HANCOCK	III	2.5	2.9	3.6	4.2	5.2	6.1	7.2	10.5
KENNEBEC	III	2.4	2.8	3.5	4.2	5.2	6.1	7.2	10.6
KNOX	III	2.6	3.2	3.9	4.6	5.7	6.7	7.9	11.5
LINCOLN	III	2.5	3.1	3.8	4.5	5.5	6.5	7.6	11.1
OXFORD E (Rumford Area)	II ¹	2.3	2.7	3.3	3.9	4.8	5.7	6.7	9.7
OXFORD W (Gilead Area)	II	2.2	2.7	3.4	4.0	4.9	5.8	6.9	10.1
PENOBCOT N (Millinocket Area)	II	2.2	2.6	3.2	3.8	4.7	5.6	6.5	9.5
PENOBCOTS (Hudson Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.7
PISCATAQUIS N (Chesuncook Area)	II	2.0	2.4	2.9	3.4	4.2	5.0	5.8	8.5
PISCATAQUIS S (Monson Area)	II	2.2	2.7	3.3	3.9	4.8	5.7	6.8	10.0
SAGADAHOC	III	2.6	3.2	3.9	4.6	5.7	6.7	7.8	11.4
SOMERSET N (Pittston Farm Area)	II	2.0	2.3	2.8	3.3	4.0	4.7	5.4	7.8
SOMERSET S (Solon Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.8
WALDO	III	2.4	2.9	3.6	4.2	5.2	6.1	7.2	10.5
WASHINGTON	III	2.5	2.8	3.4	3.9	4.8	5.5	6.4	9.0
YORK	III	2.6	3.3	4.1	4.9	6.2	7.3	8.7	13.2

1 Use Type III rainfall for the towns of Brownfield, Buckfield, Denmark, Hartford, Hebron, Hiram, Oxford, and Porter.

Source: Data extracted by the Maine Department of Environmental Protection from the Northeast Regional Climate Center website (<http://precip.eas.cornell.edu>), Extreme Precipitation Tables. Data from this website was obtained from the National Oceanic and Atmospheric Administration's Regional Climate Center Program.

June 2014

Table 5-1 - Hydrologic Soil Groups for Maine Soils

This table provides information on the hydrologic soil series recognized in Maine and is current as of January 1, 2016. It is understood that these ratings may, and some probably will, change over time and with better data. The USDA - NRCS (Natural Resources Conservation Service) should be contacted for more accurate information.

<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

HSG A	HSG A/D	HSG B	HSG B/D	HSG C	HSG C/D	HSG D
Adams	Au Gres	Agawam	Atherton	Becket	Boothbay #	Abram
Colton	Bucksport	Allagash	Belgrade	Chesuncook *	Buxton #	Aurelie
Croghan	Chocorua	Bangor	Charles	Conant	Chesuncook **	Bemis
Danforth	Kinsman	Berkshire	Cornish	Dixfield *	Dixfield **	Benson
Deerfield	Markey	Caribou	Elmwood +	Elliottsville	Dixmont	Biddeford
Eldridge	Moosabec	Charlton	Fredon	Howland *	Easton	Brayton
Enchanted	Naskeag	Fryeburg	Halsey	Linneus	Howland **	Burnham
Hermon	Naumburg	Hadley	Limerick	Mapleton	Lamoine	Cabot
Hinckley	Rifle	Hartland	Lovewell +	Marlow	Leicester	Canaan
Mahoosuc	Scarboro	Nicholville ^	Medomak	Melrose	Perham **	Canandaigua
Masardis	Searsport	Machias ^	Ninigret +	Paxton	Pushaw	Colonel
Merrimac	Sebago	Madawaska ^	Podunk +	Penquis	Ragmuff **	Creasey
Skowhegan	Togus	Monadnock	Raynham	Perham *	Peru **	Daigle
Stetson	Vassalboro	Ondawa	Red Hook	Peru *	Skerry *	Gouldsboro
Sunday	Walpole	Salmon	Roundabout	Plaisted	Surplus **	Hogback
Udipsammens	Waskish	Sheepscot ^	Rumney	Ragmuff *	Washburn	Hollis
Windsor			Saco	Rawsonville	Woodbridge	Knob Lock
			Scio +	Sisk		Lyman
			Sutton +	Skerry **		Monarda
			Swanton	Suffield		Monson
			Whately	Surplus *		Peacham
			Winooski +	Tunbridge		Pillsbury
			Wonsqueak	Winnecook		Ricker
						Ridgebury
	Soils (with *) are HSG C or C/D depending on depth to Cd (C horizon with a dense unconsolidated material) and depth to water table - (with **) most commonly HSG C/D					Saddleback
						Scantic
						Saugatuck
	Soils (with +) are HSG B or B/D if aquic-redox is within 60cm					Schoodic
						Swanville
	Soils (with ^) are HSG B if water table is below 60cm and Ksat of lower horizon greater than 10					Telos
						Thorndike
	Soils (with #) are HSG C - or C/D if aquic-redox is within 60cm					Westbury
						Whitman