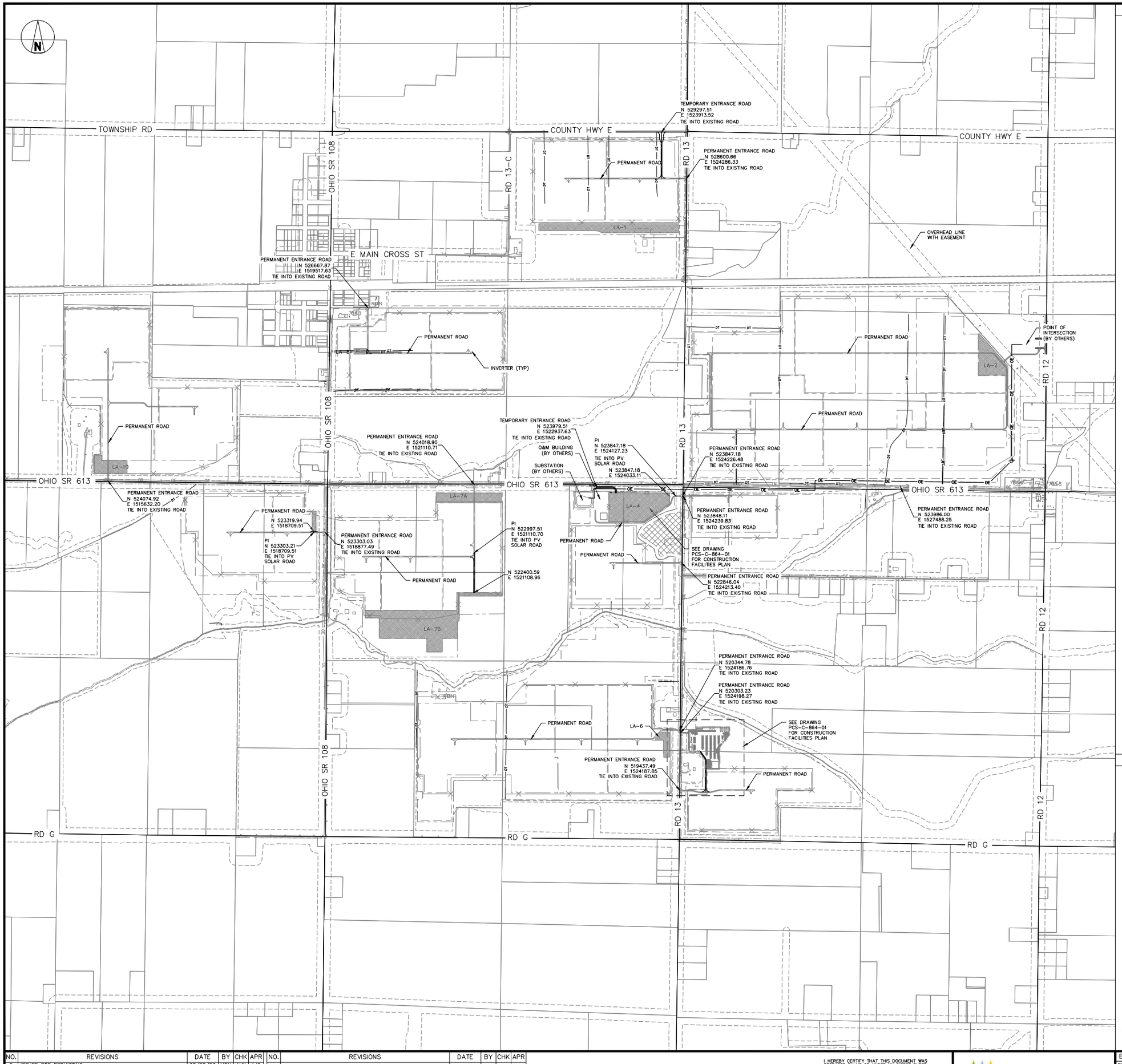


NOTES

1. SEE DRAWING PCS-G-200-01 FOR GENERAL ARRANGEMENT PLAN.
2. SEE DRAWING PCS-C-810-01 FOR CIVIL COVER SHEET, DRAWING INDEX, AND STANDARD ABBREVIATIONS.
3. COORDINATES SHOWN ARE BASED ON THE OHIO STATE PLANE NORTH ZONE, NORTH AMERICAN HORIZONTAL DATUM OF 1983 (NAD83). ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SEE DRAWING PCS-G-200-01 FOR PROJECT SURVEY CONTROL TABLE.
4. ALL AREAS DISTURBED DURING CONSTRUCTION SHOULD BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS, AND STABILIZED UNLESS NOTED OTHERWISE. DISTURBED AREAS NOT RECEIVING AGGREGATE SHALL BE SEEDED/SODDED.
5. ALL NEW ROADS ARE 14'-0" WIDE UNLESS NOTED OTHERWISE.
6. ALL NEW ROAD INTERIOR TURNING RADII ARE 50'-0" UNLESS NOTED OTHERWISE.
7. ALL NEW GATES ARE 20'-0" WIDE UNLESS NOTED OTHERWISE.

LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- CONSTRUCTION SETBACK LINE
- COUNTY PARCEL
- ARRAY BOUNDARY
- NEW PERMANENT ROAD
- NEW SECURITY FENCE
- SUBSTATION FENCE
- EXISTING ROAD
- STREAM (50'-0" SETBACK)
- TEMPORARY WATER LINE
- TEMPORARY DIRECT BURIED CABLE
- TEMPORARY CONSTRUCTION FENCE
- DRAIN TILE
- TEMPORARY CONSTRUCTION GATE
- TEMPORARY CONSTRUCTION ROAD
- LAYDOWN AREA
- AVOIDANCE AREA
- CONSTRUCTION LAYDOWN AREA

STATE OF OHIO
ANDY NGUYEN
E-89364
REGISTERED PROFESSIONAL ENGINEER

Nguyen, Andy

NOT TO BE USED FOR CONSTRUCTION

THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

NO.	REVISIONS	DATE	BY	CHK	APR
0	ISSUED FOR PERMITTING	08/25/23	MBN	AVN	AJG
1	ISSUED FOR PERMITTING	09/18/23	MBN	AVN	AJG

NO.	REVISIONS	DATE	BY	CHK	APR

BLACK & VEATCH
11401 LAMAR AVENUE
OVERLAND PARK, KANSAS 66211
OHIO ENGINEERING CREDENTIAL NUMBER COA.01645

500' 250' 0 500' 1000'
1"=500'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF OHIO

SIGNED ANDY NGUYEN
DATE 09/18/23 REG NO. PE-89364

AVANGRID RENEWABLES

ENGINEERING RECORD	DATE
DRAWN: MBN	09/18/23
DESIGNED: CA	09/18/23
CHECKED: AVN	09/18/23
APPROVED: AJG	09/18/23

POWELL CREEK SOLAR, LLC
POWELL CREEK PV SOLAR PROJECT
CONSTRUCTION FACILITIES
TEMPORARY ACCESS PLAN

CADFILE: PCS-C-864-02	SCALE: 500'=1"	DWG.NO. PCS-C-864	SHEET 02	REV 1

Appendix E. Forms & Logs

Included in Appendix F:

- Grading & Stabilization Log
- SWP3 Inspection Report Form
- Corrective Action Log
- Record of Revisions

Stormwater Pollution Prevention Plan – Grading and Stabilization Log
Avangrid – Powell Creek Solar Project

Date Grading Activity Initiated	Description of Grading Activity and Location	Date Grading Activity Ceased (Temp or Perm)	Date When Stabilization Measures are Initiated	Description of Stabilization Measures and Location

Stormwater Pollution Prevention Plan Inspection Report Form

Inspections must occur at least once a week and within 24 hours of the end of a storm event that is 0.50 inches or greater.

Project Name:_____ OEPA NPDES Stormwater Identification Number: _____

Location	Rain data	Type of control (see below)	Date installed / modified	Current Condition (see below)	Corrective Action / Other Remarks

Condition Code:

G = Good M = Marginal, needs maintenance or replacement soon P = Poor, needs immediate maintenance or replacement C = Needs to be cleaned O = Other

Control Type Codes

1. Silt Fence	10. Storm drain inlet protection	19. Reinforced soil retaining system	28. Tree protection
2. Earth dikes	11. Vegetative buffer strip	20. Gabion	29. Detention pond
3. Structural diversion	12. Vegetative preservation area	21. Sediment Basin	30. Retention pond
4. Swale	13. Retention Pond	22. Temporary seed / sod	31. Waste disposal / housekeeping
5. Sediment Trap	14. Construction entrance stabilization	23. Permanent seed / sod	32. Dam
6. Check dam	15. Perimeter ditch	24. Mulch	33. Sand Bag
7. Subsurface drain	16. Curb and gutter	25. Hay Bales	34. Other
8. Pipe slope drain	17. Paved road surface	26. Geotextile	
9. Level spreaders	18. Rock outlet protection	27. Rip-rap	

Inspector Information:

_____ _____ _____

Name Qualification Date

The above signature also shall certify that this facility is in compliance with the Stormwater Pollution Prevention Plan and the State of Ohio General Permit for Stormwater Discharge Associated with Construction Activity Under the Nation Pollutant Discharge Elimination System if there are not any incidents of non-compliance identified above.

* * * * * *

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ _____

Name (Responsible Authority) Date

Stormwater Pollution Prevention Plan – Corrective Actions Log

Avangrid - Powell Creek

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person

Stormwater Pollution Prevention Plan – Record of Revisions
Avangrid – Powell Creek Solar Project

Date	Name	Description of Revision	Location of Revision in Plan

Appendix F. Stormwater Calculations

BLACK & VEATCH
Building a world of difference.

CALCULATION RECORD

Confidential and Proprietary Business Information of Black & Veatch

Client Name Avangrid Page 1 of 412

Project Name Powell Creek Solar Project Project No. 415878

Calculation Title Stormwater Calculation

Calculation No./File No. 58.1000

Verification Method: ☒ Check and Review ☐ Alternate Calculations

Objective: **Design and record a comprehensive stormwater management plan that includes the design of all necessary stormwater practices to minimize the impact of stormwater runoff on the environment and public health**

Unverified Assumptions Requiring Subsequent Verification			
No.	**Assumption**	**Verified By***	**Date**

Refer to Page _____ of this calculation for additional assumptions.

This Section Used for Software-Generated Calculations	
Program Name	Microsoft Excl, Bentley Flowmaster, Bentley CulvertMaster, AutoCAD Civil3D, HydroCAD, Google Earth

If a nonstandard B&V application is used, the approved deviation permit number shall be listed below, and the approved deviation permit attached to the calculation as a reference.

Review and Approval						
Rev	**Prepared By***	**Date**	**Verified By***	**Date**	**Approved By***	**Date**
0	John Winter	09/21/2023				

*Signature Required

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List of Attachments

Attachment A: NOAA Atlas 14 Storm Data
Attachment B: Hydrology Inputs Culverts and Low Water Crossings
Attachment C: Riprap Design Calculations
Attachment D: Drainage Area Maps
Attachment E: Bentley CulvertMaster Reports
Attachment F: Bentley Flowmaster Reports
Attachment G: Sediment Trap Sizing
Attachment H: Sediment Trap HydroCAD model Reports
Attachment I: Sediment Trap Dewatering Calculation

1.0 Objective

This report has been prepared by Black & Veatch for the Avangrid Powell Creek Solar project in Putnam County, Ohio. The property is in northwest Ohio, 20 miles west of Findlay, Ohio. This report encompasses the PV array areas. The site is currently row crop and pastureland. This report will develop a comprehensive stormwater management plan that includes the design of all necessary stormwater practices to minimize the impact of stormwater runoff on the environment and public health.

2.0 References

Reference 1: Ohio DOT Hydraulic design Manual

Reference 2: NOAA Atlas 14, Volume 11, Version 2

Reference 3: Urban Hydrology for Small Watersheds, TR-55, Second Edition, United States Department of Agriculture, 1986

Reference 4: US DOT - Design of Roadside Channels with Flexible Linings Report No. FHWA-NHI-05-114 HEC-14

Reference 5: Ohio's Standards for Stormwater Management: Chapter 6 Sediment Controls

Reference 6: *USDA, Forest Services - Low-Water Crossing Geomorphic, Biological and Engineering Design Considerations*

Reference 7: Ohio Environmental Protection Agency General Permit Authorization for Stormwater Discharges Associated With Construction Activity Under The National Pollutant Discharge Elimination System Permit No. OHC000006

3.0 Design Basis

3.1 Sediment Trap Design

The sediment traps have been designed to capture either 1000 cubic feet of sediment and 1800 cubic feet of dewatering volume per disturbed acre or the required water quality volume in the watershed of the basin, whichever is greater. Channels and swales have been appropriately designed to convey all upstream disturbed areas to the appropriate sediment trap. Please refer to Attachment G and H for all relevant data and calculations. The sediment traps have been designed to remove and store sediment and comply with all Ohio sediment control regulations per Ohio's Standards for Stormwater Management: Chapter 6 Sediment Controls, Reference 5 and Reference 7: Ohio Environmental Protection Agency General Permit Authorization for Stormwater Discharges Associated With Construction Activity Under The National Pollutant Discharge Elimination System Permit No. OHC000006. All sediment traps have been designed to have a drawdown time between 72 and 24 hours. All drawdown calculation estimates can be found in Attachment I

3.2 Culvert Design

The culverts have been specifically designed to prevent overtopping of the adjacent roadway during the peak runoff of the 100-year storm event, as stated in Reference 1, and to accommodate the 25-year storm event according to AGR Spec# AGR-C-071-0. Please refer to Attachment B for all hydrology inputs. The design of these culverts includes a minimum cover of 1' based on Reference 3. The minimum culvert

pipe diameter used in these calculations is 18". You can find the culvert design outputs and drawings in Attachment E.

3.3 Low Water Crossing Design

The low water crossings have been designed with aggregate and riprap as the road surface to provide protection for the roadway during the designed storm event as referenced in Reference 1. Riprap has been designed to protect the roads from the peak runoff of the 25-year storm. The design storm crossing depth during the 100-year storm has been minimized according to reference 6. Water crossing calculations can be found in Attachment B. The design flow depth over the low water crossing was analyzed using FlowMaster attachment F, which modeled the low water crossing as a broad-crested weir, considering the peak flow.

3.4 Riprap Design

The riprap aprons for these culverts were designed using Reference 4. The minimum Riprap sizes used is 6 inches (D50). Riprap calculations can be found in Attachment C.

4.0 Definitions of Units

in/hr	Inches/hour	Ac	acres
cfs	Cubic feet per second	ft/ft	Slope
ft	Feet	SF	Square feet
in	Inches	ea	Each
cy	Cubic Yard	Min	Minutes
ft/s	Feet per Second	LB/ft^2	Pound per Square Foot

5.0 Analysis & Design

5.1 Watershed Delineation

Drainage areas for each of the proposed culverts and low water crossings were determined by using LIDAR topography data provided by Black & Veatch and Global Mapper topography data for areas outside the project limits, also provided by Black & Veatch. Drainage Maps can be found in Attachment D.

5.2 Hydraulic Modeling

The Modified Rational Method was utilized to determine the peak runoff for each culvert and low water crossing needed to cross a proposed solar array access road. The Time of Concentration (ToC) for the drainage basins were determined using TR-55 using Reference 3. Rainfall intensity values were determined using NOAA Atlas 14 see Attachment B. All supporting calculations can be seen in Attachment B, Attachment E and Attachment F.

5.3 Culvert Size

Table 1: Culvert Sizing

Culvert ID	Number of Barrels (ea)	Pipe Height (in)	Pipe Material	Barrel Length (ft)	Manning's n value for CHDPE	Pipe end section type	Inlet Elevation (ft)	Outlet Elevation (ft)	Slope (ft/ft)
C-3	2	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	724.00	723.95	0.0010
C-4	2	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	728.00	727.95	0.0010
C-7	1	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	732.50	732.26	0.0048
C-10	1	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	732.25	732.13	0.0024
C-17	6	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	731.25	731.20	0.0010

5.4 Low Water Crossing Size

Table 2: Low Water Crossing Sizing

LWC ID	Design Storm Discharge (CFS)	25 yr Headwater Elevation (ft)	100 yr Headwater Elevation (ft)	Crossing road breath (ft)	MIN gravel Crossing width (ft)	25 yr Velocity (ft/s)	Surface type
LWC-1	1.11	0.19	0.22	14	5	1.14	Gravel
LWC-2	7.15	0.42	0.49	14	10	1.72	Gravel
LWC-11	10.81	0.42	0.47	14	15	1.72	Gravel
LWC-12	3.73	0.43	0.48	14	5	1.75	Gravel
LWC-13	2.63	0.34	0.39	14	5	1.54	Gravel
LWC-14	2.26	0.31	0.35	14	5	1.46	Gravel
LWC-15	2.84	0.36	0.4	14	5	1.58	Gravel
LWC-16	4.05	0.45	0.51	14	5	1.8	Gravel
LWC-18	4.76	0.32	0.37	14	10	1.49	Gravel

5.5 Riprap Sizing

Table 3: Riprap Sizing for Culverts and Low Water Crossing

ID	Q 25 YR PEAK DISCHARGE	TAILWATER CONDITION	NUMBER OF BARRELS	PIPE DIAMETER	TOTAL WIDTH	TAILWATER DEPTH	RIPRAP SIZE
	CFS		EACH	INCHES	FT	FT	FT
							(D50)
LWC-1	1.11	MIN	-	-	5.0	0.19	0.50
LWC-2	7.15	MIN	-	-	10.0	0.42	0.50
C-3	10.53	MIN	2	18	3.0	0.88	0.50
C-4	5.49	MIN	2	18	3.0	0.63	0.50
C-7	0.17	MIN	1	18	1.5	0.15	0.50
C-10	2.46	MIN	1	18	1.5	0.59	0.50
LWC-11	10.81	MIN	-	-	15.0	0.42	0.50
LWC-12	3.73	MIN	-	-	5.0	0.43	0.50
LWC-13	2.63	MIN	-	-	5.0	0.34	0.50
LWC-14	2.26	MIN	-	-	5.0	0.31	0.50
LWC-15	2.84	MIN	-	-	5.0	0.36	0.50
LWC-16	4.05	MIN	-	-	5.0	0.45	0.50
C-17	23.46	MIN	6	18	9.0	0.80	0.50
LWC-18	4.76	MIN	-	-	10.0	0.80	0.50
HEC-14 CHAPTER 10.2 RIPRAP APRON DESIGN							

5.6 Sediment Trap Design

Table 4: Sediment Trap Sizing

SEDIMENT TRAP SIZE							Crest EL. of Spillway
Sediment Trap ID	Sediment Trap Plan Size at bottom level	Sediment Trap Plan Size at top	Sediment Trap Overall Depth	Bottom EL. Of Sediment Trap	Top EL. Of Sediment Trap	Top EL. Of Berm on D/S side	
	(SF)	(SF)	(FT)	(FT)	(FT)	(FT)	(FT)
ST-01	113690	143678	1.5	731.50	733.00	733.50	733.00
ST-02	119979	147222	1.5	726.50	728.00	728.50	728.00
ST-03-A	141587	153463	1.5	722.90	724.40	724.90	724.40
ST-03-B	32557	38080	1.5	725.50	727.00	727.50	727.00
ST-04-A	70442	78757	1.5	724.50	726.00	726.50	726.00
ST-04-B	30714	34411	1.5	723.50	725.00	725.50	725.00
ST-05-A	102810	116922	1.5	726.50	728.00	728.50	728.00
ST-05-B	43505	47411	1.5	725.50	727.00	727.50	727.00
ST-06	246280	255640	1.5	726.00	727.50	728.00	727.50
ST-07	63755	78200	1.5	730.50	732.00	732.50	732.00
ST-08	55040	67028	1.5	726.60	728.10	728.60	728.10
ST-09-A	15925	20416	1.5	728.50	730.00	730.50	730.00
ST-09-B	18900	24921	1.5	729.20	730.70	731.20	730.70
ST-10	40500	44361	1.5	731.50	733.00	733.50	733.00
ST-11	106670	128256	1.5	731.25	732.75	733.25	732.75
ST-12	340760	354844	1.5	731.25	732.75	733.25	732.75

Table 5: Pre and Post Development Discharges

SUMMARY OF PRE AND POST DEVELOPMENT DISCHARGES									
DRAINAGE AREA	RUNOFF (CFS) FOR RAINFALL EVENTS								LOCATED IN
	5 YEAR- 24HR		10 YEAR- 24HR		25 YEAR- 24HR		100 YEAR- 24HR		
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
DA-01	13.56	13.56	17.63	17.63	23.61	23.61	34.12	34.12	PUTNAM COUNTY, OHIO
DA-02	13.94	13.22	18.01	17.19	23.97	23.05	34.41	33.35	
DA-03-A	33.69	20.76	41.05	27.05	51.41	36.30	68.83	52.54	
DA-03-B	10.52	6.45	12.81	8.42	16.05	11.30	21.47	16.36	
DA-04-A	21.07	15.04	26.33	19.63	33.85	26.44	46.64	38.32	
DA-04-B	9.03	8.82	11.76	11.52	15.76	15.45	22.78	22.32	
DA-05-A	20.26	12.36	24.73	16.10	31.04	21.61	41.66	31.41	
DA-05-B	11.91	7.25	14.54	9.46	18.23	12.71	24.43	18.42	
DA-06	34.99	34.69	45.44	45.18	60.96	60.62	88.20	87.73	
DA-07	15.84	15.84	20.64	20.64	27.66	27.66	39.96	39.96	
DA-08	26.33	14.74	32.03	19.23	40.03	25.81	53.43	37.37	
DA-09-A	6.64	6.64	8.66	8.66	11.60	11.60	16.76	16.76	
DA-09-B	8.81	8.37	11.48	10.89	15.38	14.58	22.17	21.01	
DA-10	8.74	8.18	11.39	10.57	15.26	14.06	22.05	20.12	
DA-11	12.85	12.85	16.78	16.78	22.56	22.56	32.75	32.75	
DA-12	33.04	33.04	43.02	43.02	57.72	57.72	83.61	83.61	
Peak discharges to nearby streams and low lying areas.									

6.0 Conclusion

This stormwater analysis and report complies with the ODOT Hydraulic Design Manual. The proposed infrastructure includes culverts and low water crossings designed to handle the stormwater runoff from a 25-year design storm. Based on our calculations each culvert pipe has been size to adequately handle the 25-year storm flow without overtopping the 100-year design storm. The low water crossings do not exceed a height of 1' during the 25- and 100-year design storm. We have determined that using class 2 Riprap with a 1.65 ft thickness at the low water crossings will effectively convey the runoff from this storm event without causing any negative impacts to neighboring properties or roadways. The erosion control runoff during construction will be managed via conveyance swales and sediment traps onsite. These will become permanent BMPs onsite after construction has completed to manage the storm water quality requirements of the site. The dewatering within 7 days will be motivated by the existing drain tiles onsite from the bottom and sides of sediment trap by means of infiltration and evaporation.

Attachment A

NOAA Atlas 14 Storm Data

NOAA Atlas 14, Volume 2, Version 3
Location name: Ottawa, Ohio, USA*
Latitude: 41.0938°, Longitude: -84.1256°
Elevation: 726 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**4.08** (3.67-4.54)	**4.85** (4.38-5.39)	**5.80** (5.23-6.44)	**6.56** (5.89-7.27)	**7.52** (6.73-8.32)	**8.27** (7.37-9.13)	**9.01** (7.99-9.94)	**9.77** (8.62-10.8)	**10.8** (9.43-11.9)	**11.5** (10.0-12.7)
10-min	**3.17** (2.86-3.53)	**3.79** (3.42-4.21)	**4.51** (4.06-5.00)	**5.06** (4.55-5.61)	**5.75** (5.15-6.36)	**6.27** (5.59-6.92)	**6.78** (6.02-7.48)	**7.29** (6.43-8.03)	**7.93** (6.94-8.74)	**8.39** (7.28-9.25)
15-min	**2.59** (2.33-2.88)	**3.09** (2.79-3.43)	**3.69** (3.32-4.10)	**4.16** (3.73-4.60)	**4.74** (4.24-5.24)	**5.17** (4.61-5.71)	**5.62** (4.98-6.19)	**6.04** (5.33-6.66)	**6.60** (5.77-7.27)	**6.99** (6.07-7.71)
30-min	**1.71** (1.54-1.91)	**2.07** (1.86-2.30)	**2.53** (2.28-2.81)	**2.88** (2.59-3.20)	**3.35** (2.99-3.70)	**3.70** (3.29-4.08)	**4.05** (3.60-4.47)	**4.41** (3.89-4.86)	**4.89** (4.27-5.38)	**5.24** (4.55-5.78)
60-min	**1.04** (0.942-1.16)	**1.27** (1.14-1.41)	**1.58** (1.43-1.76)	**1.84** (1.65-2.03)	**2.17** (1.94-2.40)	**2.44** (2.17-2.69)	**2.71** (2.41-2.99)	**2.99** (2.64-3.30)	**3.38** (2.96-3.72)	**3.68** (3.19-4.06)
2-hr	**0.611** (0.551-0.681)	**0.741** (0.668-0.825)	**0.930** (0.838-1.04)	**1.08** (0.973-1.20)	**1.29** (1.16-1.43)	**1.46** (1.30-1.62)	**1.64** (1.46-1.82)	**1.83** (1.61-2.02)	**2.09** (1.82-2.32)	**2.31** (1.99-2.55)
3-hr	**0.433** (0.393-0.482)	**0.523** (0.475-0.582)	**0.657** (0.595-0.729)	**0.765** (0.690-0.847)	**0.915** (0.820-1.01)	**1.04** (0.926-1.14)	**1.17** (1.04-1.29)	**1.31** (1.15-1.44)	**1.50** (1.30-1.65)	**1.66** (1.43-1.82)
6-hr	**0.255** (0.231-0.283)	**0.307** (0.279-0.341)	**0.383** (0.347-0.425)	**0.447** (0.403-0.493)	**0.538** (0.483-0.591)	**0.613** (0.547-0.672)	**0.694** (0.615-0.761)	**0.782** (0.686-0.855)	**0.907** (0.785-0.992)	**1.01** (0.865-1.11)
12-hr	**0.146** (0.133-0.162)	**0.176** (0.160-0.194)	**0.219** (0.199-0.241)	**0.255** (0.231-0.280)	**0.306** (0.276-0.336)	**0.349** (0.312-0.382)	**0.396** (0.352-0.432)	**0.445** (0.392-0.486)	**0.518** (0.449-0.564)	**0.577** (0.496-0.629)
24-hr	**0.086** (0.080-0.092)	**0.103** (0.096-0.110)	**0.127** (0.119-0.136)	**0.147** (0.137-0.157)	**0.175** (0.163-0.187)	**0.198** (0.183-0.211)	**0.221** (0.204-0.236)	**0.247** (0.226-0.263)	**0.282** (0.257-0.301)	**0.310** (0.280-0.332)
2-day	**0.049** (0.046-0.053)	**0.059** (0.056-0.063)	**0.072** (0.068-0.077)	**0.083** (0.078-0.089)	**0.098** (0.092-0.105)	**0.111** (0.103-0.118)	**0.123** (0.114-0.131)	**0.136** (0.126-0.145)	**0.155** (0.142-0.165)	**0.169** (0.154-0.181)
3-day	**0.035** (0.033-0.038)	**0.042** (0.040-0.045)	**0.052** (0.049-0.055)	**0.059** (0.056-0.063)	**0.069** (0.065-0.074)	**0.078** (0.073-0.083)	**0.087** (0.081-0.092)	**0.095** (0.088-0.101)	**0.108** (0.099-0.115)	**0.118** (0.107-0.126)
4-day	**0.028** (0.027-0.030)	**0.034** (0.032-0.036)	**0.041** (0.039-0.044)	**0.047** (0.044-0.050)	**0.055** (0.052-0.058)	**0.061** (0.058-0.065)	**0.068** (0.064-0.072)	**0.075** (0.070-0.080)	**0.084** (0.078-0.090)	**0.092** (0.084-0.098)
7-day	**0.019** (0.018-0.020)	**0.022** (0.021-0.024)	**0.027** (0.026-0.029)	**0.031** (0.029-0.033)	**0.036** (0.034-0.038)	**0.040** (0.038-0.042)	**0.045** (0.042-0.047)	**0.049** (0.046-0.052)	**0.055** (0.051-0.058)	**0.060** (0.055-0.064)
10-day	**0.015** (0.014-0.016)	**0.018** (0.017-0.019)	**0.021** (0.020-0.022)	**0.024** (0.023-0.025)	**0.028** (0.026-0.029)	**0.031** (0.029-0.033)	**0.034** (0.032-0.036)	**0.037** (0.035-0.039)	**0.041** (0.038-0.044)	**0.045** (0.041-0.048)
20-day	**0.010** (0.010-0.011)	**0.012** (0.011-0.013)	**0.014** (0.013-0.015)	**0.016** (0.015-0.017)	**0.018** (0.017-0.019)	**0.020** (0.019-0.021)	**0.022** (0.020-0.023)	**0.023** (0.022-0.025)	**0.026** (0.024-0.027)	**0.027** (0.025-0.029)
30-day	**0.008** (0.008-0.009)	**0.010** (0.009-0.010)	**0.011** (0.011-0.012)	**0.013** (0.012-0.013)	**0.014** (0.014-0.015)	**0.015** (0.015-0.016)	**0.017** (0.016-0.017)	**0.018** (0.017-0.019)	**0.019** (0.018-0.020)	**0.020** (0.019-0.021)
45-day	**0.007** (0.007-0.007)	**0.008** (0.008-0.009)	**0.010** (0.009-0.010)	**0.011** (0.010-0.011)	**0.012** (0.011-0.012)	**0.013** (0.012-0.013)	**0.014** (0.013-0.014)	**0.014** (0.014-0.015)	**0.015** (0.015-0.016)	**0.016** (0.015-0.017)
60-day	**0.006** (0.006-0.007)	**0.007** (0.007-0.008)	**0.009** (0.008-0.009)	**0.009** (0.009-0.010)	**0.010** (0.010-0.011)	**0.011** (0.011-0.012)	**0.012** (0.011-0.013)	**0.013** (0.012-0.013)	**0.014** (0.013-0.014)	**0.014** (0.013-0.015)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

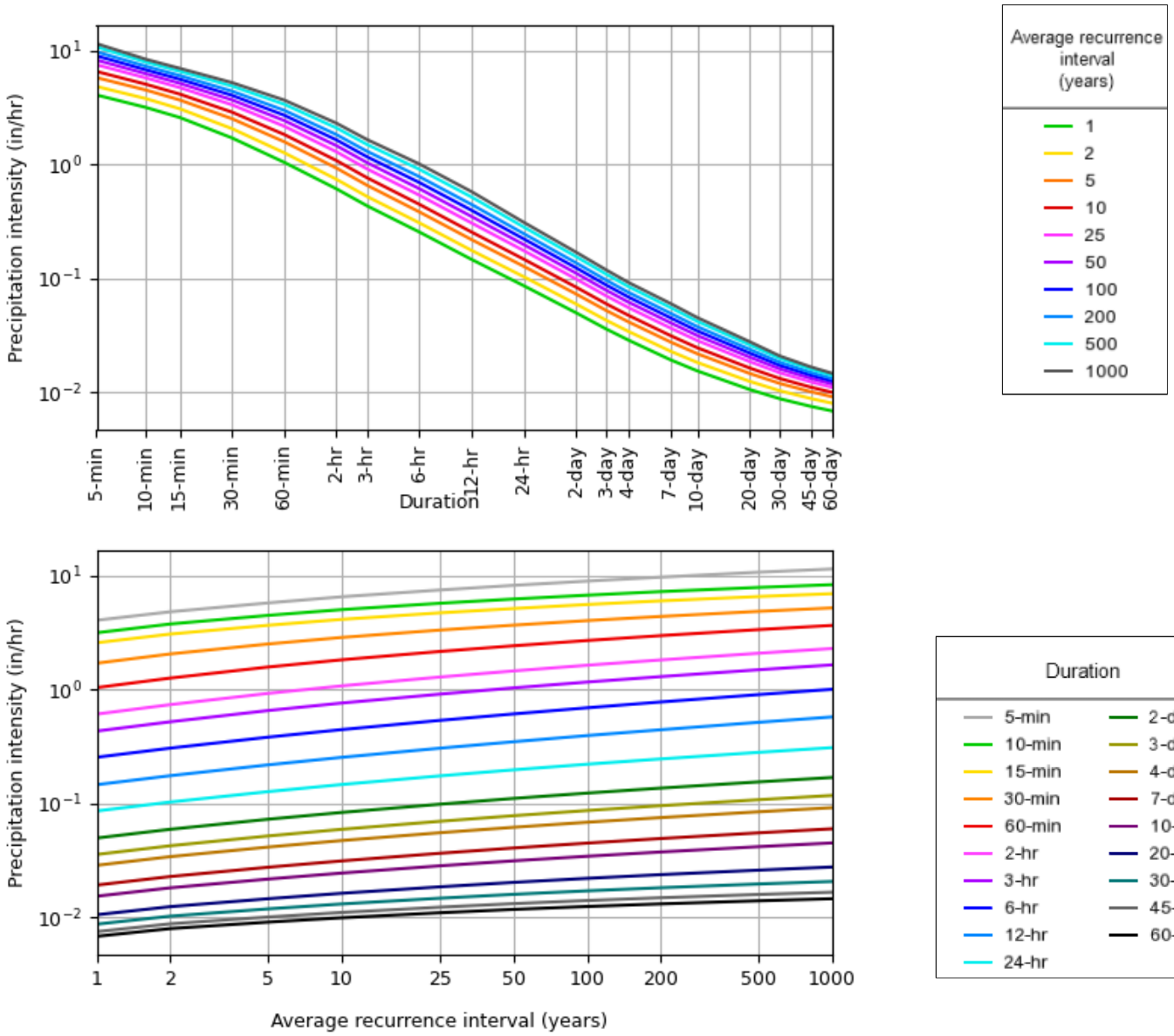
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 41.0938°, Longitude: -84.1256°



NOAA Atlas 14, Volume 2, Version 3

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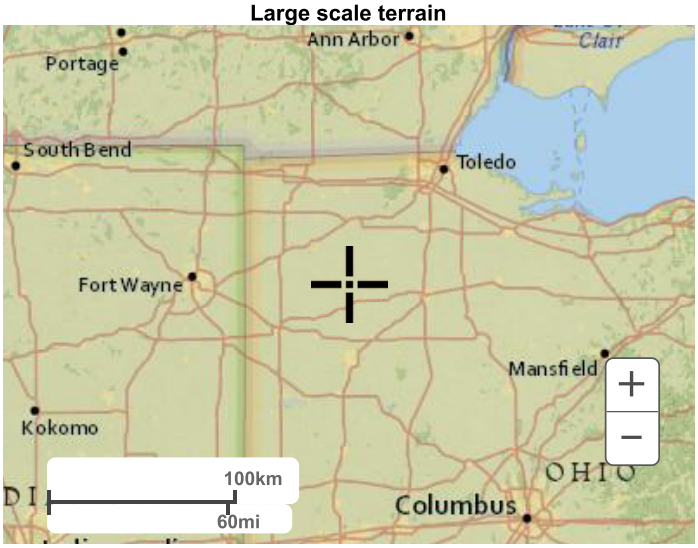
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Maps & aerials

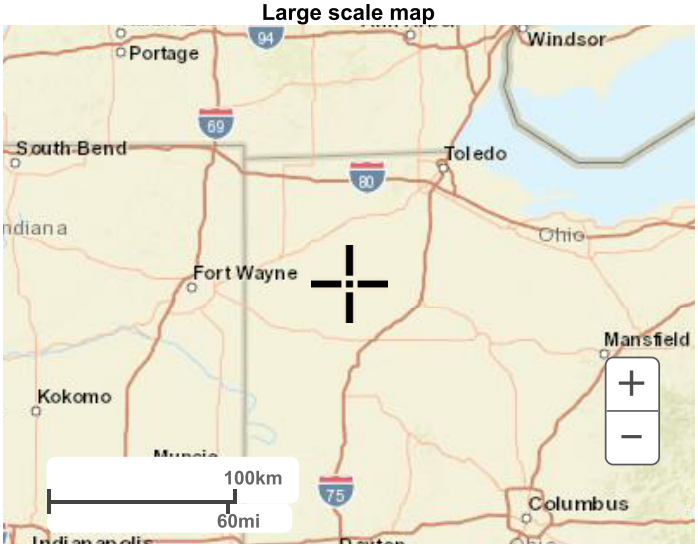
Small scale terrain



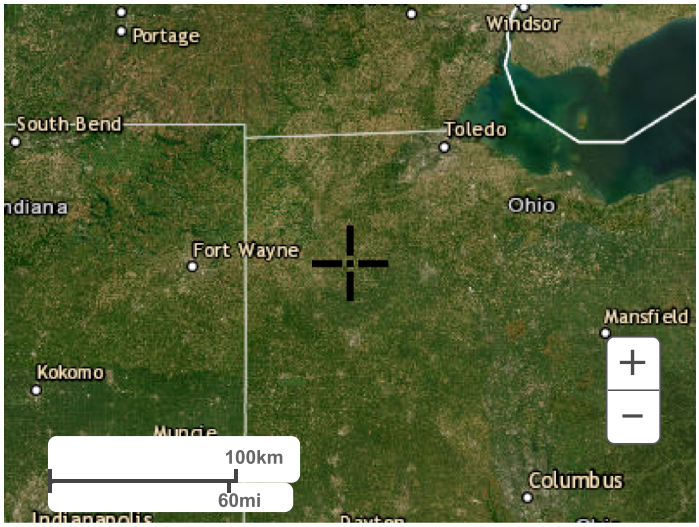
Large scale terrain



Large scale map



Large scale aerial



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1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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NOAA Atlas 14, Volume 2, Version 3
Location name: Ottawa, Ohio, USA*
Latitude: 41.0938°, Longitude: -84.1256°
Elevation: 726 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.340 (0.306-0.378)	0.404 (0.365-0.449)	0.483 (0.436-0.537)	0.547 (0.491-0.606)	0.627 (0.561-0.693)	0.689 (0.614-0.761)	0.751 (0.666-0.828)	0.814 (0.718-0.897)	0.899 (0.786-0.990)	0.960 (0.834-1.06)
10-min	0.528 (0.476-0.588)	0.631 (0.570-0.701)	0.751 (0.677-0.834)	0.844 (0.759-0.935)	0.959 (0.858-1.06)	1.04 (0.931-1.15)	1.13 (1.00-1.25)	1.22 (1.07-1.34)	1.32 (1.16-1.46)	1.40 (1.21-1.54)
15-min	0.647 (0.583-0.721)	0.772 (0.697-0.857)	0.922 (0.831-1.02)	1.04 (0.933-1.15)	1.18 (1.06-1.31)	1.29 (1.15-1.43)	1.40 (1.25-1.55)	1.51 (1.33-1.66)	1.65 (1.44-1.82)	1.75 (1.52-1.93)
30-min	0.856 (0.771-0.953)	1.03 (0.932-1.15)	1.26 (1.14-1.40)	1.44 (1.30-1.60)	1.67 (1.50-1.85)	1.85 (1.65-2.04)	2.03 (1.80-2.24)	2.20 (1.94-2.43)	2.44 (2.14-2.69)	2.62 (2.27-2.89)
60-min	1.04 (0.942-1.16)	1.27 (1.14-1.41)	1.58 (1.43-1.76)	1.84 (1.65-2.03)	2.17 (1.94-2.40)	2.44 (2.17-2.69)	2.71 (2.41-2.99)	2.99 (2.64-3.30)	3.38 (2.96-3.72)	3.68 (3.19-4.06)
2-hr	1.22 (1.10-1.36)	1.48 (1.34-1.65)	1.86 (1.68-2.07)	2.17 (1.95-2.40)	2.59 (2.31-2.87)	2.93 (2.61-3.24)	3.29 (2.91-3.64)	3.66 (3.22-4.05)	4.19 (3.65-4.64)	4.61 (3.98-5.11)
3-hr	1.30 (1.18-1.45)	1.57 (1.43-1.75)	1.97 (1.79-2.19)	2.30 (2.07-2.54)	2.75 (2.46-3.03)	3.12 (2.78-3.44)	3.51 (3.11-3.87)	3.92 (3.45-4.32)	4.50 (3.92-4.96)	4.97 (4.28-5.48)
6-hr	1.53 (1.39-1.70)	1.84 (1.67-2.04)	2.30 (2.08-2.54)	2.68 (2.42-2.96)	3.22 (2.90-3.54)	3.67 (3.28-4.03)	4.16 (3.68-4.56)	4.68 (4.11-5.12)	5.44 (4.70-5.94)	6.06 (5.18-6.62)
12-hr	1.77 (1.61-1.96)	2.12 (1.94-2.34)	2.64 (2.40-2.91)	3.07 (2.78-3.38)	3.70 (3.33-4.05)	4.21 (3.77-4.60)	4.77 (4.24-5.21)	5.37 (4.73-5.86)	6.24 (5.42-6.81)	6.96 (5.98-7.59)
24-hr	2.07 (1.94-2.22)	2.48 (2.32-2.66)	3.06 (2.87-3.28)	3.53 (3.30-3.78)	4.20 (3.92-4.49)	4.75 (4.41-5.08)	5.33 (4.92-5.68)	5.93 (5.44-6.33)	6.77 (6.17-7.24)	7.45 (6.74-7.99)
2-day	2.39 (2.25-2.55)	2.86 (2.69-3.04)	3.50 (3.30-3.73)	4.02 (3.78-4.28)	4.74 (4.44-5.04)	5.33 (4.97-5.66)	5.94 (5.51-6.31)	6.58 (6.07-7.00)	7.45 (6.82-7.96)	8.15 (7.41-8.73)
3-day	2.57 (2.43-2.74)	3.07 (2.90-3.27)	3.74 (3.53-3.98)	4.28 (4.04-4.55)	5.03 (4.73-5.34)	5.64 (5.28-5.99)	6.26 (5.84-6.65)	6.91 (6.41-7.34)	7.80 (7.17-8.31)	8.50 (7.77-9.08)
4-day	2.76 (2.61-2.93)	3.29 (3.11-3.49)	3.99 (3.77-4.23)	4.55 (4.30-4.83)	5.33 (5.01-5.65)	5.95 (5.58-6.31)	6.59 (6.16-6.99)	7.24 (6.74-7.69)	8.14 (7.52-8.67)	8.85 (8.12-9.44)
7-day	3.23 (3.07-3.42)	3.85 (3.65-4.06)	4.64 (4.40-4.90)	5.28 (5.00-5.56)	6.15 (5.81-6.48)	6.85 (6.45-7.22)	7.56 (7.09-7.97)	8.30 (7.74-8.77)	9.31 (8.61-9.87)	10.1 (9.28-10.8)
10-day	3.69 (3.50-3.89)	4.37 (4.16-4.61)	5.22 (4.96-5.50)	5.89 (5.59-6.21)	6.82 (6.45-7.18)	7.54 (7.11-7.94)	8.28 (7.78-8.73)	9.03 (8.45-9.54)	10.1 (9.33-10.6)	10.8 (10.0-11.5)
20-day	5.07 (4.83-5.33)	5.98 (5.70-6.28)	7.01 (6.68-7.37)	7.83 (7.45-8.23)	8.92 (8.46-9.37)	9.76 (9.24-10.3)	10.6 (10.0-11.1)	11.4 (10.7-12.0)	12.5 (11.7-13.2)	13.3 (12.4-14.1)
30-day	6.29 (6.02-6.59)	7.40 (7.09-7.75)	8.57 (8.20-8.98)	9.47 (9.06-9.92)	10.6 (10.2-11.1)	11.5 (11.0-12.0)	12.3 (11.7-12.9)	13.2 (12.5-13.8)	14.2 (13.4-14.9)	14.9 (14.0-15.7)
45-day	8.10 (7.77-8.47)	9.50 (9.11-9.93)	10.9 (10.4-11.4)	12.0 (11.4-12.5)	13.3 (12.7-13.9)	14.3 (13.6-14.9)	15.2 (14.5-15.9)	16.1 (15.3-16.8)	17.2 (16.3-18.0)	18.0 (17.0-18.9)
60-day	9.83 (9.42-10.3)	11.5 (11.0-12.0)	13.1 (12.6-13.7)	14.3 (13.7-14.9)	15.8 (15.1-16.5)	17.0 (16.2-17.7)	18.0 (17.1-18.8)	19.0 (18.0-19.8)	20.2 (19.1-21.1)	21.0 (19.9-22.1)

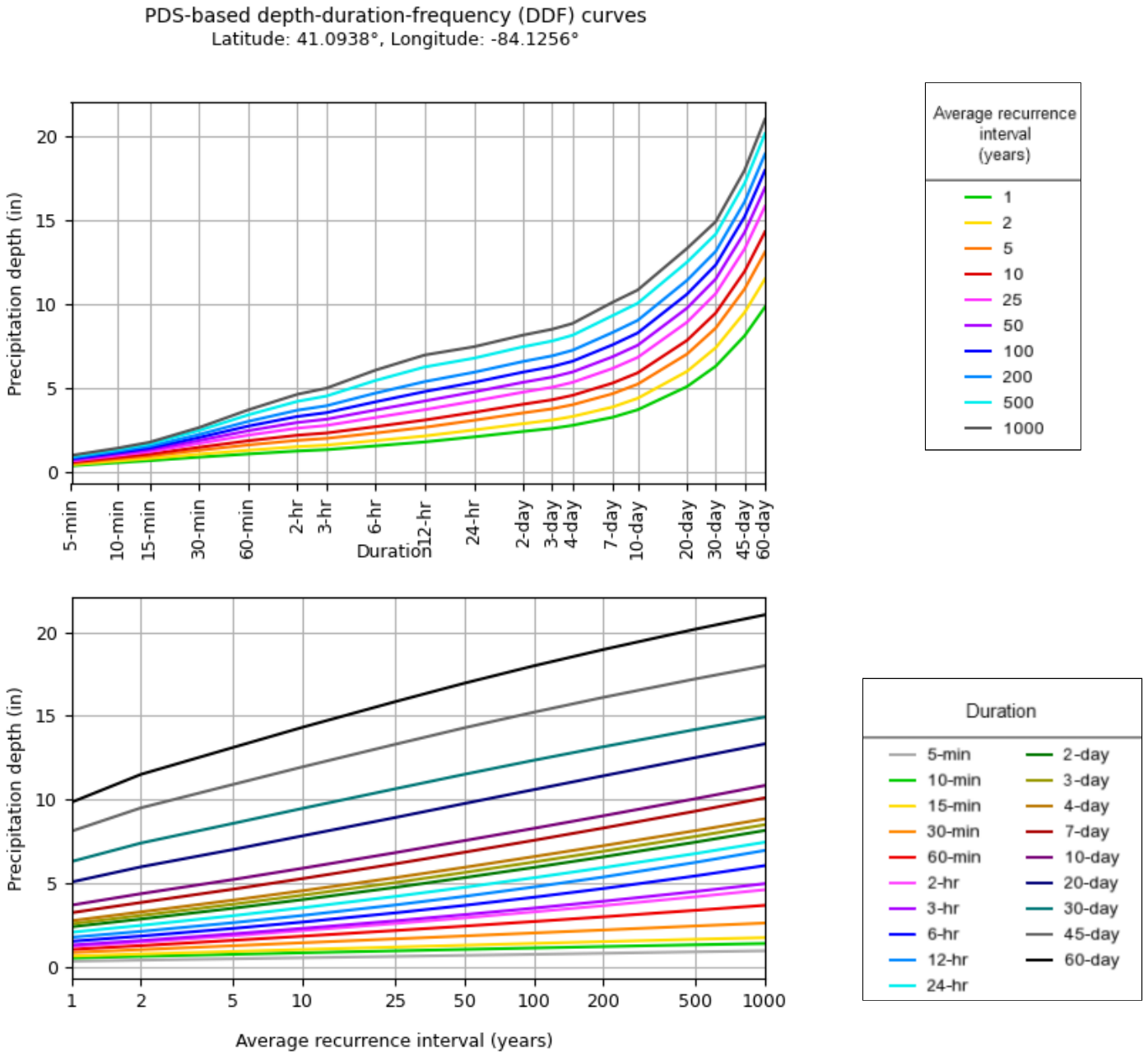
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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PF graphical



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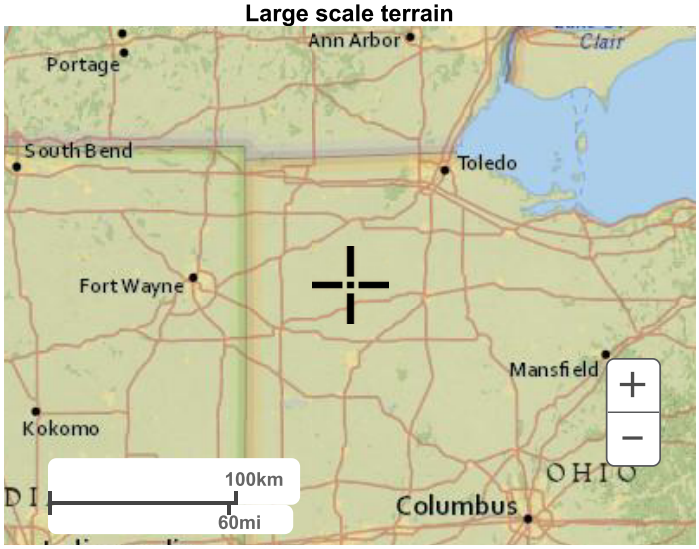
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Maps & aerials

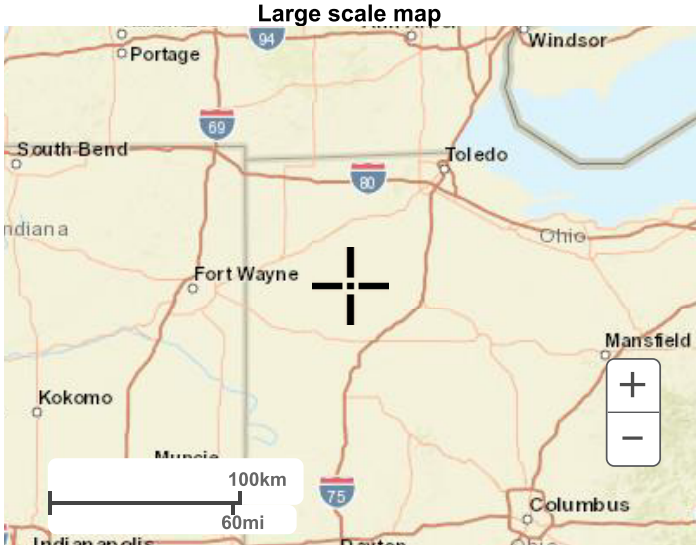
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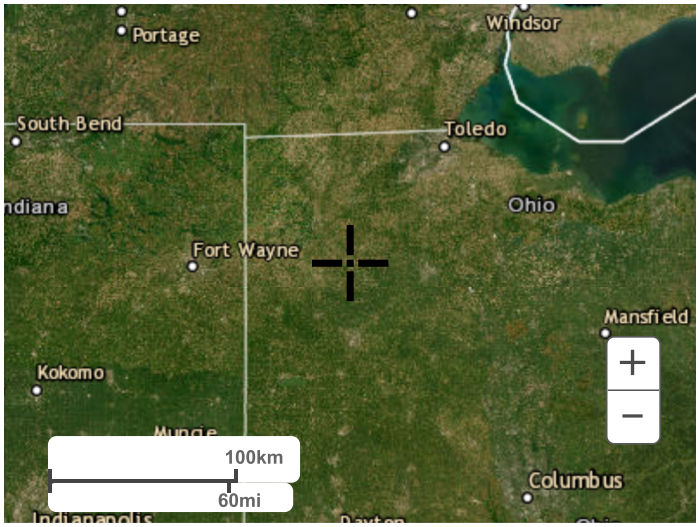
Large scale terrain



Large scale map



Large scale aerial



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Attachment B

Hydrology Inputs for Culverts and Low Water Crossings

ID	Drainage Area (SF)	Area (Ac)	TC (Min)	C (unitless)	I - 2 yr (IN/HR)	I -10 yr (IN/HR)	I -25 yr (IN/HR)	I -50 yr (IN/HR)	I -100 yr (IN/HR)	Q - 2 yr (CFS)	Q -10 yr (CFS)	Q -25 yr (CFS)	Q -50 yr (CFS)	Q -100 yr (CFS))
LWC-1	62,698	1.44	49.6	0.3	1.55	2.20	2.58	2.88	3.17	0.67	0.95	1.11	1.24	1.37
LWC-2	868,967	19.95	131.5	0.3	0.70	1.02	1.19	1.38	1.55	4.19	6.10	7.15	8.26	9.28
C-3	1,250,937	28.72	126.6	0.3	0.72	1.05	1.22	1.41	1.59	6.18	9.01	10.53	12.18	13.68
C-4	156,869	3.60	13.3	0.3	3.32	4.46	5.08	5.54	6.01	3.59	4.82	5.49	5.98	6.49
C-7	14,728	0.34	92.8	0.3	0.98	1.42	1.67	1.90	2.12	0.10	0.14	0.17	0.19	0.22
C-10	258,460	5.93	112.0	0.3	0.81	1.18	1.38	1.59	1.78	1.44	2.10	2.46	2.83	3.17
LWC-11	313,481	7.20	13.7	0.3	3.28	4.40	5.01	5.46	5.93	7.07	9.50	10.81	11.79	12.80
LWC-12	121,715	2.79	18.1	0.3	2.88	3.90	4.45	4.87	5.30	2.41	3.27	3.73	4.08	4.44
LWC-13	123,415	2.83	36.5	0.3	1.90	2.65	3.09	3.43	3.76	1.61	2.26	2.63	2.91	3.19
LWC-14	87,988	2.02	25.9	0.3	2.35	3.23	3.73	4.10	4.48	1.42	1.96	2.26	2.48	2.71
LWC-15	93,783	2.15	18.6	0.3	2.84	3.85	4.40	4.82	5.24	1.84	2.49	2.84	3.11	3.39
LWC-16	154,752	3.55	18.4	0.3	2.38	3.28	3.80	4.19	4.57	2.53	3.50	4.05	4.46	4.87
C-17	3,493,959	80.21	169.6	0.3	0.56	0.82	0.98	1.11	1.25	13.50	19.73	23.46	26.79	30.12
LWC-18	257,389	5.91	46.9	0.3	1.62	2.29	2.69	2.99	3.29	2.87	4.07	4.76	5.30	5.84

The Modified Rational Method is utilized to solve for Q

Time of concentration was calculated following the TR-55 method

Rainfall intensity values from NOAA-14 Atlas

Culvertmaster is utilized to calculate the culvert size

Flowmaster is utilized to calculate the LWC size

The 25 yr storm peak flow rate is used to size the culverts

The 25 yr storm peak flow rate is used to size the LWC

Culvert ID	Number of Barrels (ea)	Pipe Height (in)	Pipe Material	Barrel Length (ft)	Manning's n value for CHDPE	Pipe end section type	Inlet Elevation (ft)	Outlet Elevation (ft)	Slope (ft/ft)
C-3	2	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	724.00	723.95	0.0010
C-4	2	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	728.00	727.95	0.0010
C-7	1	18	Corrugated HDPE (Smooth Interior)	54	0.012	Groove End Projecting	732.50	732.26	0.0044
C-10	1	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	732.25	732.13	0.0024
C-17	6	18	Corrugated HDPE (Smooth Interior)	50	0.012	Groove End Projecting	731.25	731.20	0.0010

Culvert ID	Q 25 yr Computed headwater (ft)	Q 25 yr MAX headwater (ft)	Q 25 yr Velocity (ft/s)	Q 100 yr Computed headwater (ft)	Q 100 yr MAX headwater (ft)	Q 100 yr Velocity (ft/s)	Below Max (True/False)
C-3	725.40	726.00	4.86	725.65	726.00	5.39	TRUE
C-4	728.96	730.00	3.91	729.05	730.00	4.12	TRUE
C-7	732.71	733.50	1.82	732.74	733.50	1.95	TRUE
C-10	733.12	734.00	3.78	733.25	734.00	4.09	TRUE
C-17	732.56	732.75	4.71	732.61	732.75	4.78	TRUE

LWC ID	Design Storm Discharge (CFS)	25 yr Headwater Elevation (ft)	100 yr Headwater Elevation (ft)	Crossing road breath (ft)	MIN gravel Crossing width (ft)	25 yr Velocity (ft/s)	Surface type
LWC-1	1.11	0.19	0.22	14	5	1.14	Gravel
LWC-2	7.15	0.42	0.49	14	10	1.72	Gravel
LWC-11	10.81	0.42	0.47	14	15	1.72	Gravel
LWC-12	3.73	0.43	0.48	14	5	1.75	Gravel
LWC-13	2.63	0.34	0.39	14	5	1.54	Gravel
LWC-14	2.26	0.31	0.35	14	5	1.46	Gravel
LWC-15	2.84	0.36	0.4	14	5	1.58	Gravel
LWC-16	4.05	0.45	0.51	14	5	1.8	Gravel
LWC-18	4.76	0.32	0.37	14	10	1.49	Gravel

1992

TABLE 5-2
VALUES OF RUNOFF COEFFICIENT (C) FOR RATIONAL FORMULA

Land Use	C	Land Use	C
Business:		Lawns:	
Downtown areas	0.70-0.95	Sandy soil, flat, 2%	0.05-0.10
Neighborhood areas	0.50-0.70	Sandy soil, average, 2-7%	0.10-0.15
		Sandy soil, steep, 7%	0.15-0.20
		Heavy soil, flat, 2%	0.13-0.17
		Heavy soil, average, 2-7%	0.18-0.22
		Heavy soil, steep, 7%	0.25-0.35
Residential:		Agricultural land:	
Single-family areas	0.30-0.50	Bare packed soil	
Multi units, detached	0.40-0.60	* Smooth	0.30-0.60
Multi units, attached	0.60-0.75	* Rough	0.20-0.50
Suburban	0.25-0.40	Cultivated rows	
		* Heavy soil, no crop	0.30-0.60
		* Heavy soil, with crop	0.20-0.50
		* Sandy soil, no crop	0.20-0.40
		* Sandy soil, with crop	0.10-0.25
		Pasture	
		* Heavy soil	0.15-0.45
		* Sandy soil	0.05-0.25
		Woodlands	0.05-0.25
Industrial:		Streets:	
Light areas	0.50-0.80	Asphaltic	0.70-0.95
Heavy areas	0.60-0.90	Concrete	0.80-0.95
		Brick	0.70-0.85
Parks, cemeteries	0.10-0.25	Unimproved areas	0.10-0.30
Playgrounds	0.20-0.35	Drives and walks	0.75-0.85
Railroad yard areas	0.20-0.40	Roofs	0.75-0.95

Note: The designer must use judgement to select the appropriate "C" value within the range. Generally, larger areas with permeable soils, flat slopes and dense vegetation should have the lowest C values. Smaller areas with dense soils, moderate to steep slopes, and sparse vegetation should be assigned the highest C values.

Source: American Society of Civil Engineers

TABLE 2-3
RATIONAL METHOD RUNOFF COEFFICIENTS FOR COMPOSITE ANALYSIS
Runoff Coefficient (C)

Character of Surface	Return Period						
	2 Years	5 Years	10 Years	25 Years	50 Years	100 Years	500 Years
Flat, 0-2%	0.21	0.23	0.25	0.29	0.32	0.36	0.49
Average, 2-7%	0.29	0.32	0.35	0.39	0.42	0.46	0.56
Steep, over 7%	0.34	0.37	0.40	0.44	0.47	0.51	0.58
UNDEVELOPED							
Cultivated							
Flat, 0-2%	0.31	0.34	0.36	0.40	0.43	0.47	0.57
Average, 2-7%	0.35	0.38	0.41	0.44	0.48	0.51	0.60
Steep, over 7%	0.39	0.42	0.44	0.48	0.51	0.54	0.61
Pasture/Range							
Flat, 0-2%	0.25	0.28	0.30	0.34	0.37	0.41	0.53
Average, 2-7%	0.33	0.36	0.38	0.42	0.45	0.49	0.58
Steep, over 7%	0.37	0.40	0.42	0.46	0.49	0.53	0.60
Forest/Woodlands							
Flat, 0-7%	0.22	0.25	0.28	0.31	0.35	0.39	0.48

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.08 (3.67-4.54)	4.85 (4.38-5.39)	5.80 (5.23-6.44)	6.56 (5.89-7.27)	7.52 (6.73-8.32)	8.27 (7.37-9.13)	9.01 (7.99-9.94)	9.77 (8.62-10.8)	10.8 (9.43-11.9)	11.5 (10.0-12.7)
10-min	3.17 (2.86-3.53)	3.79 (3.42-4.21)	4.51 (4.06-5.00)	5.06 (4.55-5.61)	5.75 (5.15-6.36)	6.27 (5.59-6.92)	6.78 (6.02-7.48)	7.29 (6.43-8.03)	7.93 (6.94-8.74)	8.39 (7.28-9.25)
15-min	2.59 (2.33-2.88)	3.09 (2.79-3.43)	3.69 (3.32-4.10)	4.16 (3.73-4.60)	4.74 (4.24-5.24)	5.17 (4.61-5.71)	5.62 (4.98-6.19)	6.04 (5.33-6.66)	6.60 (5.77-7.27)	6.99 (6.07-7.71)
30-min	1.71 (1.54-1.91)	2.07 (1.86-2.30)	2.53 (2.28-2.81)	2.88 (2.59-3.20)	3.35 (2.99-3.70)	3.70 (3.29-4.08)	4.05 (3.60-4.47)	4.41 (3.89-4.86)	4.89 (4.27-5.38)	5.24 (4.55-5.78)
60-min	1.04 (0.942-1.16)	1.27 (1.14-1.41)	1.58 (1.43-1.76)	1.84 (1.65-2.03)	2.17 (1.94-2.40)	2.44 (2.17-2.69)	2.71 (2.41-2.99)	2.99 (2.64-3.30)	3.38 (2.96-3.72)	3.68 (3.19-4.06)
2-hr	0.611 (0.551-0.681)	0.741 (0.668-0.825)	0.930 (0.838-1.04)	1.08 (0.973-1.20)	1.29 (1.16-1.43)	1.46 (1.30-1.62)	1.64 (1.46-1.82)	1.83 (1.61-2.02)	2.09 (1.82-2.32)	2.31 (1.99-2.55)
3-hr	0.433 (0.393-0.482)	0.523 (0.475-0.582)	0.657 (0.595-0.729)	0.765 (0.690-0.847)	0.915 (0.820-1.01)	1.04 (0.926-1.14)	1.17 (1.04-1.29)	1.31 (1.15-1.44)	1.50 (1.30-1.65)	1.66 (1.43-1.82)
6-hr	0.255 (0.231-0.283)	0.307 (0.279-0.341)	0.383 (0.347-0.425)	0.447 (0.403-0.493)	0.538 (0.483-0.591)	0.613 (0.547-0.672)	0.694 (0.615-0.761)	0.782 (0.686-0.855)	0.907 (0.785-0.992)	1.01 (0.865-1.11)
12-hr	0.146 (0.133-0.162)	0.176 (0.160-0.194)	0.219 (0.199-0.241)	0.255 (0.231-0.280)	0.306 (0.276-0.336)	0.349 (0.312-0.382)	0.396 (0.352-0.432)	0.445 (0.392-0.486)	0.518 (0.449-0.564)	0.577 (0.496-0.629)
24-hr	0.086 (0.080-0.092)	0.103 (0.096-0.110)	0.127 (0.119-0.136)	0.147 (0.137-0.157)	0.175 (0.163-0.187)	0.198 (0.183-0.211)	0.221 (0.204-0.236)	0.247 (0.226-0.263)	0.282 (0.257-0.301)	0.310 (0.280-0.332)
2-day	0.049 (0.046-0.053)	0.059 (0.056-0.063)	0.072 (0.068-0.077)	0.083 (0.078-0.089)	0.098 (0.092-0.105)	0.111 (0.103-0.118)	0.123 (0.114-0.131)	0.136 (0.126-0.145)	0.155 (0.142-0.165)	0.169 (0.154-0.181)
3-day	0.035 (0.033-0.038)	0.042 (0.040-0.045)	0.052 (0.049-0.055)	0.059 (0.056-0.063)	0.069 (0.065-0.074)	0.078 (0.073-0.083)	0.087 (0.081-0.092)	0.095 (0.088-0.101)	0.108 (0.099-0.115)	0.118 (0.107-0.126)
4-day	0.028 (0.027-0.030)	0.034 (0.032-0.036)	0.041 (0.039-0.044)	0.047 (0.044-0.050)	0.055 (0.052-0.058)	0.061 (0.058-0.065)	0.068 (0.064-0.072)	0.075 (0.070-0.080)	0.084 (0.078-0.090)	0.092 (0.084-0.098)
7-day	0.019 (0.018-0.020)	0.022 (0.021-0.024)	0.027 (0.026-0.029)	0.031 (0.029-0.033)	0.036 (0.034-0.038)	0.040 (0.038-0.042)	0.045 (0.042-0.047)	0.049 (0.046-0.052)	0.055 (0.051-0.058)	0.060 (0.055-0.064)
10-day	0.015 (0.014-0.016)	0.018 (0.017-0.019)	0.021 (0.020-0.022)	0.024 (0.023-0.025)	0.028 (0.026-0.029)	0.031 (0.029-0.033)	0.034 (0.032-0.036)	0.037 (0.035-0.039)	0.041 (0.038-0.044)	0.045 (0.041-0.048)
20-day	0.010 (0.010-0.011)	0.012 (0.011-0.013)	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.020 (0.019-0.021)	0.022 (0.020-0.023)	0.023 (0.022-0.025)	0.026 (0.024-0.027)	0.027 (0.025-0.029)
30-day	0.008 (0.008-0.009)	0.010 (0.009-0.010)	0.011 (0.011-0.012)	0.013 (0.012-0.013)	0.014 (0.014-0.015)	0.015 (0.015-0.016)	0.017 (0.016-0.017)	0.018 (0.017-0.019)	0.019 (0.018-0.020)	0.020 (0.019-0.021)
45-day	0.007 (0.007-0.007)	0.008 (0.008-0.009)	0.010 (0.009-0.010)	0.011 (0.010-0.011)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.014 (0.013-0.014)	0.014 (0.014-0.015)	0.015 (0.015-0.016)	0.016 (0.015-0.017)
60-day	0.006 (0.006-0.007)	0.007 (0.007-0.008)	0.009 (0.008-0.009)	0.009 (0.009-0.010)	0.010 (0.010-0.011)	0.011 (0.011-0.012)	0.012 (0.011-0.013)	0.013 (0.012-0.013)	0.014 (0.013-0.014)	0.014 (0.013-0.015)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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Project:	**Powel Creek**
Project #:	**415878**
Date:	**9/13/2023**

BLACK & VEATCH

TIME OF CONCENTRATION CALCULATIONS FOR CULVERTS

DRAINAGE AREA	TOTAL TIME OF CONC. T_C (MIN)	SHEET FLOW $t_{sheet} = 0.007\ (nL)^{0.8} / P2^{0.5}\ S^{0.4} / 60$					SHALLOW CONCENTRATED FLOW $t_{shallow} = L / (16.1345 * S^{0.5}) / 60$				CHANNEL FLOW $t_{channel} = L / (1.486 * R^{(2/3)} * S^{0.5} * n^{-1}) / 60$				
		Manning's n	Flow L (ft)	P_2 (in)	Slope (ft/ft)	t_{sheet} (min)	Paved/ Unpaved	Flow L (ft)	Slope (ft/ft)	$t_{shallow}$ (min)	Flow L (ft)	Hydraulic Radius R (ft)	Channel Slope (ft/ft)	Manning's n	$t_{channel}$ (min)
LWC-1	**49.6**	0.150	100.0	2.48	0.0005	48.68	U	559	0.388	0.93	0.0	0.65	0.0000	0.15	0.00
LWC-2	**131.5**	0.150	100.0	2.48	0.0005	48.68	U	1000	0.217	2.22	1351.0	0.65	0.0014	0.15	80.56
C-3	**126.6**	0.150	100.0	2.48	0.0001	92.66	U	1000	0.217	2.22	565.0	0.65	0.0016	0.15	31.74
C-4	**13.3**	0.150	100.0	2.48	0.0150	12.49	U	524	0.414	0.84	0.0	0.65	0.0000	0.15	0.00
C-7	**92.8**	0.150	100.0	2.48	0.0001	92.66	U	186	1.165	0.18	0.0	0.65	0.0000	0.15	0.00
C-10	**112.0**	0.150	100.0	2.48	0.0171	11.85	U	150	1.445	0.13	736.0	0.65	0.0000	0.15	100.00
LWC-11	**13.7**	0.150	100.0	2.48	0.0171	11.85	U	878	0.247	1.83	0.0	0.65	0.0000	0.15	0.00
LWC-12	**18.1**	0.150	100.0	2.48	0.0069	17.04	U	611	0.355	1.06	0.0	0.65	0.0000	0.15	0.00
LWC-13	**36.5**	0.150	100.0	2.48	0.0011	35.51	U	592	0.366	1.01	0.0	0.65	0.0000	0.15	0.00
LWC-14	**25.9**	0.150	100.0	2.48	0.0027	24.79	U	635	0.341	1.12	0.0	0.65	0.0000	0.15	0.00
LWC-15	**18.6**	0.150	100.0	2.48	0.0061	17.88	U	511	0.515	0.74	0.0	0.65	0.0000	0.15	0.00
LWC-16	**18.4**	0.150	100.0	2.48	0.0061	17.88	U	387	0.515	0.56	0.0	0.65	0.0000	0.15	0.00
C-17	**169.6**	0.150	100.0	2.48	0.0010	36.89	U	1000	0.001	32.67	2373.0	0.65	0.0010	0.15	100.00
LWC-18	**46.9**	0.150	100.0	2.48	0.0020	27.96	U	735	0.002	18.95	0.0	0.65	0.0010	0.15	0.00

Time of concentration was calculated following the TR-55 method

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.340 (0.306-0.378)	0.404 (0.365-0.449)	0.483 (0.436-0.537)	0.547 (0.491-0.606)	0.627 (0.561-0.693)	0.689 (0.614-0.761)	0.751 (0.666-0.828)	0.814 (0.718-0.897)	0.899 (0.786-0.990)	0.960 (0.834-1.06)
10-min	0.528 (0.476-0.588)	0.631 (0.570-0.701)	0.751 (0.677-0.834)	0.844 (0.759-0.935)	0.959 (0.858-1.06)	1.04 (0.931-1.15)	1.13 (1.00-1.25)	1.22 (1.07-1.34)	1.32 (1.16-1.46)	1.40 (1.21-1.54)
15-min	0.647 (0.583-0.721)	0.772 (0.697-0.857)	0.922 (0.831-1.02)	1.04 (0.933-1.15)	1.18 (1.06-1.31)	1.29 (1.15-1.43)	1.40 (1.25-1.55)	1.51 (1.33-1.66)	1.65 (1.44-1.82)	1.75 (1.52-1.93)
30-min	0.856 (0.771-0.953)	1.03 (0.932-1.15)	1.26 (1.14-1.40)	1.44 (1.30-1.60)	1.67 (1.50-1.85)	1.85 (1.65-2.04)	2.03 (1.80-2.24)	2.20 (1.94-2.43)	2.44 (2.14-2.69)	2.62 (2.27-2.89)
60-min	1.04 (0.942-1.16)	1.27 (1.14-1.41)	1.58 (1.43-1.76)	1.84 (1.65-2.03)	2.17 (1.94-2.40)	2.44 (2.17-2.69)	2.71 (2.41-2.99)	2.99 (2.64-3.30)	3.38 (2.96-3.72)	3.68 (3.19-4.06)
2-hr	1.22 (1.10-1.36)	1.48 (1.34-1.65)	1.86 (1.68-2.07)	2.17 (1.95-2.40)	2.59 (2.31-2.87)	2.93 (2.61-3.24)	3.29 (2.91-3.64)	3.66 (3.22-4.05)	4.19 (3.65-4.64)	4.61 (3.98-5.11)
3-hr	1.30 (1.18-1.45)	1.57 (1.43-1.75)	1.97 (1.79-2.19)	2.30 (2.07-2.54)	2.75 (2.46-3.03)	3.12 (2.78-3.44)	3.51 (3.11-3.87)	3.92 (3.45-4.32)	4.50 (3.92-4.96)	4.97 (4.28-5.48)
6-hr	1.53 (1.39-1.70)	1.84 (1.67-2.04)	2.30 (2.08-2.54)	2.68 (2.42-2.96)	3.22 (2.90-3.54)	3.67 (3.29-4.03)	4.16 (3.68-4.56)	4.68 (4.11-5.12)	5.44 (4.70-5.94)	6.06 (5.18-6.62)
12-hr	1.77 (1.61-1.93)	2.12 (1.94-2.34)	2.64 (2.40-2.91)	3.07 (2.79-3.38)	3.70 (3.33-4.05)	4.21 (3.77-4.60)	4.77 (4.26-5.21)	5.37 (4.73-5.86)	6.24 (5.42-6.81)	6.96 (5.98-7.59)
24-hr	2.07 (1.94-2.27)	2.48 (2.32-2.68)	3.06 (2.87-3.28)	3.53 (3.30-3.78)	4.20 (3.92-4.49)	4.75 (4.41-5.08)	5.33 (4.92-5.68)	5.93 (5.44-6.33)	6.77 (6.17-7.24)	7.45 (6.74-7.99)
2-day	2.39 (2.25-2.59)	2.86 (2.68-3.06)	3.50 (3.30-3.73)	4.02 (3.78-4.28)	4.74 (4.44-5.04)	5.33 (4.97-5.66)	5.94 (5.51-6.31)	6.58 (6.07-7.00)	7.45 (6.82-7.96)	8.15 (7.41-8.73)
3-day	2.57 (2.43-2.74)	3.07 (2.90-3.27)	3.74 (3.53-3.98)	4.28 (4.04-4.55)	5.03 (4.73-5.34)	5.64 (5.28-5.99)	6.26 (5.84-6.65)	6.91 (6.41-7.34)	7.80 (7.17-8.31)	8.50 (7.77-9.08)
4-day	2.76 (2.61-2.93)	3.29 (3.11-3.49)	3.99 (3.77-4.23)	4.55 (4.30-4.83)	5.33 (5.01-5.65)	5.95 (5.58-6.31)	6.59 (6.16-6.99)	7.24 (6.74-7.69)	8.14 (7.52-8.67)	8.85 (8.12-9.44)
7-day	3.23 (3.07-3.42)	3.85 (3.65-4.06)	4.64 (4.40-4.90)	5.28 (5.00-5.56)	6.15 (5.81-6.48)	6.85 (6.45-7.22)	7.56 (7.09-7.97)	8.30 (7.74-8.77)	9.31 (8.61-9.87)	10.1 (9.28-10.8)
10-day	3.69 (3.50-3.89)	4.37 (4.16-4.61)	5.22 (4.96-5.50)	5.89 (5.59-6.21)	6.82 (6.45-7.18)	7.54 (7.11-7.94)	8.28 (7.78-8.73)	9.03 (8.45-9.54)	10.1 (9.33-10.6)	10.8 (10.0-11.5)
20-day	5.07 (4.83-5.33)	5.98 (5.70-6.28)	7.01 (6.68-7.37)	7.83 (7.45-8.23)	8.92 (8.46-9.37)	9.76 (9.24-10.3)	10.6 (10.0-11.1)	11.4 (10.7-12.0)	12.5 (11.7-13.2)	13.3 (12.4-14.1)
30-day	6.29 (6.02-6.59)	7.40 (7.08-7.75)	8.57 (8.20-8.98)	9.47 (9.06-9.92)	10.6 (10.2-11.1)	11.5 (11.0-12.0)	12.3 (11.7-12.9)	13.2 (12.5-13.8)	14.2 (13.4-14.9)	14.9 (14.0-15.7)
45-day	8.10 (7.77-8.47)	9.50 (9.11-9.93)	10.9 (10.4-11.4)	12.0 (11.4-12.5)	13.3 (12.7-13.9)	14.3 (13.6-14.9)	15.2 (14.5-15.9)	16.1 (15.3-16.8)	17.2 (16.3-18.0)	18.0 (17.0-18.9)
60-day	9.83 (9.42-10.3)	11.5 (11.0-12.0)	13.1 (12.6-13.7)	14.3 (13.7-14.9)	15.8 (15.1-16.5)	17.0 (16.2-17.7)	18.0 (17.1-18.8)	19.0 (18.0-19.8)	20.2 (19.1-21.1)	21.0 (19.9-22.1)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

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Table 3-1 Roughness coefficients (Manning's n) for sheet flow

Surface description	n [1]
Smooth surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover ≤20%	0.06
Residue cover >20%	0.17
Grass:	
Short grass prairie	0.15
Dense grasses [2]	0.24
Bermudagrass	0.41
Range (natural)	0.13
Woods: [3]	
Light underbrush	0.40
Dense underbrush	0.80

[1] The n values are a composite of information compiled by Engman (1986).

[2] Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.

[3] When selecting n , consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

Attachment C

Riprap Design Calculations

ID	Q 25 YR PEAK DISCHARGE	TAILWATER CONDITION	NUMBER OF BARRELS	PIPE DIAMETER	TOTAL WIDTH	TAILWATER DEPTH	RIPRAP SIZE	RIPRAP CLASS	APRON LENGTH	APRON DEPTH	UPSTREAM WIDTH	DOWNSTREAM WIDTH	AREA OF APRON	APPROX RIPRAP QUANTITY
	CFS		EACH	INCHES	FT	FT	FT (D50)		FT	FT	FT	FT	SF	CY
LWC-1	1.11	MIN	-	-	5.0	0.19	0.50	CLASS 2	20	1.75	15.0	21.7	366.7	641.7
LWC-2	7.15	MIN	-	-	10.0	0.42	0.50	CLASS 2	40	1.75	30.0	43.3	1466.7	2566.7
C-3	10.53	MIN	2	18	3.0	0.88	0.50	CLASS 2	12	1.75	9.0	13.0	132.0	231.0
C-4	5.49	MIN	2	18	3.0	0.63	0.50	CLASS 2	12	1.75	9.0	13.0	132.0	231.0
C-7	0.17	MIN	1	18	1.5	0.15	0.50	CLASS 2	6	1.75	4.5	6.5	33.0	57.8
C-10	2.46	MIN	1	18	1.5	0.59	0.50	CLASS 2	6	1.75	4.5	6.5	33.0	57.8
LWC-11	10.81	MIN	-	-	15.0	0.42	0.50	CLASS 2	60	1.75	45.0	65.0	3300.0	5775.0
LWC-12	3.73	MIN	-	-	5.0	0.43	0.50	CLASS 2	20	1.75	15.0	21.7	366.7	641.7
LWC-13	2.63	MIN	-	-	5.0	0.34	0.50	CLASS 2	20	1.75	15.0	21.7	366.7	641.7
LWC-14	2.26	MIN	-	-	5.0	0.31	0.50	CLASS 2	20	1.75	15.0	21.7	366.7	641.7
LWC-15	2.84	MIN	-	-	5.0	0.36	0.50	CLASS 2	20	1.75	15.0	21.7	366.7	641.7
LWC-16	4.05	MIN	-	-	5.0	0.45	0.50	CLASS 2	20	1.75	15.0	21.7	366.7	641.7
C-17	23.46	MIN	6	18	9.0	0.80	0.50	CLASS 2	36	1.75	27.0	39.0	1188.0	2079.0
LWC-18	4.76	MIN	-	-	10.0	0.80	0.50	CLASS 2	40	1.75	30.0	43.3	1466.7	2566.7

HEC-14 CHAPTER 10.2 RIPRAP APRON DESIGN

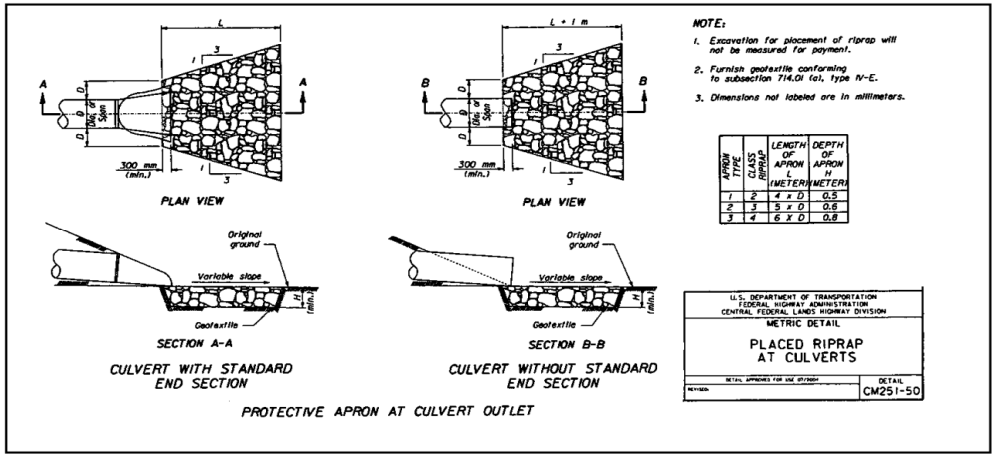


Figure 10.4. Placed Riprap at Culverts (Central Federal Lands Highway Division)

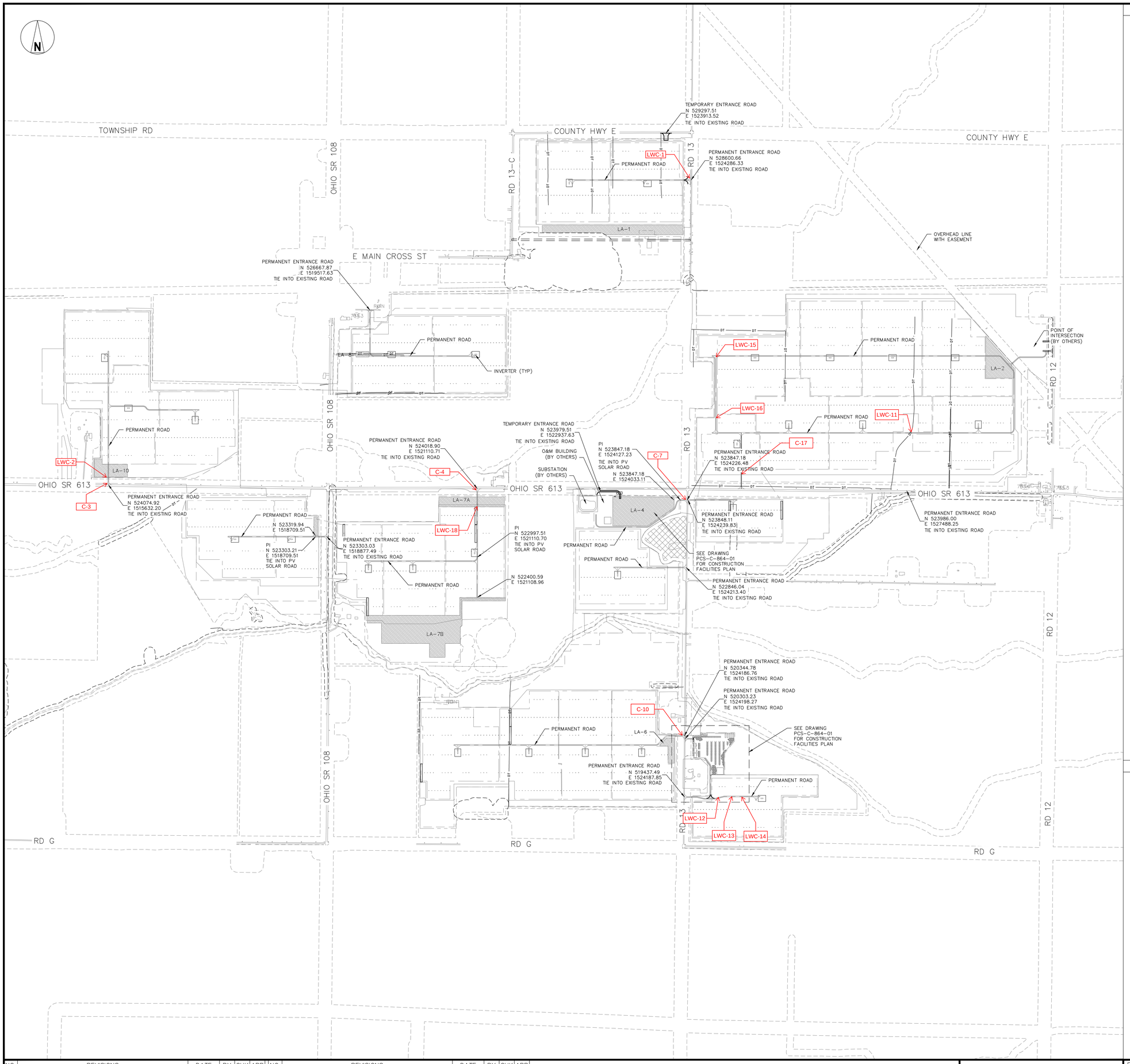
Table 10.1. Example Riprap Classes and Apron Dimensions

Class	D_{50} (mm)	D_{50} (in)	Apron Length[1]	Apron Depth
1	125	5	4D	$3.5D_{50}$
2	150	6	4D	$3.3D_{50}$
3	250	10	5D	$2.4D_{50}$
4	350	14	6D	$2.2D_{50}$
5	500	20	7D	$2.0D_{50}$
6	550	22	8D	$2.0D_{50}$

[1]D is the culvert rise.

Attachment D

Drainage Area Maps



NOTES

1. SEE DRAWING PCS-G-200-01 FOR GENERAL ARRANGEMENT PLAN.
2. SEE DRAWING PCS-C-810-01 FOR CIVIL COVER SHEET, DRAWING INDEX, AND STANDARD ABBREVIATIONS.
3. COORDINATES SHOWN ARE BASED ON THE OHIO STATE PLANE NORTH ZONE, NORTH AMERICAN HORIZONTAL DATUM OF 1983 (NAD83). ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SEE DRAWING PCS-G-200-01 FOR PROJECT SURVEY CONTROL TABLE.
4. ALL AREAS DISTURBED DURING CONSTRUCTION SHOULD BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS, AND STABILIZED UNLESS NOTED OTHERWISE. DISTURBED AREAS NOT RECEIVING AGGREGATE SHALL BE SEEDED/SODDED.
5. ALL NEW ROADS ARE 14'-0" WIDE UNLESS NOTED OTHERWISE.
6. ALL NEW ROAD INTERIOR TURNING RADII ARE 50'-0" UNLESS NOTED OTHERWISE.
7. ALL NEW GATES ARE 24'-0" WIDE UNLESS NOTED OTHERWISE.

LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- CONSTRUCTION SETBACK LINE
- ARRAY BOUNDARY
- NEW PERMANENT ROAD
- NEW SECURITY FENCE
- SUBSTATION FENCE
- EXISTING ROAD
- STREAM (50'-0" SETBACK)
- TEMPORARY WATER LINE
- TEMPORARY DIRECT BURIED CABLE
- TEMPORARY CONSTRUCTION FENCE
- DRAIN TILE
- TEMPORARY CONSTRUCTION GATE
- TEMPORARY CONSTRUCTION ROAD
- LAYDOWN AREA
- AVOIDANCE AREA
- CONSTRUCTION LAYDOWN AREA

NOT TO BE USED FOR CONSTRUCTION

THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

NO.	REVISIONS	DATE	BY	CHK	APR
0	ISSUED FOR PERMITTING	08/25/23	MBN	AVN	AJG
1	ISSUED FOR PERMITTING	09/18/23	MBN	AVN	AJG

NO.	REVISIONS	DATE	BY	CHK	APR

BLACK & VEATCH
11401 LAMAR AVENUE
OVERLAND PARK, KANSAS 66211
OHIO ENGINEERING CREDENTIAL
NUMBER COA.01645

500' 250' 0 500' 1000'
1"=500'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF OHIO

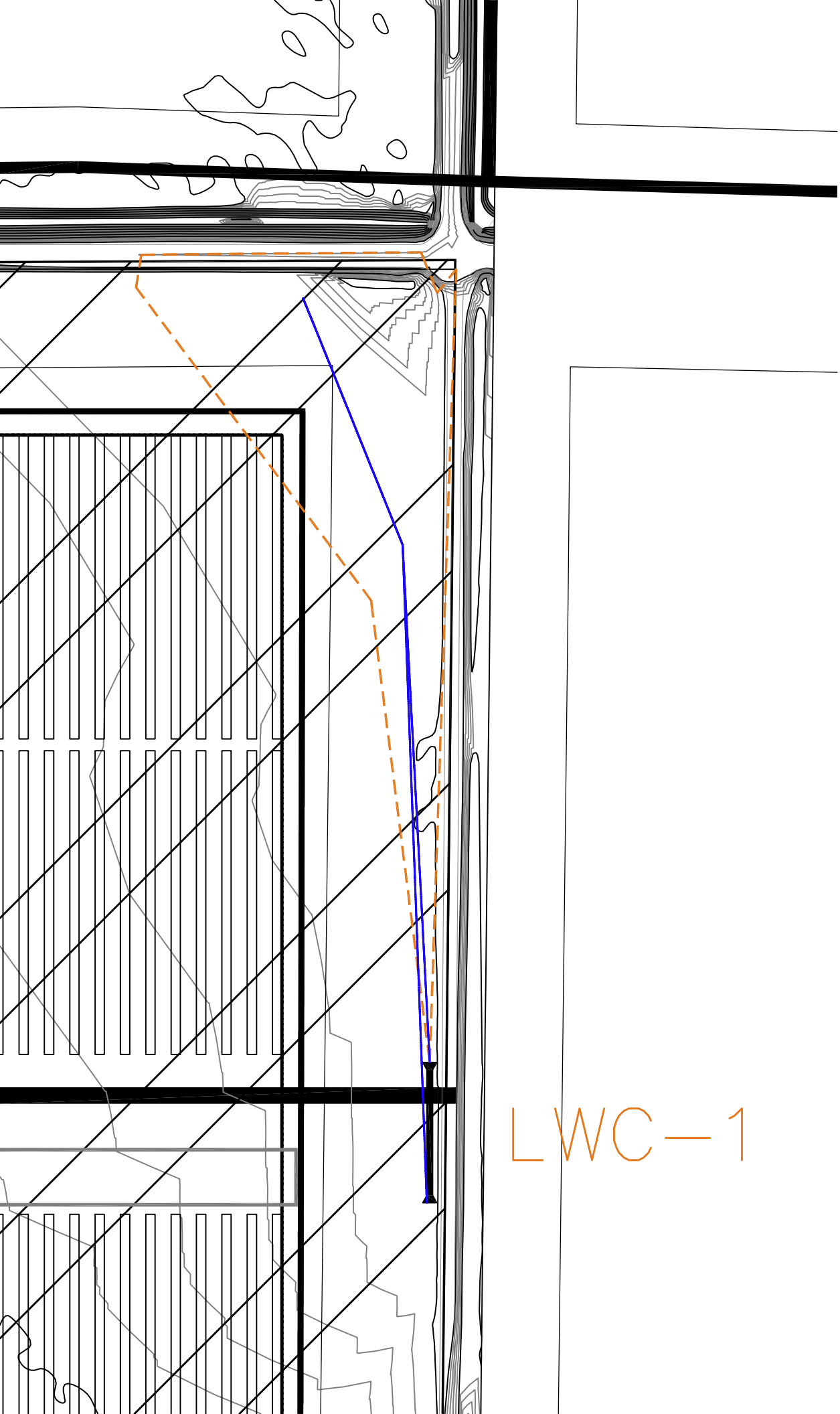
SIGNED ANDY NGUYEN
DATE 09/18/23 REG NO. PE-89364

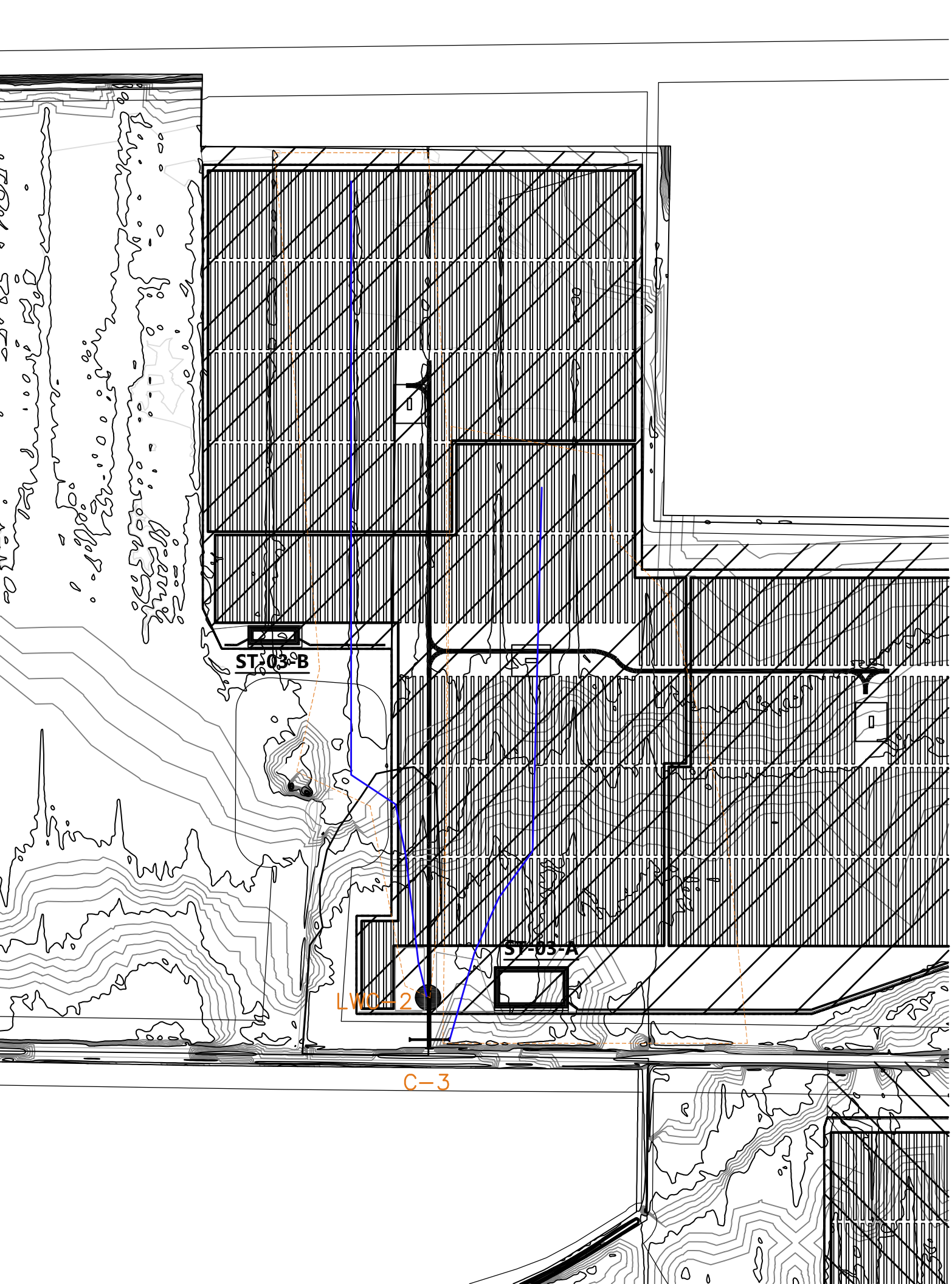
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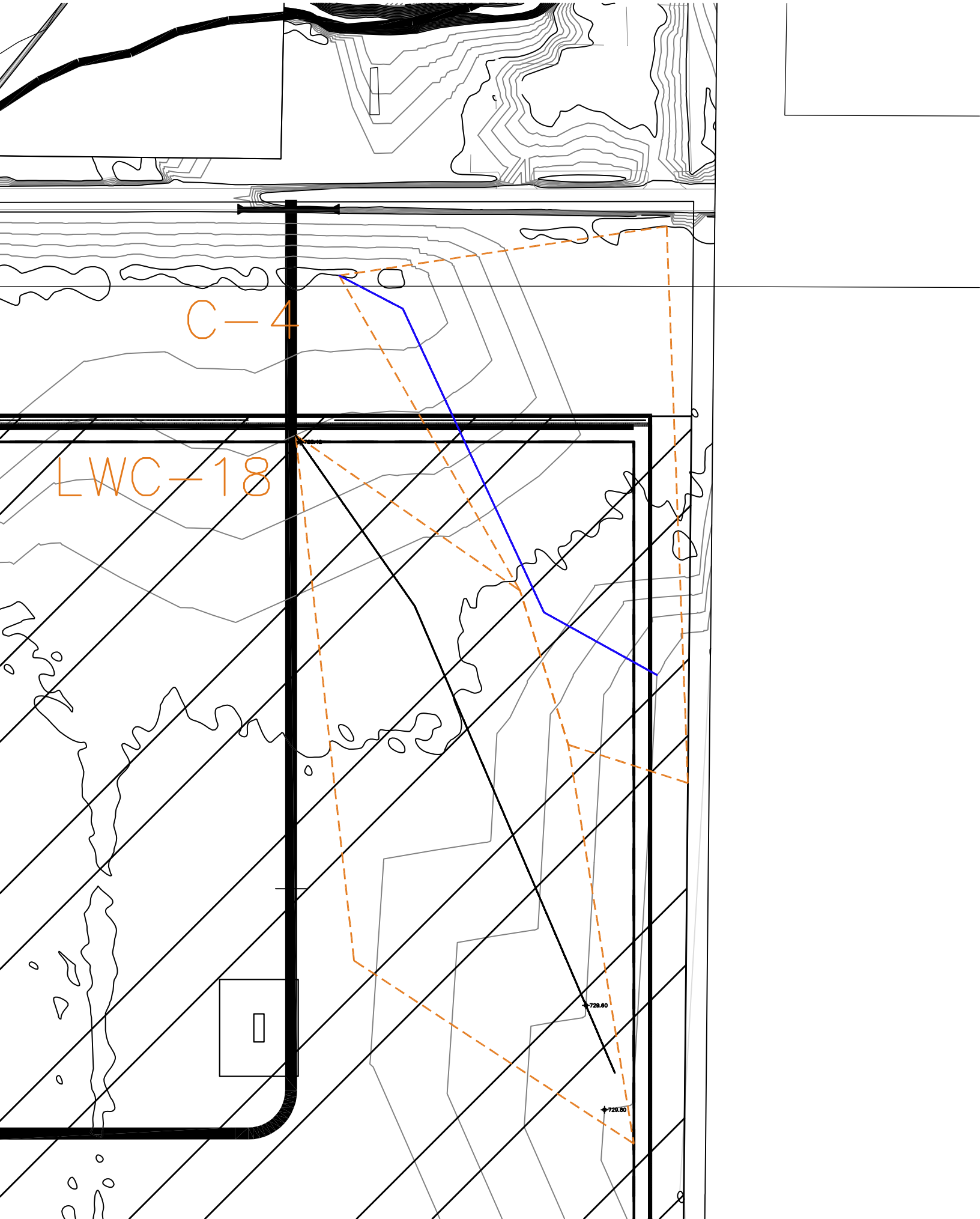
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DRAWN: RRY	09/18/23
DESIGNED: AVN	09/18/23
CHECKED: AVN	09/18/23
APPROVED: AJG	09/18/23

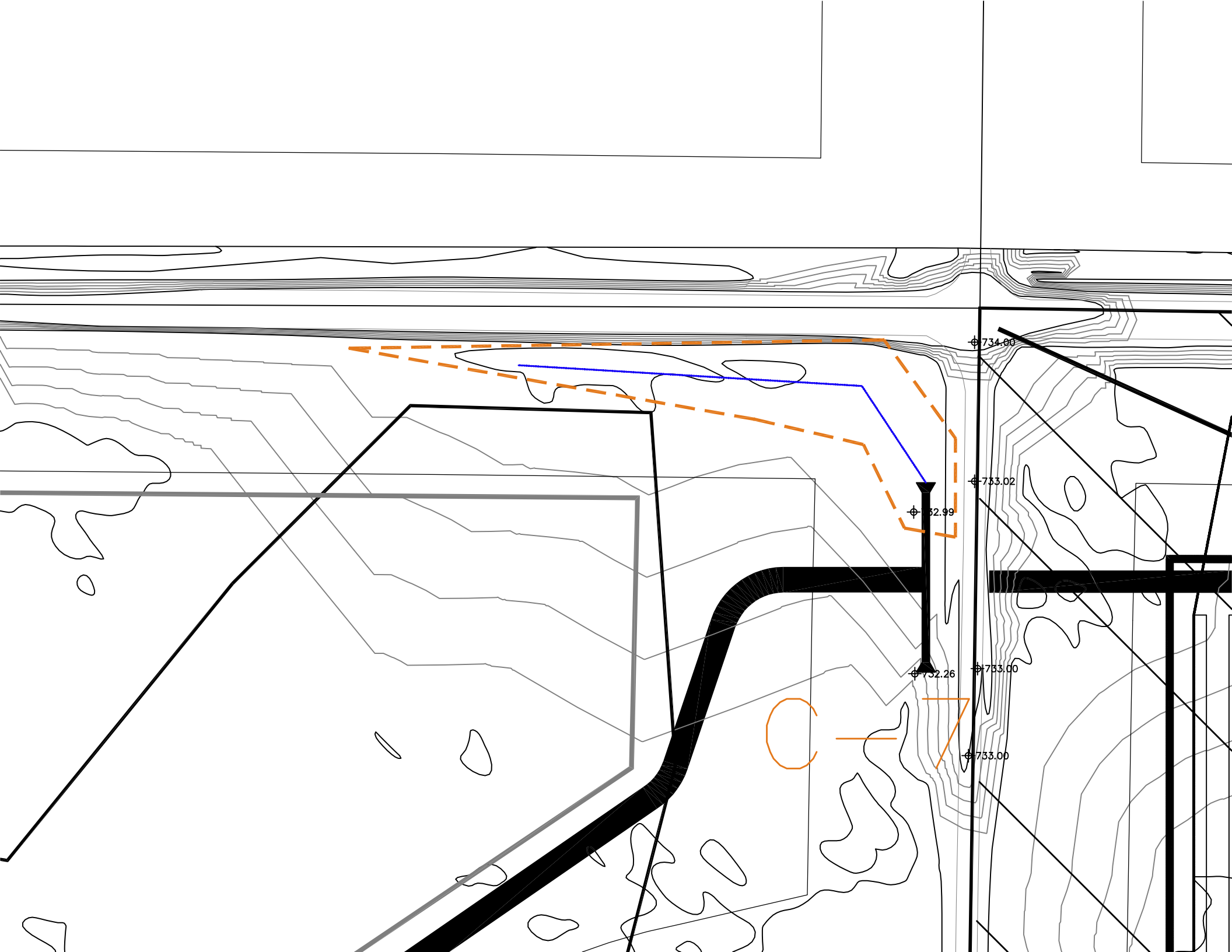
POWELL CREEK SOLAR, LLC
POWELL CREEK PV SOLAR PROJECT
CONSTRUCTION FACILITIES TEMPORARY ACCESS PLAN

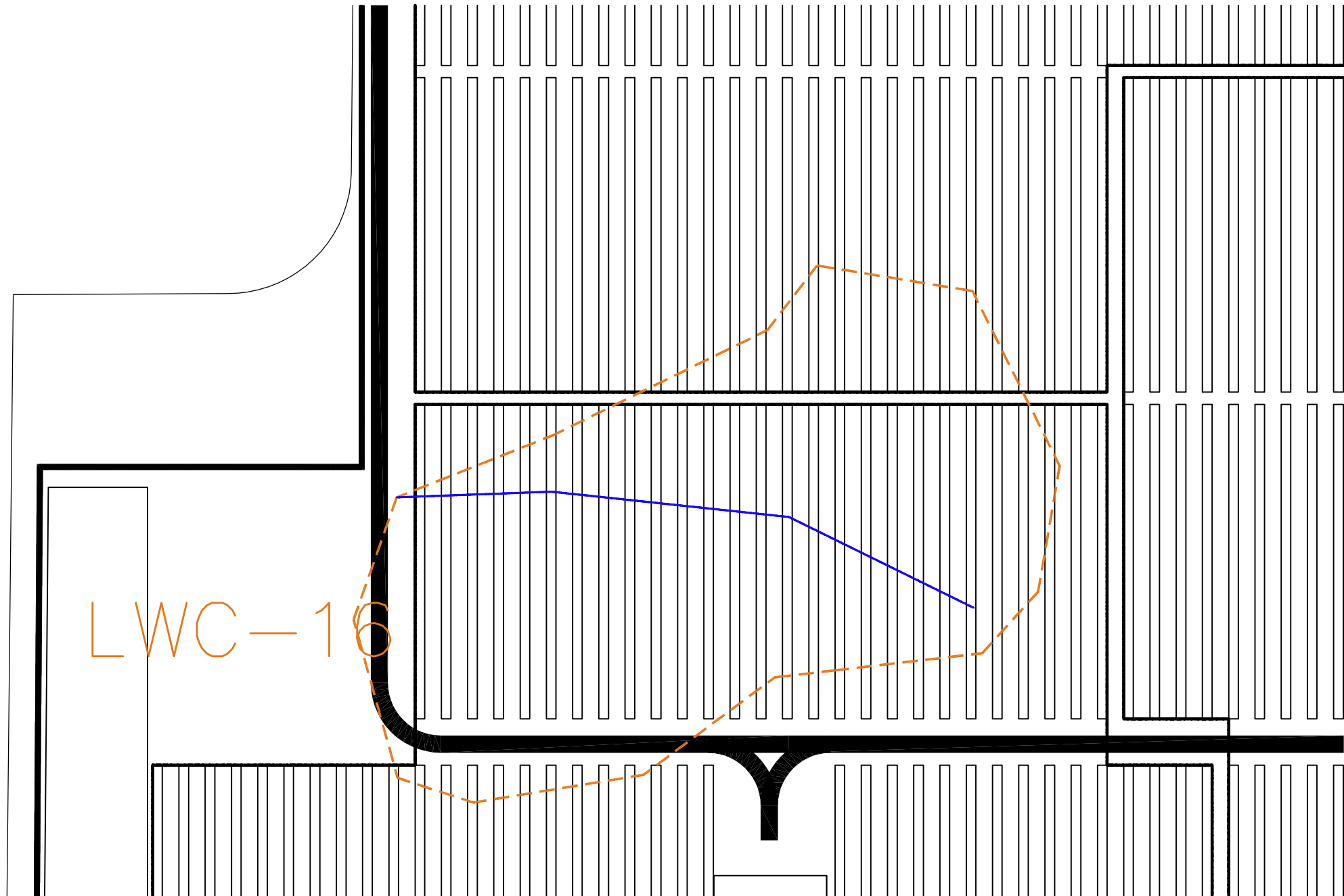
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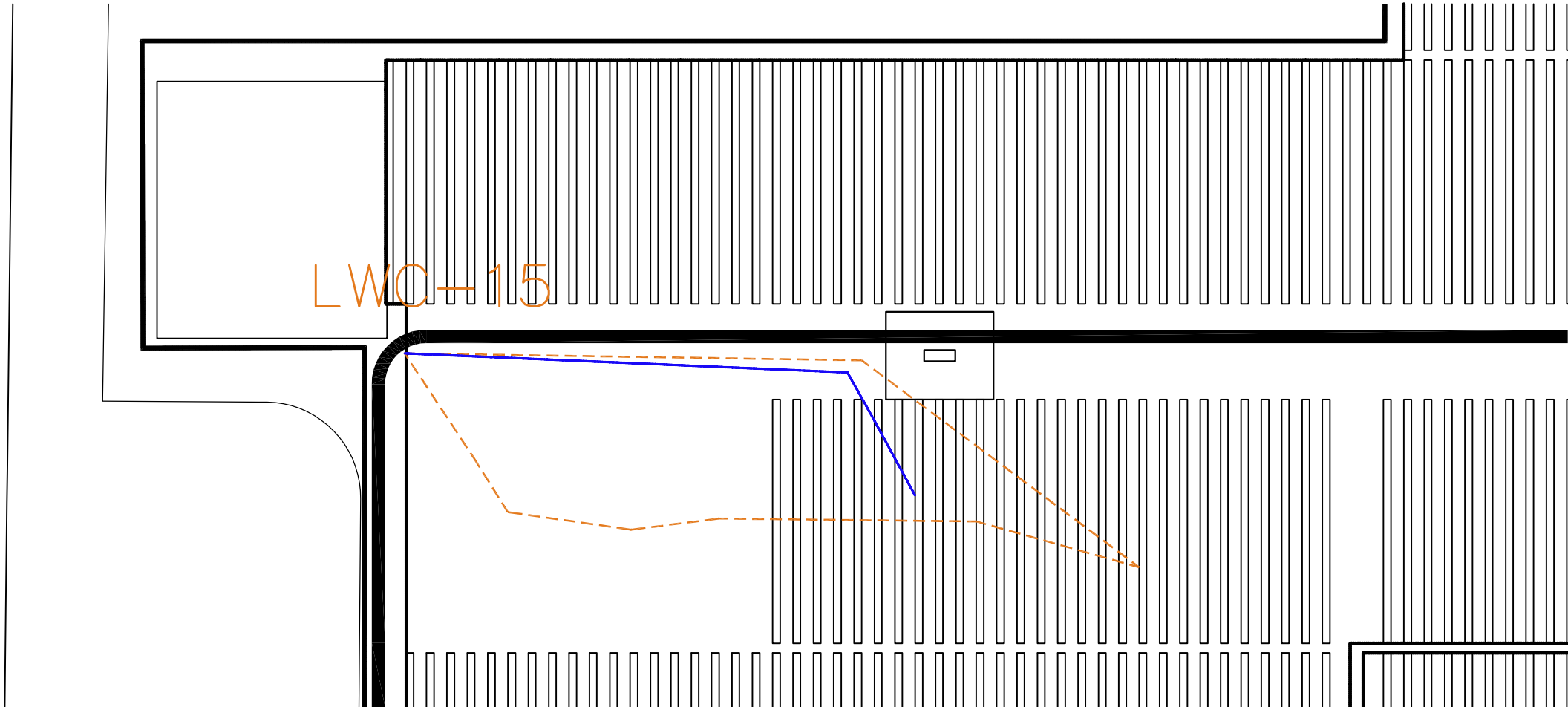

LWC-1

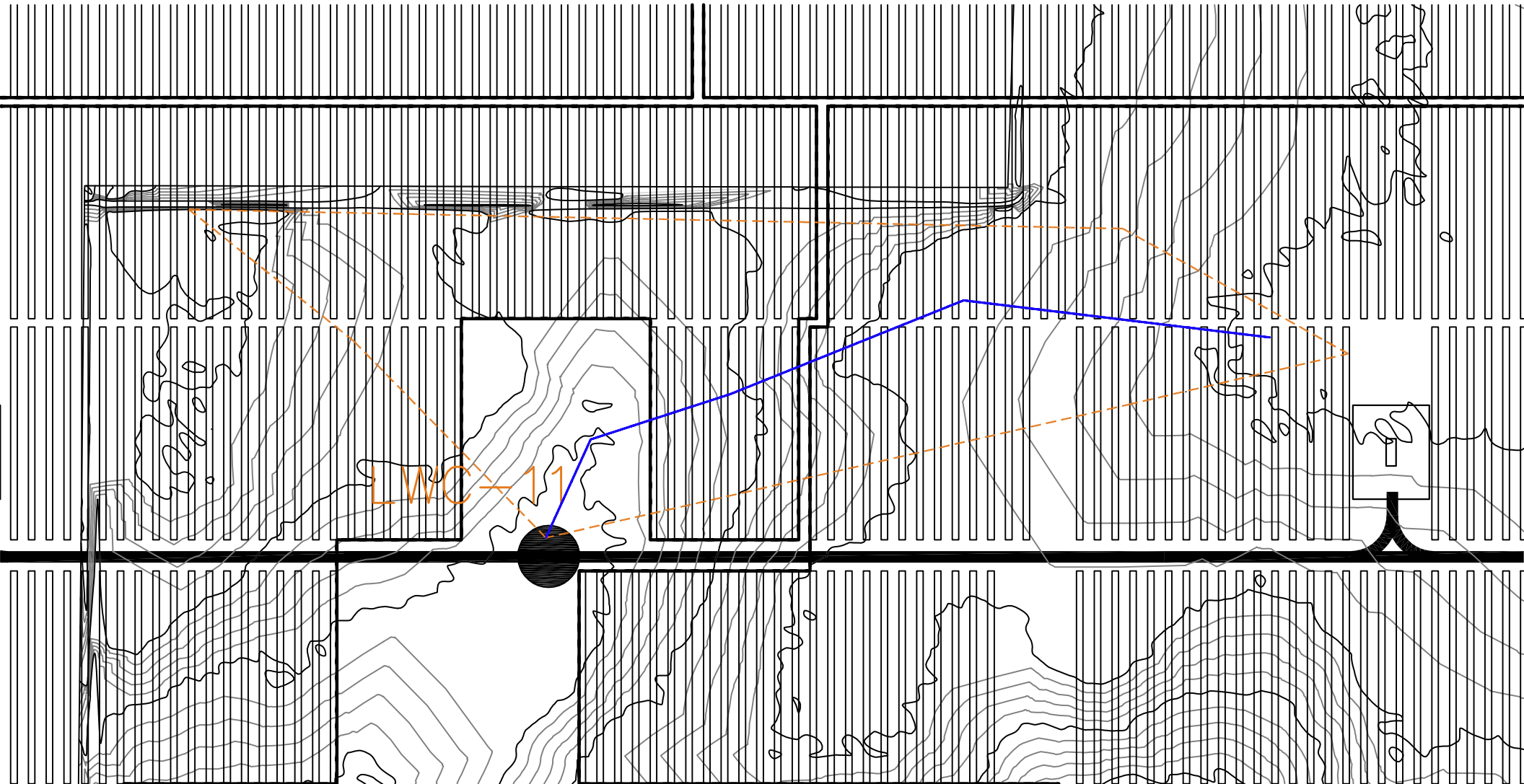

ST-03-B
ST-03-A
LWC-2
C-3

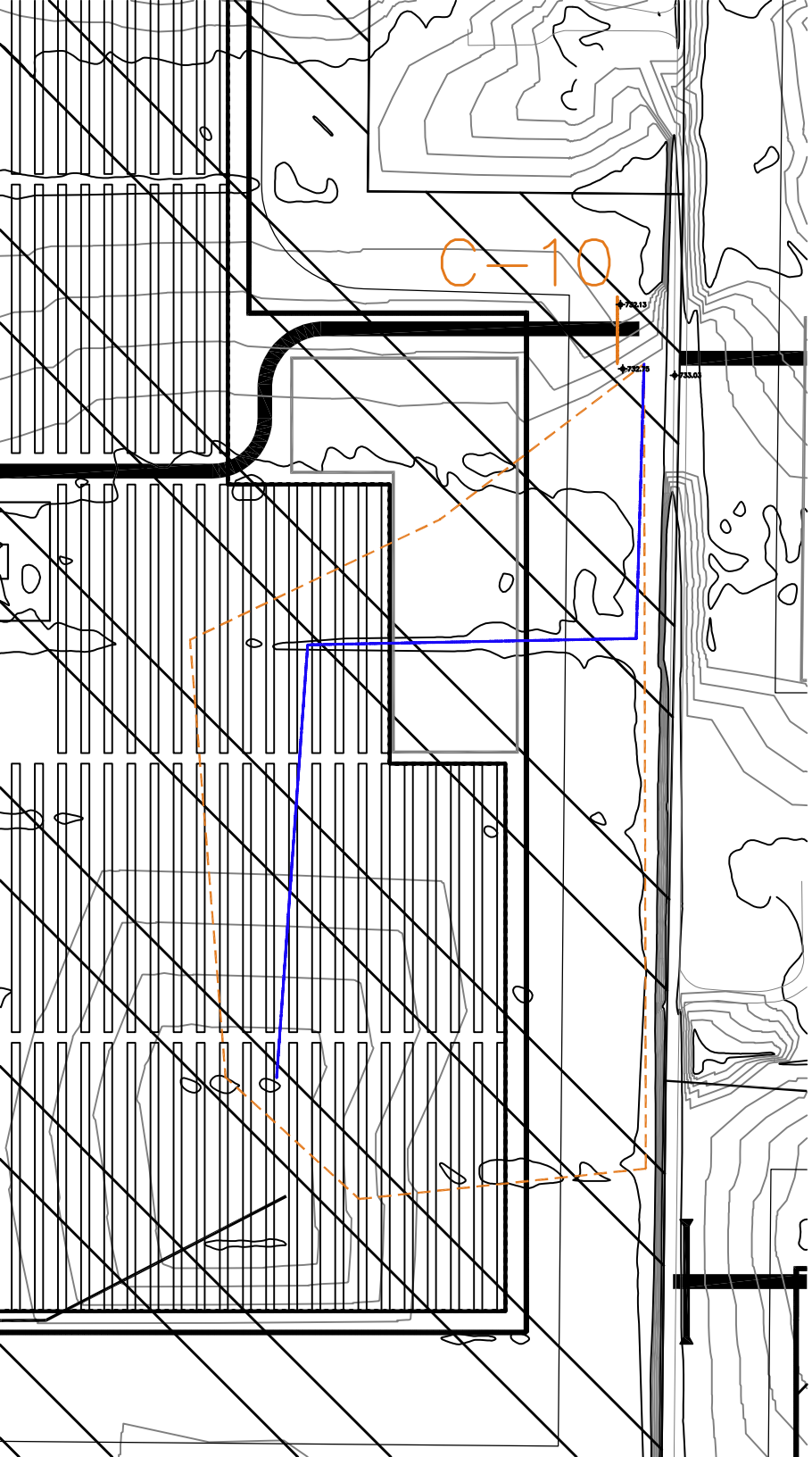

C-4
LWC-18
729.60
729.80

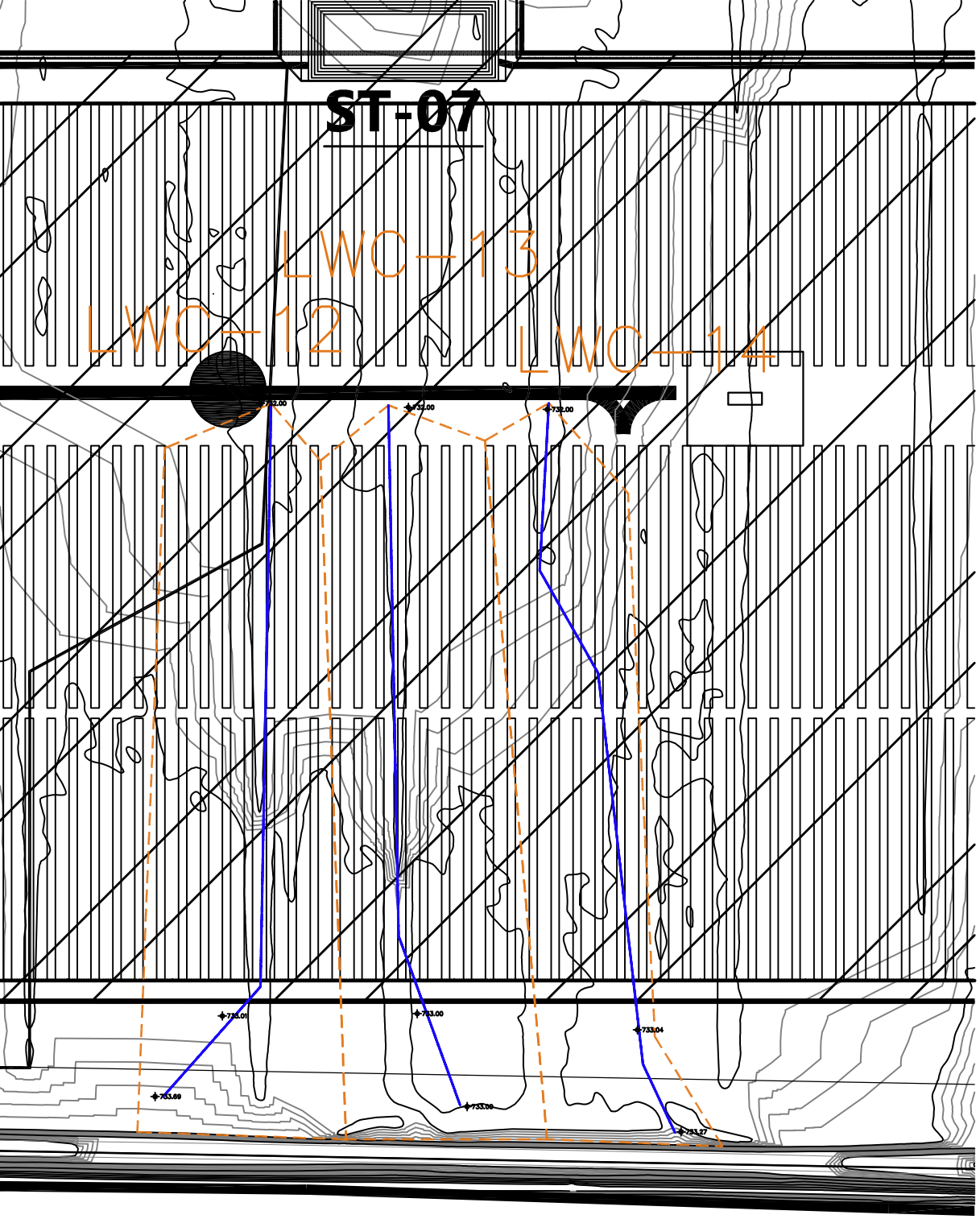

734.00
733.02
732.99
732.26
733.00
733.00

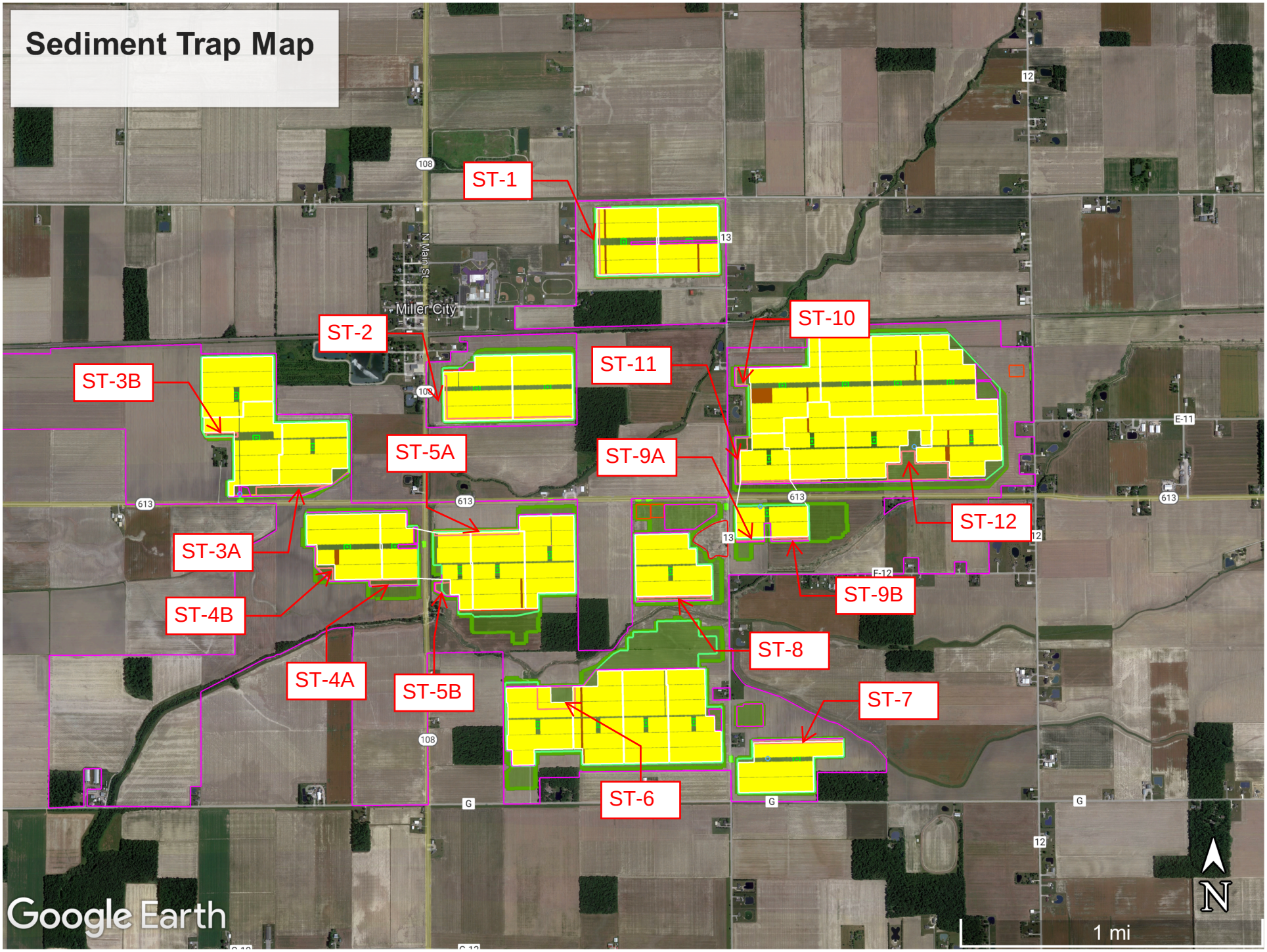

LWC-16


LWC-15


LWC – 11


C-10
732.13
732.15
733.00


ST-07
LWC-13
LWC-12
LWC-14
732.00
732.00
732.00
733.01
733.00
733.04
733.69
733.00
733.27


Sediment Trap Map
ST-1
ST-2
ST-3B
ST-3A
ST-4B
ST-4A
ST-5A
ST-5B
ST-6
ST-7
ST-8
ST-9A
ST-9B
ST-10
ST-11
ST-12
Miller City
N Main St
108
613
G
E-11
E-12
12
13
Google Earth
N
1 mi

Attachment E

Bentley CulvertMaster Reports

Culvert Calculator Report
C-10 100 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	734.00	ft	Headwater Depth/Height	0.67	
Computed Headwater Elevation	733.25	ft	Discharge	3.17	cfs
Inlet Control HW Elev.	733.19	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	733.25	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	732.25	ft	Downstream Invert	732.13	ft
Length	50.00	ft	Constructed Slope	0.002400	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.68	ft
Slope Type	Mild		Normal Depth	0.81	ft
Flow Regime	Subcritical		Critical Depth	0.68	ft
Velocity Downstream	4.09	ft/s	Critical Slope	0.004405	ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.012
Section Material	Corrugated HDPE (Smooth Interior)	Span	1.50 ft
Section Size	18 inch	Rise	1.50 ft
Number Sections	1		

Outlet Control Properties					
Outlet Control HW Elev.	733.25	ft	Upstream Velocity Head	0.18	ft
Ke	0.20		Entrance Loss	0.04	ft

Inlet Control Properties					
Inlet Control HW Elev.	733.19	ft	Flow Control	Unsubmerged	
Inlet Type	Beveled ring, 33.7° bevels		Area Full	1.8	ft²
K	0.00180		HDS 5 Chart	3	
M	2.50000		HDS 5 Scale	B	
C	0.02430		Equation Form	1	
Y	0.83000				

Culvert Calculator Report
C-10 25 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	734.00	ft	Headwater Depth/Height	0.58	
Computed Headwater Elevation	733.12	ft	Discharge	2.46	cfs
Inlet Control HW Elev.	733.07	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	733.12	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	732.25	ft	Downstream Invert	732.13	ft
Length	50.00	ft	Constructed Slope	0.002400	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.59	ft
Slope Type	Mild		Normal Depth	0.70	ft
Flow Regime	Subcritical		Critical Depth	0.59	ft
Velocity Downstream	3.78	ft/s	Critical Slope	0.004274	ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.012
Section Material	Corrugated HDPE (Smooth Interior)	Span	1.50 ft
Section Size	18 inch	Rise	1.50 ft
Number Sections	1		

Outlet Control Properties					
Outlet Control HW Elev.	733.12	ft	Upstream Velocity Head	0.15	ft
Ke	0.20		Entrance Loss	0.03	ft

Inlet Control Properties					
Inlet Control HW Elev.	733.07	ft	Flow Control	Unsubmerged	
Inlet Type	Beveled ring, 33.7° bevels		Area Full	1.8	ft²
K	0.00180		HDS 5 Chart	3	
M	2.50000		HDS 5 Scale	B	
C	0.02430		Equation Form	1	
Y	0.83000				

Culvert Calculator Report
C-3 100 YR

Solve For: Section Size

Culvert Summary					
Allowable HW Elevation	726.00	ft	Headwater Depth/Height	1.10	
Computed Headwater Elevation	725.65	ft	Discharge	13.68	cfs
Inlet Control HW Elev.	725.53	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	725.65	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	724.00	ft	Downstream Invert	723.95	ft
Length	50.00	ft	Constructed Slope	0.001000	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	1.01	ft
Slope Type	Mild		Normal Depth	N/A	ft
Flow Regime	Subcritical		Critical Depth	1.01	ft
Velocity Downstream	5.39	ft/s	Critical Slope	0.005686	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.012	
Section Material	Corrugated HDPE (Smooth Interior)		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	2				

Outlet Control Properties					
Outlet Control HW Elev.	725.65	ft	Upstream Velocity Head	0.26	ft
Ke	0.20		Entrance Loss	0.05	ft

Inlet Control Properties					
Inlet Control HW Elev.	725.53	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	3.5	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-3 25 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	726.00	ft	Headwater Depth/Height	0.93	
Computed Headwater Elevation	725.40	ft	Discharge	10.53	cfs
Inlet Control HW Elev.	725.29	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	725.40	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	724.00	ft	Downstream Invert	723.95	ft
Length	50.00	ft	Constructed Slope	0.001000	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.88	ft
Slope Type	Mild		Normal Depth	N/A	ft
Flow Regime	Subcritical		Critical Depth	0.88	ft
Velocity Downstream	4.86	ft/s	Critical Slope	0.005014	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.012	
Section Material	Corrugated HDPE (Smooth Interior)		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	2				

Outlet Control Properties					
Outlet Control HW Elev.	725.40	ft	Upstream Velocity Head	0.20	ft
Ke	0.20		Entrance Loss	0.04	ft

Inlet Control Properties					
Inlet Control HW Elev.	725.29	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	3.5	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-4 100 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	730.00	ft	Headwater Depth/Height	0.70	
Computed Headwater Elevation	729.05	ft	Discharge	6.49	cfs
Inlet Control HW Elev.	728.96	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	729.05	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	728.00	ft	Downstream Invert	727.95	ft
Length	50.00	ft	Constructed Slope	0.001000	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.69	ft
Slope Type	Mild		Normal Depth	1.11	ft
Flow Regime	Subcritical		Critical Depth	0.69	ft
Velocity Downstream	4.12	ft/s	Critical Slope	0.004424	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.012	
Section Material	Corrugated HDPE (Smooth Interior)		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	2				

Outlet Control Properties					
Outlet Control HW Elev.	729.05	ft	Upstream Velocity Head	0.14	ft
Ke	0.20		Entrance Loss	0.03	ft

Inlet Control Properties					
Inlet Control HW Elev.	728.96	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	3.5	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-4 25 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	730.00	ft	Headwater Depth/Height	0.64	
Computed Headwater Elevation	728.96	ft	Discharge	5.49	cfs
Inlet Control HW Elev.	728.88	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	728.96	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	728.00	ft	Downstream Invert	727.95	ft
Length	50.00	ft	Constructed Slope	0.001000	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.63	ft
Slope Type	Mild		Normal Depth	0.98	ft
Flow Regime	Subcritical		Critical Depth	0.63	ft
Velocity Downstream	3.91	ft/s	Critical Slope	0.004328	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.012	
Section Material	Corrugated HDPE (Smooth Interior)		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	2				

Outlet Control Properties					
Outlet Control HW Elev.	728.96	ft	Upstream Velocity Head	0.12	ft
Ke	0.20		Entrance Loss	0.02	ft

Inlet Control Properties					
Inlet Control HW Elev.	728.88	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	3.5	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-7 100 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	733.50	ft	Headwater Depth/Height	0.16	
Computed Headwater Elevation	732.74	ft	Discharge	0.22	cfs
Inlet Control HW Elev.	732.73	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	732.74	ft	Control Type	Entrance Control	

Grades					
Upstream Invert	732.50	ft	Downstream Invert	732.26	ft
Length	50.00	ft	Constructed Slope	0.004800	ft/ft

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.17	ft
Slope Type	Steep		Normal Depth	0.17	ft
Flow Regime	Supercritical		Critical Depth	0.17	ft
Velocity Downstream	1.95	ft/s	Critical Slope	0.004776	ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.012
Section Material	Corrugated HDPE (Smooth Interior)	Span	1.50 ft
Section Size	18 inch	Rise	1.50 ft
Number Sections	1		

Outlet Control Properties					
Outlet Control HW Elev.	732.74	ft	Upstream Velocity Head	0.06	ft
Ke	0.20		Entrance Loss	0.01	ft

Inlet Control Properties					
Inlet Control HW Elev.	732.73	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	1.8	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-7 25 YR

Solve For: Headwater Elevation

Culvert Summary					
Allowable HW Elevation	733.50	ft	Headwater Depth/Height	0.14	
Computed Headwater Elevation	732.71	ft	Discharge	0.17	cfs
Inlet Control HW Elev.	732.70	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	732.71	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	732.50	ft	Downstream Invert	732.26	ft
Length	50.00	ft	Constructed Slope	0.004800	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.15	ft
Slope Type	Mild		Normal Depth	0.15	ft
Flow Regime	Subcritical		Critical Depth	0.15	ft
Velocity Downstream	1.82	ft/s	Critical Slope	0.004933	ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.012
Section Material	Corrugated HDPE (Smooth Interior)	Span	1.50 ft
Section Size	18 inch	Rise	1.50 ft
Number Sections	1		

Outlet Control Properties					
Outlet Control HW Elev.	732.71	ft	Upstream Velocity Head	0.05	ft
Ke	0.20		Entrance Loss	0.01	ft

Inlet Control Properties					
Inlet Control HW Elev.	732.70	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	1.8	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-17 100 YR

Solve For: Section Size

Culvert Summary					
Allowable HW Elevation	732.75	ft	Headwater Depth/Height	0.90	
Computed Headwater Elevation	732.61	ft	Discharge	30.12	cfs
Inlet Control HW Elev.	732.50	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	732.61	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	731.25	ft	Downstream Invert	731.20	ft
Length	50.00	ft	Constructed Slope	0.001000	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.86	ft
Slope Type	Mild		Normal Depth	N/A	ft
Flow Regime	Subcritical		Critical Depth	0.86	ft
Velocity Downstream	4.78	ft/s	Critical Slope	0.004927	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.012	
Section Material	Corrugated HDPE (Smooth Interior)		Span	1.50	ft
Section Size	18 inch		Rise	1.50	ft
Number Sections	6				

Outlet Control Properties					
Outlet Control HW Elev.	732.61	ft	Upstream Velocity Head	0.19	ft
Ke	0.20		Entrance Loss	0.04	ft

Inlet Control Properties					
Inlet Control HW Elev.	732.50	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	10.6	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Culvert Calculator Report
C-17 25 YR

Solve For: Section Size

Culvert Summary					
Allowable HW Elevation	732.75	ft	Headwater Depth/Height	1.05	
Computed Headwater Elevation	732.56	ft	Discharge	23.46	cfs
Inlet Control HW Elev.	732.44	ft	Tailwater Elevation	0.00	ft
Outlet Control HW Elev.	732.56	ft	Control Type	Outlet Control	

Grades					
Upstream Invert	731.25	ft	Downstream Invert	731.20	ft
Length	50.00	ft	Constructed Slope	0.001000	ft/ft

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.80	ft
Slope Type	Mild		Normal Depth	N/A	ft
Flow Regime	Subcritical		Critical Depth	0.80	ft
Velocity Downstream	4.71	ft/s	Critical Slope	0.005708	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.012	
Section Material	Corrugated HDPE (Smooth Interior)		Span	1.25	ft
Section Size	15 inch		Rise	1.25	ft
Number Sections	6				

Outlet Control Properties					
Outlet Control HW Elev.	732.56	ft	Upstream Velocity Head	0.19	ft
Ke	0.20		Entrance Loss	0.04	ft

Inlet Control Properties					
Inlet Control HW Elev.	732.44	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end projecting		Area Full	7.4	ft²
K	0.00450		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	3	
C	0.03170		Equation Form	1	
Y	0.69000				

Attachment F

Bentley FlowMaster Reports

Worksheet for 25 yr LWC1

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		1.11	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.19	ft
Headwater Height Above Crest	0.19	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.58	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.58	US
Flow Area	0.97	ft²
Velocity	1.14	ft/s
Wetted Perimeter	5.39	ft
Top Width	5.00	ft

Worksheet for 25 yr LWC2

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		7.15	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		10.00	ft

Results

Headwater Elevation	0.42	ft
Headwater Height Above Crest	0.42	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.67	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.67	US
Flow Area	4.16	ft²
Velocity	1.72	ft/s
Wetted Perimeter	10.83	ft
Top Width	10.00	ft

Worksheet for 25 yr LWC11

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		10.81	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		15.00	ft

Results

Headwater Elevation	0.42	ft
Headwater Height Above Crest	0.42	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.67	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.67	US
Flow Area	6.27	ft²
Velocity	1.72	ft/s
Wetted Perimeter	15.84	ft
Top Width	15.00	ft

Worksheet for 25 yr LWC12

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		3.73	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.43	ft
Headwater Height Above Crest	0.43	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.67	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.67	US
Flow Area	2.14	ft²
Velocity	1.75	ft/s
Wetted Perimeter	5.85	ft
Top Width	5.00	ft

Worksheet for 25 yr LWC13

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		2.63	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.34	ft
Headwater Height Above Crest	0.34	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.64	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.64	US
Flow Area	1.71	ft²
Velocity	1.54	ft/s
Wetted Perimeter	5.68	ft
Top Width	5.00	ft

Worksheet for 25 yr LWC14

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		2.26	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.31	ft
Headwater Height Above Crest	0.31	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.63	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.63	US
Flow Area	1.55	ft²
Velocity	1.46	ft/s
Wetted Perimeter	5.62	ft
Top Width	5.00	ft

Worksheet for 25 yr LWC15

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		2.84	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.36	ft
Headwater Height Above Crest	0.36	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.65	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.65	US
Flow Area	1.79	ft²
Velocity	1.58	ft/s
Wetted Perimeter	5.72	ft
Top Width	5.00	ft

Worksheet for 25 yr LWC16

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		4.05	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.45	ft
Headwater Height Above Crest	0.45	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.68	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.68	US
Flow Area	2.25	ft²
Velocity	1.80	ft/s
Wetted Perimeter	5.90	ft
Top Width	5.00	ft

Worksheet for 25 yr LWC18

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		4.76	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		10.00	ft

Results

Headwater Elevation	0.32	ft
Headwater Height Above Crest	0.32	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.63	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.63	US
Flow Area	3.20	ft²
Velocity	1.49	ft/s
Wetted Perimeter	10.64	ft
Top Width	10.00	ft

Worksheet for 100 yr LWC1

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		1.37	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.22	ft
Headwater Height Above Crest	0.22	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.60	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.60	US
Flow Area	1.12	ft²
Velocity	1.23	ft/s
Wetted Perimeter	5.45	ft
Top Width	5.00	ft

Worksheet for 100 yr LWC2

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		9.28	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		10.00	ft

Results

Headwater Elevation	0.49	ft
Headwater Height Above Crest	0.49	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.69	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.69	US
Flow Area	4.92	ft²
Velocity	1.89	ft/s
Wetted Perimeter	10.98	ft
Top Width	10.00	ft

Worksheet for 100 yr LWC11

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		12.80	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		15.00	ft

Results

Headwater Elevation	0.47	ft
Headwater Height Above Crest	0.47	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.68	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.68	US
Flow Area	6.99	ft²
Velocity	1.83	ft/s
Wetted Perimeter	15.93	ft
Top Width	15.00	ft

Worksheet for 100 yr LWC12

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		4.44	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.48	ft
Headwater Height Above Crest	0.48	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.69	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.69	US
Flow Area	2.39	ft²
Velocity	1.86	ft/s
Wetted Perimeter	5.96	ft
Top Width	5.00	ft

Worksheet for 100 yr LWC13

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		3.19	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.39	ft
Headwater Height Above Crest	0.39	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.66	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.66	US
Flow Area	1.93	ft²
Velocity	1.65	ft/s
Wetted Perimeter	5.77	ft
Top Width	5.00	ft

Worksheet for 100 yr LWC14

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		2.71	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.35	ft
Headwater Height Above Crest	0.35	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.64	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.64	US
Flow Area	1.74	ft²
Velocity	1.56	ft/s
Wetted Perimeter	5.70	ft
Top Width	5.00	ft

Worksheet for 100 yr LWC15

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		3.39	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.40	ft
Headwater Height Above Crest	0.40	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.66	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.66	US
Flow Area	2.01	ft²
Velocity	1.69	ft/s
Wetted Perimeter	5.80	ft
Top Width	5.00	ft

Worksheet for 100 yr LWC16

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		4.87	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		5.00	ft

Results

Headwater Elevation	0.51	ft
Headwater Height Above Crest	0.51	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.70	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.70	US
Flow Area	2.54	ft²
Velocity	1.92	ft/s
Wetted Perimeter	6.01	ft
Top Width	5.00	ft

Worksheet for 100 yr LWC18

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		5.84	ft³/s
Crest Elevation		0.00	ft
Tailwater Elevation		0.00	ft
Crest Surface Type	Gravel		
Crest Breadth		14.00	ft
Crest Length		10.00	ft

Results

Headwater Elevation	0.37	ft
Headwater Height Above Crest	0.37	ft
Tailwater Height Above Crest	0.00	ft
Weir Coefficient	2.65	US
Submergence Factor	1.00	
Adjusted Weir Coefficient	2.65	US
Flow Area	3.65	ft²
Velocity	1.60	ft/s
Wetted Perimeter	10.73	ft
Top Width	10.00	ft

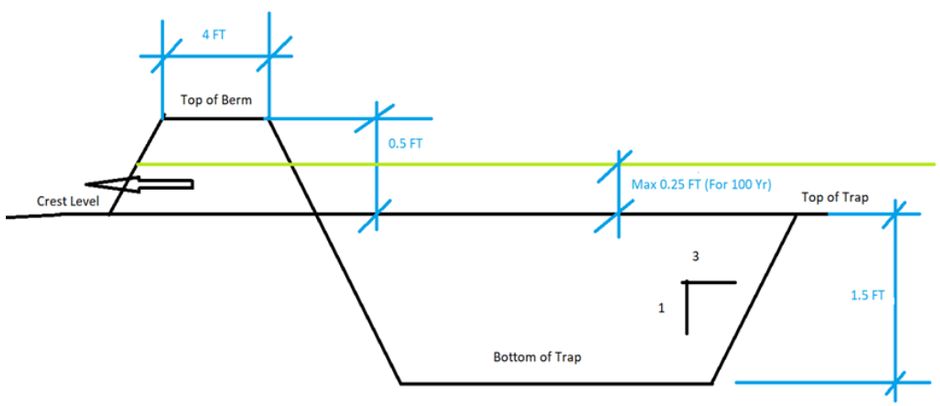
Attachment G

Sediment Trap Sizing

AREA COMPUTATION					Silt Fence Length	SEDIMENT TRAP SIZE							Crest EL. of Spillway	WATER LEVEL_From HydroCAD (25 YR)	WATER LEVEL_From HydroCAD (100 YR)	DEPTH OF WATER ABOVE CREST (25 YR)	DEPTH OF WATER ABOVE CREST (100 YR)	FREEBOARD AT BERM TOP (100 YR)	SPILLWAY LENGTH	SPILLWAY WIDTH
DA ID	Disturbed Area - For Sedimentation Volume Calcs		DA AREA - For WQv Calcs (Including additional drainage area outside			Sediment Trap ID	Sediment Trap Plan Size at bottom level	Sediment Trap Plan Size at top	Sediment Trap Overall Depth	Bottom EL. Of Sediment Trap	Top EL. Of Sediment Trap	Top EL. Of Berm on D/S side								
	(SF)	(AC)	(SF)	(AC)	(FT)		(SF)	(SF)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)	(FT)
DA-01	**2,690,164**	61.76	**3,087,673**	70.88	280	**ST-01**	**113690**	**143678**	**1.5**	**731.50**	**733.00**	**733.50**	**733.00**	733.180	733.240	0.18	0.24	0.26	**110**	**7.0**
DA-02	**2,548,460**	58.50	**3,356,533**	77.06	0	**ST-02**	**119979**	**147222**	**1.5**	**726.50**	**728.00**	**728.50**	**728.00**	728.190	728.250	0.19	0.25	0.25	**100**	**7.0**
DA-03-A	**3,380,672**	77.61	**3,598,753**	82.62	2,485	**ST-03-A**	**141587**	**153463**	**1.5**	**722.90**	**724.40**	**724.90**	**724.40**	724.590	724.650	0.19	0.25	0.25	**160**	**7.0**
DA-03-B	**796,992**	18.30	**825,534**	18.95	0	**ST-03-B**	**32557**	**38080**	**1.5**	**725.50**	**727.00**	**727.50**	**727.00**	727.180	727.250	0.18	0.25	0.25	**50**	**7.0**
DA-04-A	**1,583,385**	36.35	**1,932,009**	44.35	2,685	**ST-04-A**	**70442**	**78757**	**1.5**	**724.50**	**726.00**	**726.50**	**726.00**	726.190	726.250	0.19	0.25	0.25	**120**	**7.0**
DA-04-B	**714,942**	16.41	**855,541**	19.64	1,880	**ST-04-B**	**30714**	**34411**	**1.5**	**723.50**	**725.00**	**725.50**	**725.00**	725.190	725.250	0.19	0.25	0.25	**70**	**7.0**
DA-05-A	**2,464,910**	56.59	**2,522,573**	57.91	1,180	**ST-05-A**	**102810**	**116922**	**1.5**	**726.50**	**728.00**	**728.50**	**728.00**	728.180	728.240	0.18	0.24	0.26	**100**	**7.0**
DA-05-B	**965,659**	22.17	**1,133,321**	26.02	1,107	**ST-05-B**	**43505**	**47411**	**1.5**	**725.50**	**727.00**	**727.50**	**727.00**	727.180	727.240	0.18	0.24	0.26	**60**	**7.0**
DA-06	**5,433,661**	124.74	**6,195,774**	142.24	4,405	**ST-06**	**246280**	**255640**	**1.5**	**726.00**	**727.50**	**728.00**	**727.50**	727.690	727.750	0.19	0.25	0.25	**270**	**7.0**
DA-07	**1,328,423**	30.50	**1,899,183**	43.60	1,600	**ST-07**	**63755**	**78200**	**1.5**	**730.50**	**732.00**	**732.50**	**732.00**	732.190	732.250	0.19	0.25	0.25	**120**	**7.0**
DA-08	**1,446,236**	33.20	**1,505,279**	34.56	2,308	**ST-08**	**55040**	**67028**	**1.5**	**726.60**	**728.10**	**728.60**	**728.10**	728.280	728.340	0.18	0.24	0.26	**120**	**7.0**
DA-09-A	**324,382**	7.45	**512,476**	11.76	860	**ST-09-A**	**15925**	**20416**	**1.5**	**728.50**	**730.00**	**730.50**	**730.00**	730.180	730.230	0.18	0.23	0.27	**60**	**7.0**
DA-09-B	**458,019**	10.51	**586,765**	13.47	1,065	**ST-09-B**	**18900**	**24921**	**1.5**	**729.20**	**730.70**	**731.20**	**730.70**	730.880	730.940	0.18	0.24	0.26	**70**	**7.0**
DA-10	**914,888**	21.00	**1,049,125**	24.08	1,725	**ST-10**	**40500**	**44361**	**1.5**	**731.50**	**733.00**	**733.50**	**733.00**	733.190	733.250	0.19	0.25	0.25	**60**	**7.0**
DA-11	**2,664,580**	61.17	**2,761,820**	63.40	3,032	**ST-11**	**106670**	**128256**	**1.5**	**731.25**	**732.75**	**733.25**	**732.75**	732.930	733.000	0.18	0.25	0.25	**100**	**7.0**
DA-12	**7,223,829**	165.84	**8,369,918**	192.15	2,460	**ST-12**	**340760**	**354844**	**1.5**	**731.25**	**732.75**	**733.25**	**732.75**	732.940	733.000	0.19	0.25	0.25	**250**	**7.0**

AREA COMPUTATION					REQUIRED STORAGE FOR SEDIMENTATION ZONE					REQUIRED STORAGE FOR DEWATERING ZONE		REQUIRED STORAGE FOR WATER QUALITY									SEDIMENT TRAP STORAGE REQUIRED (MAX. OF SEDIMENTATION + DEWATERING & WATER QUALITY)		ACTUAL SEDIMENT TRAP SIZE COMPUTATION								
DA ID	Disturbed Area - For Sedimentation Volume Calcs		DA AREA - For WQv Calcs (Including additional drainage area outside disturbed area)		Silt Fence Length	Area contributed by Silt Fence (0.25AC/ 100FT)	Delta area for Sediment Trap sizing	Total Sediment Storage Required (37*AC)		Total Dewatering Storage Required (67*AC)		Road Length	Road Area (Width of Road = 16 FT)	Inverter Pad Footprint (Inverter Size + 4:1 Slope with 2 FT A/G)	Total impervious area	Drainage area impervious fraction (i)	Volumetric Runoff Coefficient (Rv=0.05+0.9i)	Water Quality Volume (WQv=Rv*P*A/12) (20% additional volume)					Sediment Trap Plan Size at bottom level	Sediment Trap Plan Size at top	Sediment Trap Effective Depth	Provided Sediment Trap Volume	Extra Storage capacity			Volume	
	(SF)	(AC)	(SF)	(AC)	(FT)	(AC)	(AC)	(CY)	(CF)	(CY)	(CF)	(FT)	(SF)	(SF)	(SF)			(AC-FT)	(CF)	(CY)	(CF)	(CY)	(FT)	(FT)	(FT)	(CF)	(CF)	(CY)	(%)	(CF)	(CY)
DA-01	2,690,164	61.76	3,087,673	70.88	280	0.70	61.06	2,259	60,997	4,749	128,228	1717	27,472	20710	48,182	0.02	0.07	0.42	18,374	681	189,224	7,008	113690	143678	1.5	193026	3,802	141	1.97%	193026	7149
DA-02	2,548,460	58.50	3,356,533	77.06	0	0.00	58.50	2,165	58,446	5,163	139,393	2160	34,560	20710	55,270	0.02	0.07	0.48	21,001	778	197,839	7,327	119979	147222	1.5	200401	2,561	95	1.28%	200401	7422
DA-03-A	3,380,672	77.61	3,598,753	82.62	2,485	6.21	71.40	2,642	71,326	5,535	149,452	3321	53,136	31065	84,201	0.02	0.07	0.54	23,455	869	220,778	8,177	141587	153463	1.5	221287	509	19	0.23%	221287	8196
DA-03-B	796,992	18.30	825,534	18.95	0	0.00	18.30	677	18,278	1,270	34,284	0	0	0	0	0.00	0.05	0.09	3,715	138	52,562	1,947	32557	38080	1.5	52978	416	15	0.79%	52978	1962
DA-04-A	1,583,385	36.35	1,932,009	44.35	2,685	6.71	29.64	1,097	29,607	2,972	80,234	1400	22,400	20710	43,110	0.03	0.07	0.30	12,955	480	109,842	4,068	70442	78757	1.5	111899	2,058	76	1.84%	111899	4144
DA-04-B	714,942	16.41	855,541	19.64	1,880	4.70	11.71	433	11,701	1,316	35,530	235	3,760	0	3,760	0.01	0.05	0.10	4,214	156	47,231	1,749	30714	34411	1.5	48844	1,613	60	3.30%	48844	1809
DA-05-A	2,464,910	56.59	2,522,573	57.91	1,180	2.95	53.64	1,985	53,583	3,880	104,760	2197	35,152	10355	45,507	0.02	0.07	0.35	15,124	560	158,343	5,865	102810	116922	1.5	164799	6,456	239	3.92%	164799	6104
DA-05-B	965,659	22.17	1,133,321	26.02	1,107	2.77	19.40	718	19,382	1,743	47,066	379	6,056	10355	16,411	0.02	0.07	0.15	6,660	247	66,447	2,461	43505	47411	1.5	68187	1,740	64	2.55%	68187	2525
DA-06	5,433,661	124.74	6,195,774	142.24	4,405	11.01	113.73	4,208	113,613	9,530	257,304	3537	56,592	41420	98,012	0.02	0.07	0.85	36,933	1,368	370,917	13,738	246280	255640	1.5	376440	5,523	205	1.47%	376440	13942
DA-07	1,328,423	30.50	1,899,183	43.60	1,600	4.00	26.50	980	26,470	2,921	78,871	1126	18,016	10355	28,371	0.02	0.07	0.27	11,832	438	105,341	3,902	63755	78200	1.5	106466	1,125	42	1.06%	106466	3943
DA-08	1,446,236	33.20	1,505,279	34.56	2,308	5.77	27.43	1,015	27,404	2,315	62,513	992	15,872	10355	26,227	0.02	0.07	0.21	8,985	333	89,916	3,330	55040	67028	1.5	91551	1,635	61	1.79%	91551	3391
DA-09-A	324,382	7.45	512,476	11.76	860	2.15	5.30	196	5,291	788	21,283	633	10,128	0	10,128	0.03	0.08	0.08	3,602	133	26,574	984	15925	20416	1.5	27256	682	25	2.50%	27256	1009
DA-09-B	458,019	10.51	586,765	13.47	1,065	2.66	7.85	291	7,844	903	24,368	225	3,600	10355	13,955	0.03	0.08	0.09	4,089	151	32,212	1,193	18900	24921	1.5	32866	654	24	1.99%	32866	1217
DA-10	914,888	21.00	1,049,125	24.08	1,725	4.31	16.69	618	16,674	1,614	43,569	1490	23,840	10355	34,195	0.04	0.08	0.18	7,897	292	60,243	2,231	40500	44361	1.5	63646	3,403	126	5.35%	63646	2357
DA-11	2,664,580	61.17	2,761,820	63.40	3,032	7.58	53.59	1,983	53,537	4,248	114,695	2619	41,904	20710	62,614	0.02	0.07	0.41	17,685	655	168,232	6,231	106670	128256	1.5	176195	7,962	295	4.52%	176195	6526
DA-12	7,223,829	165.84	8,369,918	192.15	2,460	6.15	159.69	5,908	159,527	12,874	347,594	7181	114,896	51775	166,671	0.02	0.07	1.22	53,307	1,974	507,120	18,782	340760	354844	1.5	521703	14,583	540	2.80%	521703	19322

from Ohio EPA Chapter 6 - Sediment Controls



a) Dewatering Zone Volume –

The volume of the dewatering zone shall be a minimum of 1800 cubic feet per acre of drainage (67 yd3/acre) or the minimum stated in the current NPDES construction general permit. The total volume of the dewatering zone shall be measured from the base of the stone outlet structure to the crest of the stone outlet structure.

b) Sediment Storage Zone Volume –

The volume of the sediment storage zone shall be calculated by one of the following methods. The sediment storage zone shall be measured below the elevation of the base of the stone outlet structure.

Method 1: The volume of the sediment storage zone shall be 1000 cu. ft. per disturbed acre within the watershed of the basin; OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment yield as calculated with RUSLE or a similar generally accepted erosion prediction model. While the sediment storage volume may extend to the expected time period of the construction project, the minimum estimated time between cleanouts shall be six months.

iv. Post-Construction BMPs. For all construction activities that will disturb two or more acres of land or will disturb less than two acres that are part of a larger common plan of development or sale which will disturb two or more acres of land, the post construction BMP(s) chosen shall be able to manage stormwater runoff for protection of stream channels, stream stability, and water quality. The BMP(s) chosen must be compatible with

site and soil conditions. Structural post-construction stormwater treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

$$WQ_v = Rv * P * A / 12 \qquad \text{(Equation 1)}$$

where:
WQ_v = water quality volume in acre-feet
Rv = the volumetric runoff coefficient calculated using equation 2
P = 0.90 inch precipitation depth
A = area draining into the BMP in acres

$$Rv = 0.05 + 0.9i \qquad \text{(Equation 2)}$$

where i = fraction of post-construction impervious surface

Ohio EPA recommends BMPs be designed according to the methodology described in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA and in accordance with ORC Chapter 4733.

Attachment H

Sediment Trap HydroCAD Model Reports



Subcat Reach Pond Link

Routing Diagram for Powell Creek_Sediment Traps
Prepared by Black & Veatch, Printed 19-Jul-23
HydroCAD® 10.20-2d s/n 02393 © 2021 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B
1	100-year, 24-hour	OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1	100-yr	Default	24.00	

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
905.778	80	>75% Grass cover, Good, HSG D (DA-01, DA-02, DA-03-A, DA-03-B, DA-04-A, DA-04-B, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-A, DA-09-B, DA-10, DA-11, DA-12)
10.730	98	Internal Access Road (DA-01, DA-02, DA-03-A, DA-04-A, DA-04-B, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-A, DA-09-B, DA-10, DA-11, DA-12)
6.181	98	Inverter (DA-01, DA-02, DA-03-A, DA-04-A, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-B, DA-10, DA-11, DA-12)
922.689	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
905.778	HSG D	DA-01, DA-02, DA-03-A, DA-03-B, DA-04-A, DA-04-B, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-A, DA-09-B, DA-10, DA-11, DA-12
16.911	Other	DA-01, DA-02, DA-03-A, DA-04-A, DA-04-B, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-A, DA-09-B, DA-10, DA-11, DA-12
922.689		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	905.778	0.000	905.778	>75% Grass cover, Good	DA-01, DA-02, DA-03-A, DA-03-B, DA-04-A, DA-04-B, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-A, DA-09-B, DA-10, DA-11, DA-12
0.000	0.000	0.000	0.000	10.730	10.730	Internal Access Road	DA-01, DA-02, DA-03-A, DA-04-A, DA-04-B, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-A, DA-09-B, DA-10, DA-11, DA-12

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	6.181	6.181	Inverter	DA-01, DA-02, DA-03-A, DA-04-A, DA-05-A, DA-05-B, DA-06, DA-07, DA-08, DA-09-B, DA-10, DA-11, DA-12
0.000	**0.000**	**0.000**	**905.778**	**16.911**	**922.689**	**TOTAL AREA**	

Time span=0.00-200.00 hrs, dt=0.10 hrs, 2001 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentDA-01: DA-01 Runoff Area=70.883 ac 1.56% Impervious Runoff Depth=3.18"
Flow Length=1,878' Tc=354.5 min CN=80 Runoff=32.31 cfs 18.800 af

SubcatchmentDA-02: DA-02 Runoff Area=77.055 ac 1.65% Impervious Runoff Depth=3.18"
Flow Length=2,933' Tc=402.3 min CN=80 Runoff=31.72 cfs 20.437 af

SubcatchmentDA-03-A: DA-03-A Runoff Area=82.616 ac 2.34% Impervious Runoff Depth=3.18"
Flow Length=2,839' Tc=252.6 min CN=80 Runoff=49.65 cfs 21.912 af

SubcatchmentDA-03-B: DA-03-B Runoff Area=18.952 ac 0.00% Impervious Runoff Depth=3.18"
Flow Length=1,373' Slope=0.0010 '/' Tc=169.6 min CN=80 Runoff=15.56 cfs 5.026 af

SubcatchmentDA-04-A: DA-04-A Runoff Area=44.352 ac 2.23% Impervious Runoff Depth=3.18"
Flow Length=1,636' Slope=0.0010 '/' Tc=170.4 min CN=80 Runoff=36.52 cfs 11.763 af

SubcatchmentDA-04-B: DA-04-B Runoff Area=19.640 ac 0.44% Impervious Runoff Depth=3.18"
Flow Length=1,075' Tc=119.1 min CN=80 Runoff=21.34 cfs 5.209 af

SubcatchmentDA-05-A: DA-05-A Runoff Area=57.911 ac 1.80% Impervious Runoff Depth=3.18"
Flow Length=2,304' Tc=302.2 min CN=80 Runoff=29.86 cfs 15.359 af

SubcatchmentDA-05-B: DA-05-B Runoff Area=26.018 ac 1.45% Impervious Runoff Depth=3.18"
Flow Length=2,340' Tc=220.4 min CN=80 Runoff=17.44 cfs 6.901 af

SubcatchmentDA-06: DA-06 Runoff Area=142.235 ac 1.58% Impervious Runoff Depth=3.18"
Flow Length=3,740' Tc=258.2 min CN=80 Runoff=83.39 cfs 37.724 af

SubcatchmentDA-07: DA-07 Runoff Area=43.600 ac 1.50% Impervious Runoff Depth=3.18"
Flow Length=1,504' Tc=158.3 min CN=80 Runoff=37.70 cfs 11.564 af

SubcatchmentDA-08: DA-08 Runoff Area=34.556 ac 1.74% Impervious Runoff Depth=3.18"
Flow Length=1,969' Tc=126.4 min CN=80 Runoff=35.81 cfs 9.165 af

SubcatchmentDA-09-A: DA-09-A Runoff Area=11.765 ac 1.98% Impervious Runoff Depth=3.18"
Flow Length=937' Tc=86.2 min CN=80 Runoff=16.18 cfs 3.120 af

SubcatchmentDA-09-B: DA-09-B Runoff Area=13.471 ac 2.38% Impervious Runoff Depth=3.18"
Flow Length=1,191' Tc=76.0 min CN=80 Runoff=20.06 cfs 3.573 af

SubcatchmentDA-10: DA-10 Runoff Area=24.085 ac 3.26% Impervious Runoff Depth=3.28"
Flow Length=1,382' Tc=185.4 min CN=81 Runoff=18.99 cfs 6.581 af

SubcatchmentDA-11: DA-11 Runoff Area=63.402 ac 2.27% Impervious Runoff Depth=3.18"
Flow Length=2,922' Tc=321.5 min CN=80 Runoff=31.13 cfs 16.816 af

SubcatchmentDA-12: DA-12 Runoff Area=192.148 ac 1.99% Impervious Runoff Depth=3.18"
Flow Length=4,413' Slope=0.0010 '/' Tc=398.5 min CN=80 Runoff=79.59 cfs 50.962 af

Pond ST-01: ST-01 Peak Elev=733.24' Storage=5.256 af Inflow=32.31 cfs 18.800 af
Outflow=31.69 cfs 14.369 af

Pond ST-02: ST-02 Peak Elev=728.25' Storage=5.485 af Inflow=31.72 cfs 20.437 af
Outflow=31.18 cfs 15.837 af

Pond ST-03-A: ST-03-A Peak Elev=724.65' Storage=5.972 af Inflow=49.65 cfs 21.912 af
Outflow=48.68 cfs 16.833 af

Pond ST-03-B: ST-03-B Peak Elev=727.25' Storage=1.438 af Inflow=15.56 cfs 5.026 af
Outflow=15.03 cfs 3.811 af

Pond ST-04-A: ST-04-A Peak Elev=726.25' Storage=3.023 af Inflow=36.52 cfs 11.763 af
Outflow=35.87 cfs 9.195 af

Pond ST-04-B: ST-04-B Peak Elev=725.25' Storage=1.321 af Inflow=21.34 cfs 5.209 af
Outflow=21.07 cfs 4.088 af

Pond ST-05-A: ST-05-A Peak Elev=728.24' Storage=4.447 af Inflow=29.86 cfs 15.359 af
Outflow=28.97 cfs 11.576 af

Pond ST-05-B: ST-05-B Peak Elev=727.24' Storage=1.830 af Inflow=17.44 cfs 6.901 af
Outflow=17.14 cfs 5.336 af

Pond ST-06: ST-06 Peak Elev=727.75' Storage=10.115 af Inflow=83.39 cfs 37.724 af
Outflow=81.79 cfs 29.082 af

Pond ST-07: ST-07 Peak Elev=732.25' Storage=2.913 af Inflow=37.70 cfs 11.564 af
Outflow=37.22 cfs 9.120 af

Pond ST-08: ST-08 Peak Elev=728.34' Storage=2.487 af Inflow=35.81 cfs 9.165 af
Outflow=34.96 cfs 7.063 af

Pond ST-09-A: ST-09-A Peak Elev=730.23' Storage=0.738 af Inflow=16.18 cfs 3.120 af
Outflow=16.09 cfs 2.494 af

Pond ST-09-B: ST-09-B Peak Elev=730.94' Storage=0.897 af Inflow=20.06 cfs 3.573 af
Outflow=19.86 cfs 2.818 af

Pond ST-10: ST-10 Peak Elev=733.25' Storage=1.724 af Inflow=18.99 cfs 6.581 af
Outflow=18.73 cfs 5.120 af

Pond ST-11: ST-11 Peak Elev=733.00' Storage=4.798 af Inflow=31.13 cfs 16.816 af
Outflow=30.21 cfs 12.771 af

Pond ST-12: ST-12 Peak Elev=733.00' Storage=14.062 af Inflow=79.59 cfs 50.962 af
Outflow=78.03 cfs 38.986 af

Total Runoff Area = 922.689 ac Runoff Volume = 244.910 af Average Runoff Depth = 3.19"
98.17% Pervious = 905.778 ac 1.83% Impervious = 16.911 ac

Summary for Subcatchment DA-01: DA-01

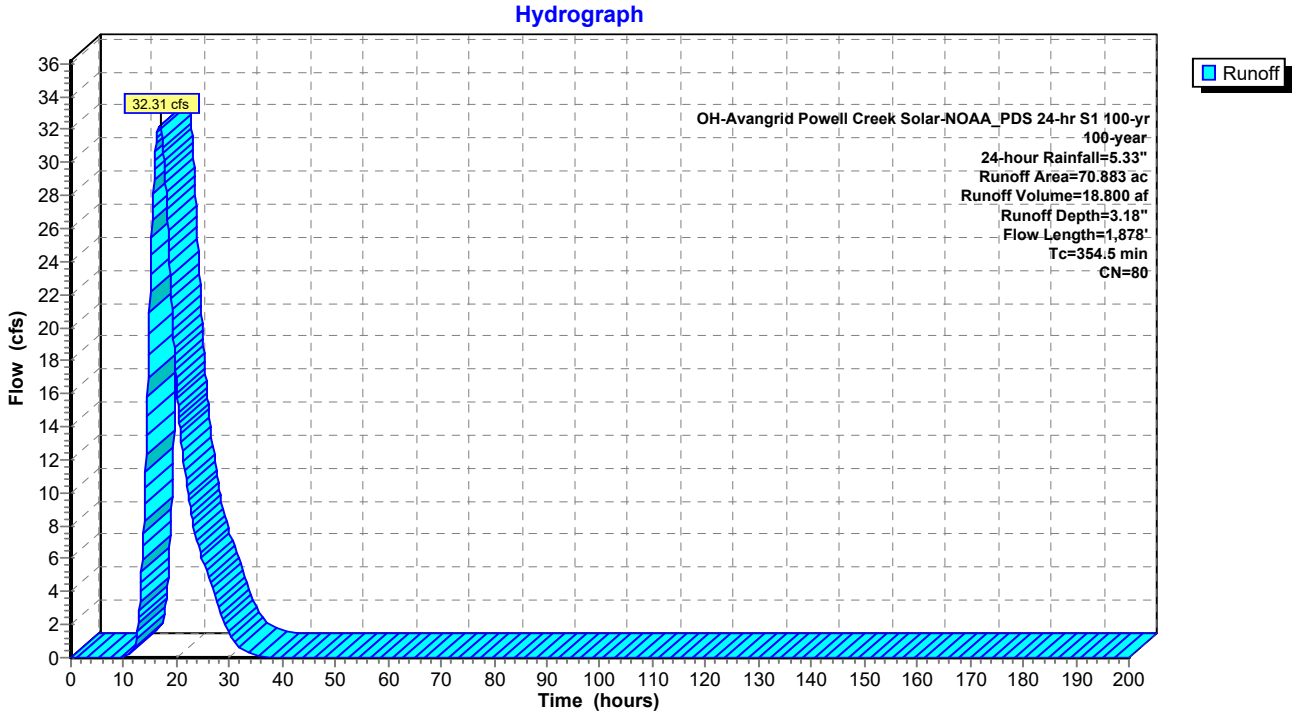
Runoff = 32.31 cfs @ 16.87 hrs, Volume= 18.800 af, Depth= 3.18"
Routed to Pond ST-01 : ST-01

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	69.777	80	>75% Grass cover, Good, HSG D
*	0.631	98	Internal Access Road
*	0.475	98	Inverter
	70.883	80	Weighted Average
	69.777		98.44% Pervious Area
	1.106		1.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
265.7	1,578	0.0002	0.10		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
354.5	1,878	Total			

Subcatchment DA-01: DA-01



Hydrograph for Subcatchment DA-01: DA-01

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.09
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.12
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.16
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.20
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.26
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.32
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.41
1.40	0.07	0.00	0.00	11.80	1.87	0.49	0.50
1.60	0.08	0.00	0.00	12.00	2.95	1.21	0.67
1.80	0.09	0.00	0.00	12.20	3.52	1.66	0.86
2.00	0.10	0.00	0.00	12.40	3.87	1.93	1.15
2.20	0.12	0.00	0.00	12.60	4.06	2.09	1.47
2.40	0.13	0.00	0.00	12.80	4.15	2.16	2.13
2.60	0.14	0.00	0.00	13.00	4.22	2.22	2.84
2.80	0.15	0.00	0.00	13.20	4.28	2.28	4.01
3.00	0.16	0.00	0.00	13.40	4.33	2.32	5.23
3.20	0.18	0.00	0.00	13.60	4.38	2.36	6.75
3.40	0.19	0.00	0.00	13.80	4.43	2.40	8.33
3.60	0.20	0.00	0.00	14.00	4.47	2.43	10.28
3.80	0.21	0.00	0.00	14.20	4.51	2.47	12.29
4.00	0.23	0.00	0.00	14.40	4.54	2.50	14.63
4.20	0.24	0.00	0.00	14.60	4.57	2.52	17.01
4.40	0.25	0.00	0.00	14.80	4.60	2.55	19.60
4.60	0.27	0.00	0.00	15.00	4.63	2.58	22.14
4.80	0.28	0.00	0.00	15.20	4.66	2.60	24.37
5.00	0.30	0.00	0.00	15.40	4.69	2.62	26.48
5.20	0.31	0.00	0.00	15.60	4.71	2.64	28.11
5.40	0.33	0.00	0.00	15.80	4.74	2.67	29.61
5.60	0.34	0.00	0.00	16.00	4.76	2.69	30.66
5.80	0.36	0.00	0.00	16.20	4.78	2.71	31.54
6.00	0.38	0.00	0.00	16.40	4.81	2.72	31.91
6.20	0.39	0.00	0.00	16.60	4.83	2.74	32.19
6.40	0.41	0.00	0.00	16.80	4.85	2.76	**32.26**
6.60	0.43	0.00	0.00	17.00	4.87	2.78	**32.13**
6.80	0.45	0.00	0.00	17.20	4.88	2.79	31.56
7.00	0.47	0.00	0.00	17.40	4.90	2.81	30.93
7.20	0.49	0.00	0.00	17.60	4.92	2.82	30.15
7.40	0.51	0.00	0.00	17.80	4.94	2.84	29.28
7.60	0.53	0.00	0.00	18.00	4.96	2.85	28.25
7.80	0.55	0.00	0.00	18.20	4.97	2.87	27.14
8.00	0.57	0.00	0.00	18.40	4.99	2.88	25.90
8.20	0.60	0.00	0.00	18.60	5.00	2.90	24.57
8.40	0.62	0.01	0.00	18.80	5.02	2.91	23.11
8.60	0.65	0.01	0.00	19.00	5.03	2.92	21.74
8.80	0.67	0.01	0.00	19.20	5.05	2.94	20.47
9.00	0.70	0.01	0.01	19.40	5.06	2.95	19.33
9.20	0.73	0.02	0.01	19.60	5.08	2.96	18.32
9.40	0.76	0.02	0.01	19.80	5.09	2.97	17.38
9.60	0.80	0.03	0.02	20.00	5.10	2.98	16.50
9.80	0.83	0.04	0.03	20.20	5.12	3.00	15.67
10.00	0.87	0.05	0.05	20.40	5.13	3.01	14.90
10.20	0.91	0.06	0.06	20.60	5.14	3.02	14.19

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	13.54	31.20	5.33	3.18	0.85
21.00	5.17	3.04	12.92	31.40	5.33	3.18	0.77
21.20	5.18	3.05	12.33	31.60	5.33	3.18	0.70
21.40	5.19	3.06	11.77	31.80	5.33	3.18	0.64
21.60	5.20	3.07	11.22	32.00	5.33	3.18	0.58
21.80	5.21	3.08	10.71	32.20	5.33	3.18	0.52
22.00	5.23	3.09	10.23	32.40	5.33	3.18	0.48
22.20	5.24	3.10	9.80	32.60	5.33	3.18	0.44
22.40	5.25	3.11	9.40	32.80	5.33	3.18	0.40
22.60	5.26	3.12	9.01	33.00	5.33	3.18	0.37
22.80	5.27	3.13	8.64	33.20	5.33	3.18	0.34
23.00	5.28	3.14	8.30	33.40	5.33	3.18	0.31
23.20	5.29	3.15	7.98	33.60	5.33	3.18	0.28
23.40	5.30	3.16	7.68	33.80	5.33	3.18	0.26
23.60	5.31	3.17	7.38	34.00	5.33	3.18	0.24
23.80	5.32	3.17	7.12	34.20	5.33	3.18	0.22
24.00	**5.33**	**3.18**	6.87	34.40	5.33	3.18	0.20
24.20	5.33	3.18	6.63	34.60	5.33	3.18	0.18
24.40	5.33	3.18	6.38	34.80	5.33	3.18	0.17
24.60	5.33	3.18	6.18	35.00	5.33	3.18	0.15
24.80	5.33	3.18	5.98	35.20	5.33	3.18	0.14
25.00	5.33	3.18	5.78	35.40	5.33	3.18	0.13
25.20	5.33	3.18	5.59	35.60	5.33	3.18	0.12
25.40	5.33	3.18	5.41	35.80	5.33	3.18	0.11
25.60	5.33	3.18	5.23	36.00	5.33	3.18	0.10
25.80	5.33	3.18	5.06	36.20	5.33	3.18	0.09
26.00	5.33	3.18	4.88	36.40	5.33	3.18	0.08
26.20	5.33	3.18	4.71	36.60	5.33	3.18	0.08
26.40	5.33	3.18	4.53	36.80	5.33	3.18	0.07
26.60	5.33	3.18	4.35	37.00	5.33	3.18	0.06
26.80	5.33	3.18	4.16	37.20	5.33	3.18	0.06
27.00	5.33	3.18	3.97	37.40	5.33	3.18	0.05
27.20	5.33	3.18	3.79	37.60	5.33	3.18	0.05
27.40	5.33	3.18	3.59	37.80	5.33	3.18	0.04
27.60	5.33	3.18	3.40	38.00	5.33	3.18	0.04
27.80	5.33	3.18	3.21	38.20	5.33	3.18	0.04
28.00	5.33	3.18	3.03	38.40	5.33	3.18	0.03
28.20	5.33	3.18	2.84	38.60	5.33	3.18	0.03
28.40	5.33	3.18	2.66	38.80	5.33	3.18	0.03
28.60	5.33	3.18	2.48	39.00	5.33	3.18	0.02
28.80	5.33	3.18	2.31	39.20	5.33	3.18	0.02
29.00	5.33	3.18	2.15	39.40	5.33	3.18	0.02
29.20	5.33	3.18	2.00	39.60	5.33	3.18	0.02
29.40	5.33	3.18	1.85	39.80	5.33	3.18	0.02
29.60	5.33	3.18	1.71	40.00	5.33	3.18	0.01
29.80	5.33	3.18	1.58	40.20	5.33	3.18	0.01
30.00	5.33	3.18	1.45	40.40	5.33	3.18	0.01
30.20	5.33	3.18	1.33	40.60	5.33	3.18	0.01
30.40	5.33	3.18	1.22	40.80	5.33	3.18	0.01
30.60	5.33	3.18	1.12	41.00	5.33	3.18	0.01
30.80	5.33	3.18	1.02	41.20	5.33	3.18	0.01
31.00	5.33	3.18	0.93	41.40	5.33	3.18	0.01

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-01: DA-01 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-02: DA-02

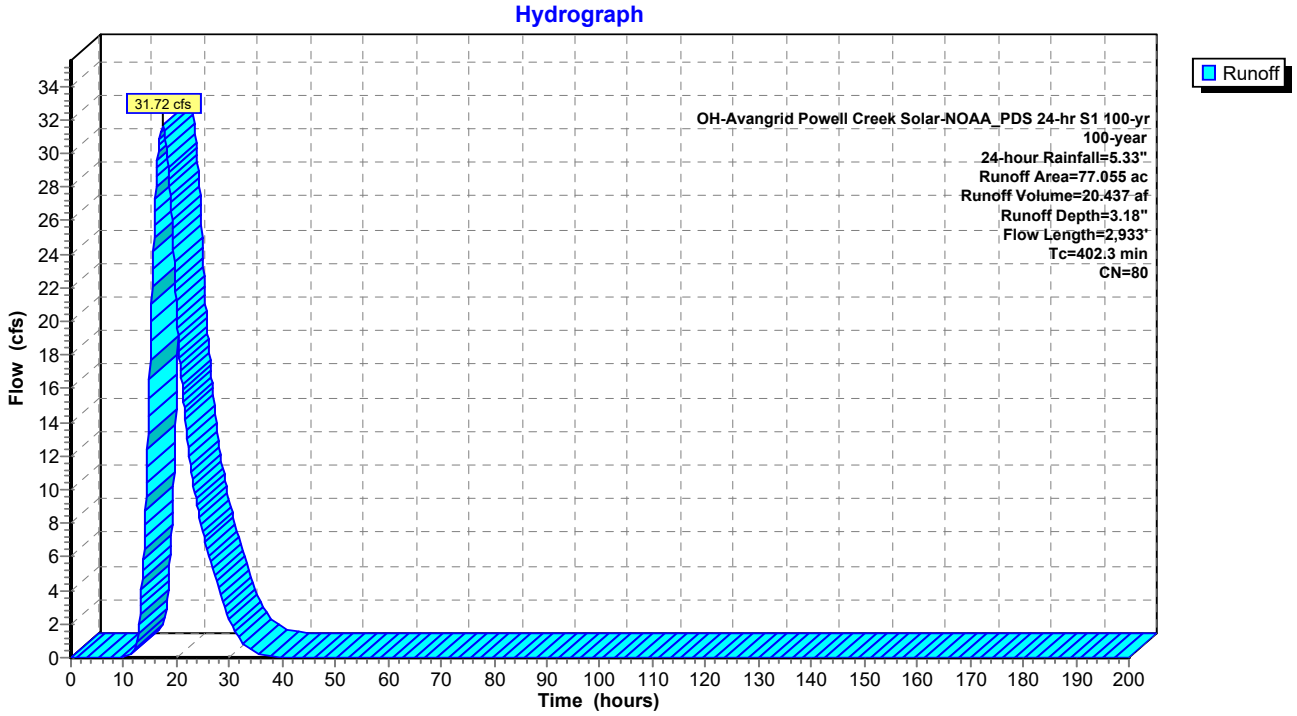
Runoff = 31.72 cfs @ 17.39 hrs, Volume= 20.437 af, Depth= 3.18"
Routed to Pond ST-02 : ST-02

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	75.787	80	>75% Grass cover, Good, HSG D
*	0.793	98	Internal Access Road
*	0.475	98	Inverter
	77.055	80	Weighted Average
	75.787		98.35% Pervious Area
	1.268		1.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
313.5	2,633	0.0004	0.14		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
402.3	2,933	Total			

Subcatchment DA-02: DA-02



Hydrograph for Subcatchment DA-02: DA-02

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.07
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.09
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.11
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.15
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.19
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.24
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.30
1.40	0.07	0.00	0.00	11.80	1.87	0.49	0.40
1.60	0.08	0.00	0.00	12.00	2.95	1.21	0.50
1.80	0.09	0.00	0.00	12.20	3.52	1.66	0.64
2.00	0.10	0.00	0.00	12.40	3.87	1.93	0.80
2.20	0.12	0.00	0.00	12.60	4.06	2.09	1.10
2.40	0.13	0.00	0.00	12.80	4.15	2.16	1.60
2.60	0.14	0.00	0.00	13.00	4.22	2.22	2.17
2.80	0.15	0.00	0.00	13.20	4.28	2.28	3.11
3.00	0.16	0.00	0.00	13.40	4.33	2.32	4.06
3.20	0.18	0.00	0.00	13.60	4.38	2.36	5.25
3.40	0.19	0.00	0.00	13.80	4.43	2.40	6.47
3.60	0.20	0.00	0.00	14.00	4.47	2.43	7.96
3.80	0.21	0.00	0.00	14.20	4.51	2.47	9.55
4.00	0.23	0.00	0.00	14.40	4.54	2.50	11.35
4.20	0.24	0.00	0.00	14.60	4.57	2.52	13.35
4.40	0.25	0.00	0.00	14.80	4.60	2.55	15.43
4.60	0.27	0.00	0.00	15.00	4.63	2.58	17.74
4.80	0.28	0.00	0.00	15.20	4.66	2.60	20.03
5.00	0.30	0.00	0.00	15.40	4.69	2.62	22.09
5.20	0.31	0.00	0.00	15.60	4.71	2.64	24.12
5.40	0.33	0.00	0.00	15.80	4.74	2.67	25.78
5.60	0.34	0.00	0.00	16.00	4.76	2.69	27.33
5.80	0.36	0.00	0.00	16.20	4.78	2.71	28.60
6.00	0.38	0.00	0.00	16.40	4.81	2.72	29.63
6.20	0.39	0.00	0.00	16.60	4.83	2.74	30.49
6.40	0.41	0.00	0.00	16.80	4.85	2.76	30.94
6.60	0.43	0.00	0.00	17.00	4.87	2.78	31.36
6.80	0.45	0.00	0.00	17.20	4.88	2.79	31.54
7.00	0.47	0.00	0.00	17.40	4.90	2.81	**31.72**
7.20	0.49	0.00	0.00	17.60	4.92	2.82	31.40
7.40	0.51	0.00	0.00	17.80	4.94	2.84	30.99
7.60	0.53	0.00	0.00	18.00	4.96	2.85	30.47
7.80	0.55	0.00	0.00	18.20	4.97	2.87	29.88
8.00	0.57	0.00	0.00	18.40	4.99	2.88	29.21
8.20	0.60	0.00	0.00	18.60	5.00	2.90	28.40
8.40	0.62	0.01	0.00	18.80	5.02	2.91	27.55
8.60	0.65	0.01	0.00	19.00	5.03	2.92	26.52
8.80	0.67	0.01	0.00	19.20	5.05	2.94	25.48
9.00	0.70	0.01	0.00	19.40	5.06	2.95	24.23
9.20	0.73	0.02	0.01	19.60	5.08	2.96	22.95
9.40	0.76	0.02	0.01	19.80	5.09	2.97	21.77
9.60	0.80	0.03	0.02	20.00	5.10	2.98	20.65
9.80	0.83	0.04	0.02	20.20	5.12	3.00	19.62
10.00	0.87	0.05	0.03	20.40	5.13	3.01	18.73
10.20	0.91	0.06	0.05	20.60	5.14	3.02	17.85

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	17.07	31.20	5.33	3.18	1.47
21.00	5.17	3.04	16.28	31.40	5.33	3.18	1.36
21.20	5.18	3.05	15.58	31.60	5.33	3.18	1.27
21.40	5.19	3.06	14.89	31.80	5.33	3.18	1.18
21.60	5.20	3.07	14.28	32.00	5.33	3.18	1.10
21.80	5.21	3.08	13.70	32.20	5.33	3.18	1.02
22.00	5.23	3.09	13.15	32.40	5.33	3.18	0.95
22.20	5.24	3.10	12.63	32.60	5.33	3.18	0.88
22.40	5.25	3.11	12.11	32.80	5.33	3.18	0.81
22.60	5.26	3.12	11.62	33.00	5.33	3.18	0.75
22.80	5.27	3.13	11.13	33.20	5.33	3.18	0.70
23.00	5.28	3.14	10.70	33.40	5.33	3.18	0.64
23.20	5.29	3.15	10.27	33.60	5.33	3.18	0.59
23.40	5.30	3.16	9.89	33.80	5.33	3.18	0.54
23.60	5.31	3.17	9.53	34.00	5.33	3.18	0.50
23.80	5.32	3.17	9.19	34.20	5.33	3.18	0.45
24.00	**5.33**	**3.18**	8.85	34.40	5.33	3.18	0.41
24.20	5.33	3.18	8.53	34.60	5.33	3.18	0.38
24.40	5.33	3.18	8.24	34.80	5.33	3.18	0.34
24.60	5.33	3.18	7.95	35.00	5.33	3.18	0.31
24.80	5.33	3.18	7.68	35.20	5.33	3.18	0.29
25.00	5.33	3.18	7.41	35.40	5.33	3.18	0.27
25.20	5.33	3.18	7.18	35.60	5.33	3.18	0.24
25.40	5.33	3.18	6.95	35.80	5.33	3.18	0.22
25.60	5.33	3.18	6.71	36.00	5.33	3.18	0.21
25.80	5.33	3.18	6.47	36.20	5.33	3.18	0.19
26.00	5.33	3.18	6.24	36.40	5.33	3.18	0.18
26.20	5.33	3.18	6.04	36.60	5.33	3.18	0.16
26.40	5.33	3.18	5.83	36.80	5.33	3.18	0.15
26.60	5.33	3.18	5.62	37.00	5.33	3.18	0.14
26.80	5.33	3.18	5.40	37.20	5.33	3.18	0.13
27.00	5.33	3.18	5.20	37.40	5.33	3.18	0.12
27.20	5.33	3.18	4.99	37.60	5.33	3.18	0.11
27.40	5.33	3.18	4.78	37.80	5.33	3.18	0.10
27.60	5.33	3.18	4.56	38.00	5.33	3.18	0.09
27.80	5.33	3.18	4.35	38.20	5.33	3.18	0.09
28.00	5.33	3.18	4.15	38.40	5.33	3.18	0.08
28.20	5.33	3.18	3.95	38.60	5.33	3.18	0.07
28.40	5.33	3.18	3.73	38.80	5.33	3.18	0.07
28.60	5.33	3.18	3.52	39.00	5.33	3.18	0.06
28.80	5.33	3.18	3.33	39.20	5.33	3.18	0.06
29.00	5.33	3.18	3.14	39.40	5.33	3.18	0.05
29.20	5.33	3.18	2.96	39.60	5.33	3.18	0.05
29.40	5.33	3.18	2.77	39.80	5.33	3.18	0.05
29.60	5.33	3.18	2.59	40.00	5.33	3.18	0.04
29.80	5.33	3.18	2.43	40.20	5.33	3.18	0.04
30.00	5.33	3.18	2.27	40.40	5.33	3.18	0.03
30.20	5.33	3.18	2.12	40.60	5.33	3.18	0.03
30.40	5.33	3.18	1.97	40.80	5.33	3.18	0.03
30.60	5.33	3.18	1.83	41.00	5.33	3.18	0.03
30.80	5.33	3.18	1.70	41.20	5.33	3.18	0.02
31.00	5.33	3.18	1.58	41.40	5.33	3.18	0.02

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.02	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.02	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.02	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.02	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.01	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.01	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.01	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.01	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.01	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.01	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.01	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.01	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.01	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-02: DA-02 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-03-A: DA-03-A

[47] Hint: Peak is 1186% of capacity of segment #3

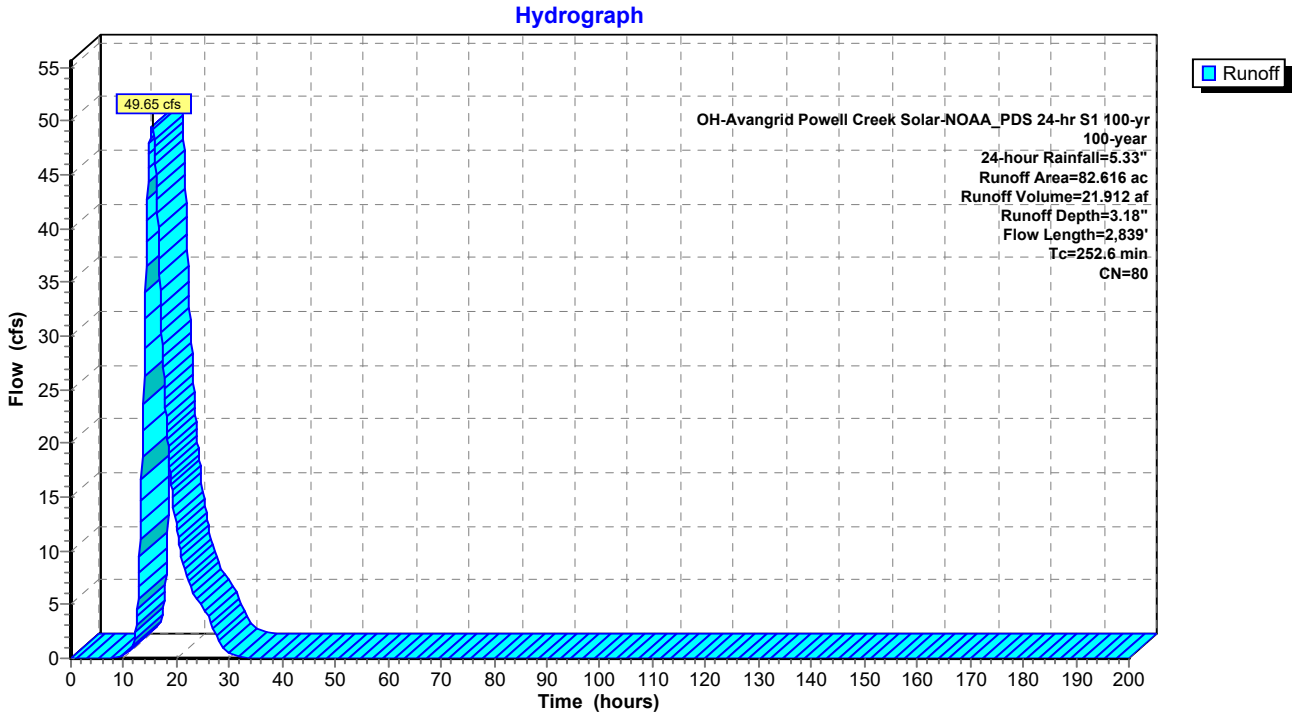
Runoff = 49.65 cfs @ 15.38 hrs, Volume= 21.912 af, Depth= 3.18"
Routed to Pond ST-03-A : ST-03-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	80.683	80	>75% Grass cover, Good, HSG D
*	1.220	98	Internal Access Road
*	0.713	98	Inverter
	82.616	80	Weighted Average
	80.683		97.66% Pervious Area
	1.933		2.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.0	300	0.0021	0.08		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
185.4	2,463	0.0010	0.22		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
1.2	76	0.0010	1.05	4.19	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
252.6	2,839	Total			

Subcatchment DA-03-A: DA-03-A



Hydrograph for Subcatchment DA-03-A: DA-03-A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.29
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.37
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.48
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.60
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.75
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.93
1.20	0.06	0.00	0.00	11.60	1.50	0.29	1.15
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.40
1.60	0.08	0.00	0.00	12.00	2.95	1.21	1.80
1.80	0.09	0.00	0.00	12.20	3.52	1.66	2.35
2.00	0.10	0.00	0.00	12.40	3.87	1.93	3.16
2.20	0.12	0.00	0.00	12.60	4.06	2.09	4.55
2.40	0.13	0.00	0.00	12.80	4.15	2.16	6.76
2.60	0.14	0.00	0.00	13.00	4.22	2.22	9.47
2.80	0.15	0.00	0.00	13.20	4.28	2.28	12.65
3.00	0.16	0.00	0.00	13.40	4.33	2.32	16.63
3.20	0.18	0.00	0.00	13.60	4.38	2.36	21.19
3.40	0.19	0.00	0.00	13.80	4.43	2.40	26.18
3.60	0.20	0.00	0.00	14.00	4.47	2.43	31.61
3.80	0.21	0.00	0.00	14.20	4.51	2.47	36.51
4.00	0.23	0.00	0.00	14.40	4.54	2.50	40.83
4.20	0.24	0.00	0.00	14.60	4.57	2.52	44.41
4.40	0.25	0.00	0.00	14.80	4.60	2.55	46.93
4.60	0.27	0.00	0.00	15.00	4.63	2.58	48.48
4.80	0.28	0.00	0.00	15.20	4.66	2.60	49.34
5.00	0.30	0.00	0.00	15.40	4.69	2.62	**49.64**
5.20	0.31	0.00	0.00	15.60	4.71	2.64	48.82
5.40	0.33	0.00	0.00	15.80	4.74	2.67	47.56
5.60	0.34	0.00	0.00	16.00	4.76	2.69	45.99
5.80	0.36	0.00	0.00	16.20	4.78	2.71	43.88
6.00	0.38	0.00	0.00	16.40	4.81	2.72	41.46
6.20	0.39	0.00	0.00	16.60	4.83	2.74	38.76
6.40	0.41	0.00	0.00	16.80	4.85	2.76	35.68
6.60	0.43	0.00	0.00	17.00	4.87	2.78	32.86
6.80	0.45	0.00	0.00	17.20	4.88	2.79	30.29
7.00	0.47	0.00	0.00	17.40	4.90	2.81	28.03
7.20	0.49	0.00	0.00	17.60	4.92	2.82	26.02
7.40	0.51	0.00	0.00	17.80	4.94	2.84	24.18
7.60	0.53	0.00	0.00	18.00	4.96	2.85	22.50
7.80	0.55	0.00	0.00	18.20	4.97	2.87	21.04
8.00	0.57	0.00	0.00	18.40	4.99	2.88	19.69
8.20	0.60	0.00	0.00	18.60	5.00	2.90	18.42
8.40	0.62	0.01	0.00	18.80	5.02	2.91	17.22
8.60	0.65	0.01	0.01	19.00	5.03	2.92	16.14
8.80	0.67	0.01	0.01	19.20	5.05	2.94	15.16
9.00	0.70	0.01	0.02	19.40	5.06	2.95	14.28
9.20	0.73	0.02	0.03	19.60	5.08	2.96	13.44
9.40	0.76	0.02	0.05	19.80	5.09	2.97	12.70
9.60	0.80	0.03	0.08	20.00	5.10	2.98	12.01
9.80	0.83	0.04	0.11	20.20	5.12	3.00	11.35
10.00	0.87	0.05	0.16	20.40	5.13	3.01	10.80
10.20	0.91	0.06	0.22	20.60	5.14	3.02	10.25

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	9.73	31.20	5.33	3.18	0.24
21.00	5.17	3.04	9.30	31.40	5.33	3.18	0.22
21.20	5.18	3.05	8.88	31.60	5.33	3.18	0.19
21.40	5.19	3.06	8.49	31.80	5.33	3.18	0.17
21.60	5.20	3.07	8.15	32.00	5.33	3.18	0.15
21.80	5.21	3.08	7.82	32.20	5.33	3.18	0.13
22.00	5.23	3.09	7.52	32.40	5.33	3.18	0.12
22.20	5.24	3.10	7.25	32.60	5.33	3.18	0.10
22.40	5.25	3.11	6.97	32.80	5.33	3.18	0.09
22.60	5.26	3.12	6.74	33.00	5.33	3.18	0.08
22.80	5.27	3.13	6.52	33.20	5.33	3.18	0.07
23.00	5.28	3.14	6.29	33.40	5.33	3.18	0.06
23.20	5.29	3.15	6.11	33.60	5.33	3.18	0.06
23.40	5.30	3.16	5.93	33.80	5.33	3.18	0.05
23.60	5.31	3.17	5.75	34.00	5.33	3.18	0.04
23.80	5.32	3.17	5.59	34.20	5.33	3.18	0.04
24.00	**5.33**	**3.18**	5.44	34.40	5.33	3.18	0.03
24.20	5.33	3.18	5.30	34.60	5.33	3.18	0.03
24.40	5.33	3.18	5.17	34.80	5.33	3.18	0.02
24.60	5.33	3.18	5.04	35.00	5.33	3.18	0.02
24.80	5.33	3.18	4.91	35.20	5.33	3.18	0.02
25.00	5.33	3.18	4.77	35.40	5.33	3.18	0.02
25.20	5.33	3.18	4.62	35.60	5.33	3.18	0.01
25.40	5.33	3.18	4.46	35.80	5.33	3.18	0.01
25.60	5.33	3.18	4.29	36.00	5.33	3.18	0.01
25.80	5.33	3.18	4.09	36.20	5.33	3.18	0.01
26.00	5.33	3.18	3.89	36.40	5.33	3.18	0.01
26.20	5.33	3.18	3.66	36.60	5.33	3.18	0.01
26.40	5.33	3.18	3.42	36.80	5.33	3.18	0.00
26.60	5.33	3.18	3.19	37.00	5.33	3.18	0.00
26.80	5.33	3.18	2.95	37.20	5.33	3.18	0.00
27.00	5.33	3.18	2.71	37.40	5.33	3.18	0.00
27.20	5.33	3.18	2.48	37.60	5.33	3.18	0.00
27.40	5.33	3.18	2.25	37.80	5.33	3.18	0.00
27.60	5.33	3.18	2.03	38.00	5.33	3.18	0.00
27.80	5.33	3.18	1.83	38.20	5.33	3.18	0.00
28.00	5.33	3.18	1.63	38.40	5.33	3.18	0.00
28.20	5.33	3.18	1.46	38.60	5.33	3.18	0.00
28.40	5.33	3.18	1.29	38.80	5.33	3.18	0.00
28.60	5.33	3.18	1.14	39.00	5.33	3.18	0.00
28.80	5.33	3.18	1.01	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.90	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.80	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.71	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.63	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.56	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.50	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.44	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.39	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.35	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.31	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.28	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-A: DA-03-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-03-B: DA-03-B

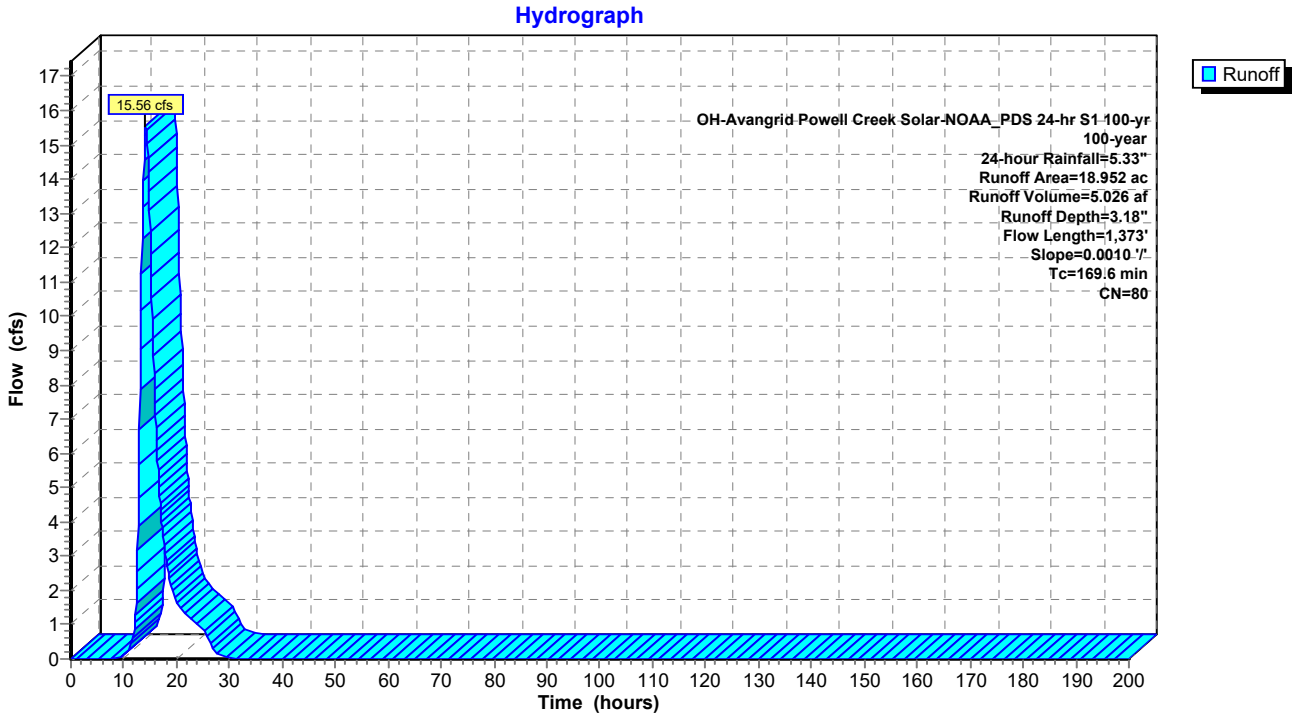
Runoff = 15.56 cfs @ 14.16 hrs, Volume= 5.026 af, Depth= 3.18"
Routed to Pond ST-03-B : ST-03-B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

Area (ac)	CN	Description
18.952	80	>75% Grass cover, Good, HSG D
18.952		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
80.8	1,073	0.0010	0.22		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
169.6	1,373	Total			

Subcatchment DA-03-B: DA-03-B



Hydrograph for Subcatchment DA-03-B: DA-03-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.17
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.22
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.27
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.33
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.39
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.48
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.57
1.40	0.07	0.00	0.00	11.80	1.87	0.49	0.71
1.60	0.08	0.00	0.00	12.00	2.95	1.21	0.90
1.80	0.09	0.00	0.00	12.20	3.52	1.66	1.30
2.00	0.10	0.00	0.00	12.40	3.87	1.93	2.05
2.20	0.12	0.00	0.00	12.60	4.06	2.09	3.16
2.40	0.13	0.00	0.00	12.80	4.15	2.16	4.72
2.60	0.14	0.00	0.00	13.00	4.22	2.22	6.71
2.80	0.15	0.00	0.00	13.20	4.28	2.28	9.02
3.00	0.16	0.00	0.00	13.40	4.33	2.32	11.26
3.20	0.18	0.00	0.00	13.60	4.38	2.36	13.18
3.40	0.19	0.00	0.00	13.80	4.43	2.40	14.55
3.60	0.20	0.00	0.00	14.00	4.47	2.43	15.31
3.80	0.21	0.00	0.00	14.20	4.51	2.47	**15.56**
4.00	0.23	0.00	0.00	14.40	4.54	2.50	15.26
4.20	0.24	0.00	0.00	14.60	4.57	2.52	14.63
4.40	0.25	0.00	0.00	14.80	4.60	2.55	13.67
4.60	0.27	0.00	0.00	15.00	4.63	2.58	12.45
4.80	0.28	0.00	0.00	15.20	4.66	2.60	11.15
5.00	0.30	0.00	0.00	15.40	4.69	2.62	9.92
5.20	0.31	0.00	0.00	15.60	4.71	2.64	8.82
5.40	0.33	0.00	0.00	15.80	4.74	2.67	7.88
5.60	0.34	0.00	0.00	16.00	4.76	2.69	7.09
5.80	0.36	0.00	0.00	16.20	4.78	2.71	6.40
6.00	0.38	0.00	0.00	16.40	4.81	2.72	5.78
6.20	0.39	0.00	0.00	16.60	4.83	2.74	5.24
6.40	0.41	0.00	0.00	16.80	4.85	2.76	4.77
6.60	0.43	0.00	0.00	17.00	4.87	2.78	4.36
6.80	0.45	0.00	0.00	17.20	4.88	2.79	4.00
7.00	0.47	0.00	0.00	17.40	4.90	2.81	3.67
7.20	0.49	0.00	0.00	17.60	4.92	2.82	3.39
7.40	0.51	0.00	0.00	17.80	4.94	2.84	3.14
7.60	0.53	0.00	0.00	18.00	4.96	2.85	2.92
7.80	0.55	0.00	0.00	18.20	4.97	2.87	2.73
8.00	0.57	0.00	0.00	18.40	4.99	2.88	2.56
8.20	0.60	0.00	0.00	18.60	5.00	2.90	2.41
8.40	0.62	0.01	0.00	18.80	5.02	2.91	2.27
8.60	0.65	0.01	0.01	19.00	5.03	2.92	2.15
8.80	0.67	0.01	0.01	19.20	5.05	2.94	2.04
9.00	0.70	0.01	0.02	19.40	5.06	2.95	1.95
9.20	0.73	0.02	0.03	19.60	5.08	2.96	1.86
9.40	0.76	0.02	0.04	19.80	5.09	2.97	1.78
9.60	0.80	0.03	0.06	20.00	5.10	2.98	1.71
9.80	0.83	0.04	0.08	20.20	5.12	3.00	1.64
10.00	0.87	0.05	0.11	20.40	5.13	3.01	1.58
10.20	0.91	0.06	0.14	20.60	5.14	3.02	1.53

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	1.47	31.20	5.33	3.18	0.01
21.00	5.17	3.04	1.42	31.40	5.33	3.18	0.00
21.20	5.18	3.05	1.37	31.60	5.33	3.18	0.00
21.40	5.19	3.06	1.33	31.80	5.33	3.18	0.00
21.60	5.20	3.07	1.29	32.00	5.33	3.18	0.00
21.80	5.21	3.08	1.25	32.20	5.33	3.18	0.00
22.00	5.23	3.09	1.22	32.40	5.33	3.18	0.00
22.20	5.24	3.10	1.19	32.60	5.33	3.18	0.00
22.40	5.25	3.11	1.17	32.80	5.33	3.18	0.00
22.60	5.26	3.12	1.14	33.00	5.33	3.18	0.00
22.80	5.27	3.13	1.12	33.20	5.33	3.18	0.00
23.00	5.28	3.14	1.10	33.40	5.33	3.18	0.00
23.20	5.29	3.15	1.08	33.60	5.33	3.18	0.00
23.40	5.30	3.16	1.06	33.80	5.33	3.18	0.00
23.60	5.31	3.17	1.04	34.00	5.33	3.18	0.00
23.80	5.32	3.17	1.02	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	1.01	34.40	5.33	3.18	0.00
24.20	5.33	3.18	0.99	34.60	5.33	3.18	0.00
24.40	5.33	3.18	0.97	34.80	5.33	3.18	0.00
24.60	5.33	3.18	0.95	35.00	5.33	3.18	0.00
24.80	5.33	3.18	0.92	35.20	5.33	3.18	0.00
25.00	5.33	3.18	0.89	35.40	5.33	3.18	0.00
25.20	5.33	3.18	0.85	35.60	5.33	3.18	0.00
25.40	5.33	3.18	0.79	35.80	5.33	3.18	0.00
25.60	5.33	3.18	0.73	36.00	5.33	3.18	0.00
25.80	5.33	3.18	0.66	36.20	5.33	3.18	0.00
26.00	5.33	3.18	0.59	36.40	5.33	3.18	0.00
26.20	5.33	3.18	0.52	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.45	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.38	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.32	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.27	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.23	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.19	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.16	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.13	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.11	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.09	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.08	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.07	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.06	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.05	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.04	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.03	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.03	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.02	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.02	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.02	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.01	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.01	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.01	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.01	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-03-B: DA-03-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-04-A: DA-04-A

[47] Hint: Peak is 872% of capacity of segment #3

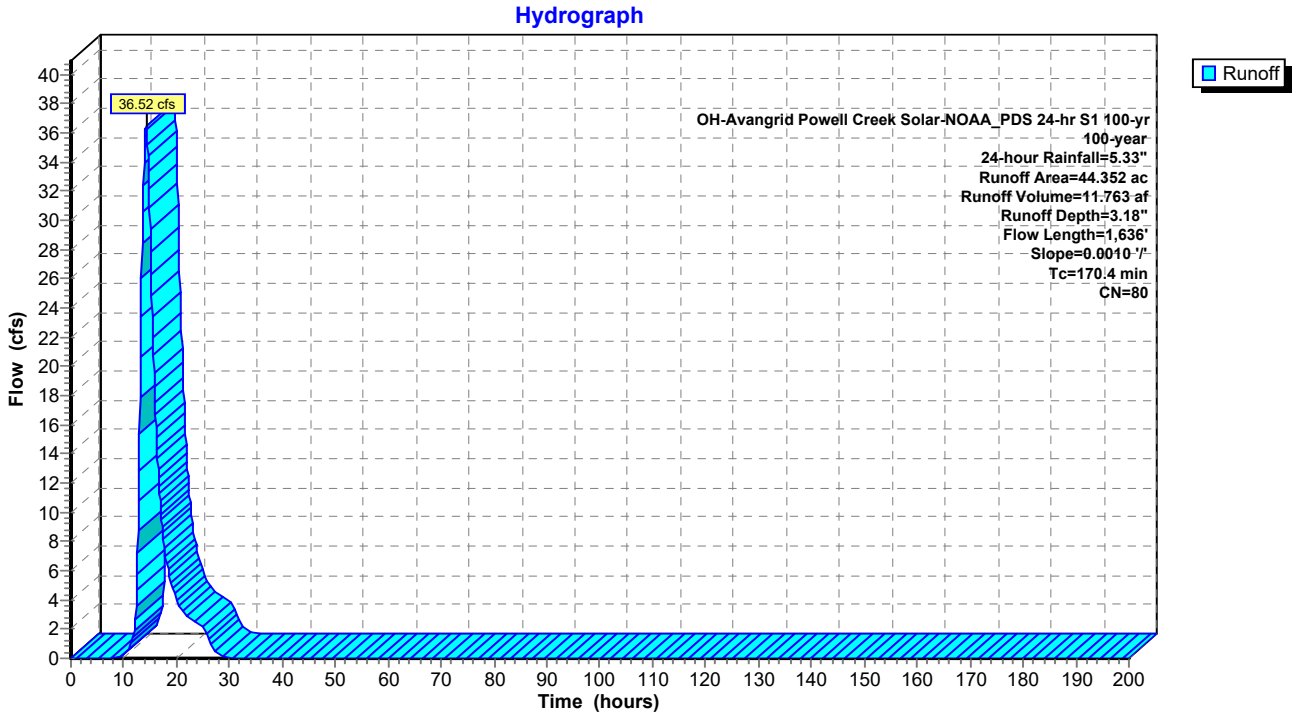
Runoff = 36.52 cfs @ 14.20 hrs, Volume= 11.763 af, Depth= 3.18"
Routed to Pond ST-04-A : ST-04-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	43.363	80	>75% Grass cover, Good, HSG D
*	0.514	98	Internal Access Road
*	0.475	98	Inverter
	44.352	80	Weighted Average
	43.363		97.77% Pervious Area
	0.989		2.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
76.5	1,016	0.0010	0.22		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
5.1	320	0.0010	1.05	4.19	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
170.4	1,636	Total			

Subcatchment DA-04-A: DA-04-A



Hydrograph for Subcatchment DA-04-A: DA-04-A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.40
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.50
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.62
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.76
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.92
1.00	0.05	0.00	0.00	11.40	1.29	0.19	1.10
1.20	0.06	0.00	0.00	11.60	1.50	0.29	1.33
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.64
1.60	0.08	0.00	0.00	12.00	2.95	1.21	2.10
1.80	0.09	0.00	0.00	12.20	3.52	1.66	2.95
2.00	0.10	0.00	0.00	12.40	3.87	1.93	4.64
2.20	0.12	0.00	0.00	12.60	4.06	2.09	7.21
2.40	0.13	0.00	0.00	12.80	4.15	2.16	10.77
2.60	0.14	0.00	0.00	13.00	4.22	2.22	15.32
2.80	0.15	0.00	0.00	13.20	4.28	2.28	20.68
3.00	0.16	0.00	0.00	13.40	4.33	2.32	26.02
3.20	0.18	0.00	0.00	13.60	4.38	2.36	30.61
3.40	0.19	0.00	0.00	13.80	4.43	2.40	33.97
3.60	0.20	0.00	0.00	14.00	4.47	2.43	35.78
3.80	0.21	0.00	0.00	14.20	4.51	2.47	**36.52**
4.00	0.23	0.00	0.00	14.40	4.54	2.50	35.79
4.20	0.24	0.00	0.00	14.60	4.57	2.52	34.40
4.40	0.25	0.00	0.00	14.80	4.60	2.55	32.18
4.60	0.27	0.00	0.00	15.00	4.63	2.58	29.43
4.80	0.28	0.00	0.00	15.20	4.66	2.60	26.28
5.00	0.30	0.00	0.00	15.40	4.69	2.62	23.36
5.20	0.31	0.00	0.00	15.60	4.71	2.64	20.78
5.40	0.33	0.00	0.00	15.80	4.74	2.67	18.56
5.60	0.34	0.00	0.00	16.00	4.76	2.69	16.70
5.80	0.36	0.00	0.00	16.20	4.78	2.71	15.08
6.00	0.38	0.00	0.00	16.40	4.81	2.72	13.64
6.20	0.39	0.00	0.00	16.60	4.83	2.74	12.36
6.40	0.41	0.00	0.00	16.80	4.85	2.76	11.25
6.60	0.43	0.00	0.00	17.00	4.87	2.78	10.27
6.80	0.45	0.00	0.00	17.20	4.88	2.79	9.42
7.00	0.47	0.00	0.00	17.40	4.90	2.81	8.65
7.20	0.49	0.00	0.00	17.60	4.92	2.82	8.00
7.40	0.51	0.00	0.00	17.80	4.94	2.84	7.39
7.60	0.53	0.00	0.00	18.00	4.96	2.85	6.89
7.80	0.55	0.00	0.00	18.20	4.97	2.87	6.42
8.00	0.57	0.00	0.00	18.40	4.99	2.88	6.03
8.20	0.60	0.00	0.00	18.60	5.00	2.90	5.67
8.40	0.62	0.01	0.01	18.80	5.02	2.91	5.35
8.60	0.65	0.01	0.01	19.00	5.03	2.92	5.06
8.80	0.67	0.01	0.02	19.20	5.05	2.94	4.81
9.00	0.70	0.01	0.04	19.40	5.06	2.95	4.57
9.20	0.73	0.02	0.06	19.60	5.08	2.96	4.37
9.40	0.76	0.02	0.09	19.80	5.09	2.97	4.18
9.60	0.80	0.03	0.13	20.00	5.10	2.98	4.01
9.80	0.83	0.04	0.18	20.20	5.12	3.00	3.86
10.00	0.87	0.05	0.24	20.40	5.13	3.01	3.72
10.20	0.91	0.06	0.32	20.60	5.14	3.02	3.59

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	3.46	31.20	5.33	3.18	0.01
21.00	5.17	3.04	3.34	31.40	5.33	3.18	0.01
21.20	5.18	3.05	3.23	31.60	5.33	3.18	0.01
21.40	5.19	3.06	3.12	31.80	5.33	3.18	0.01
21.60	5.20	3.07	3.02	32.00	5.33	3.18	0.01
21.80	5.21	3.08	2.94	32.20	5.33	3.18	0.00
22.00	5.23	3.09	2.86	32.40	5.33	3.18	0.00
22.20	5.24	3.10	2.80	32.60	5.33	3.18	0.00
22.40	5.25	3.11	2.74	32.80	5.33	3.18	0.00
22.60	5.26	3.12	2.68	33.00	5.33	3.18	0.00
22.80	5.27	3.13	2.63	33.20	5.33	3.18	0.00
23.00	5.28	3.14	2.58	33.40	5.33	3.18	0.00
23.20	5.29	3.15	2.53	33.60	5.33	3.18	0.00
23.40	5.30	3.16	2.48	33.80	5.33	3.18	0.00
23.60	5.31	3.17	2.44	34.00	5.33	3.18	0.00
23.80	5.32	3.17	2.39	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	2.36	34.40	5.33	3.18	0.00
24.20	5.33	3.18	2.31	34.60	5.33	3.18	0.00
24.40	5.33	3.18	2.27	34.80	5.33	3.18	0.00
24.60	5.33	3.18	2.22	35.00	5.33	3.18	0.00
24.80	5.33	3.18	2.17	35.20	5.33	3.18	0.00
25.00	5.33	3.18	2.08	35.40	5.33	3.18	0.00
25.20	5.33	3.18	1.99	35.60	5.33	3.18	0.00
25.40	5.33	3.18	1.86	35.80	5.33	3.18	0.00
25.60	5.33	3.18	1.72	36.00	5.33	3.18	0.00
25.80	5.33	3.18	1.55	36.20	5.33	3.18	0.00
26.00	5.33	3.18	1.39	36.40	5.33	3.18	0.00
26.20	5.33	3.18	1.22	36.60	5.33	3.18	0.00
26.40	5.33	3.18	1.05	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.90	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.76	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.64	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.54	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.45	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.38	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.32	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.27	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.22	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.19	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.16	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.13	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.11	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.09	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.08	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.06	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.05	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.04	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.04	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.03	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.03	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.02	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.02	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-A: DA-04-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-04-B: DA-04-B

[47] Hint: Peak is 336% of capacity of segment #3

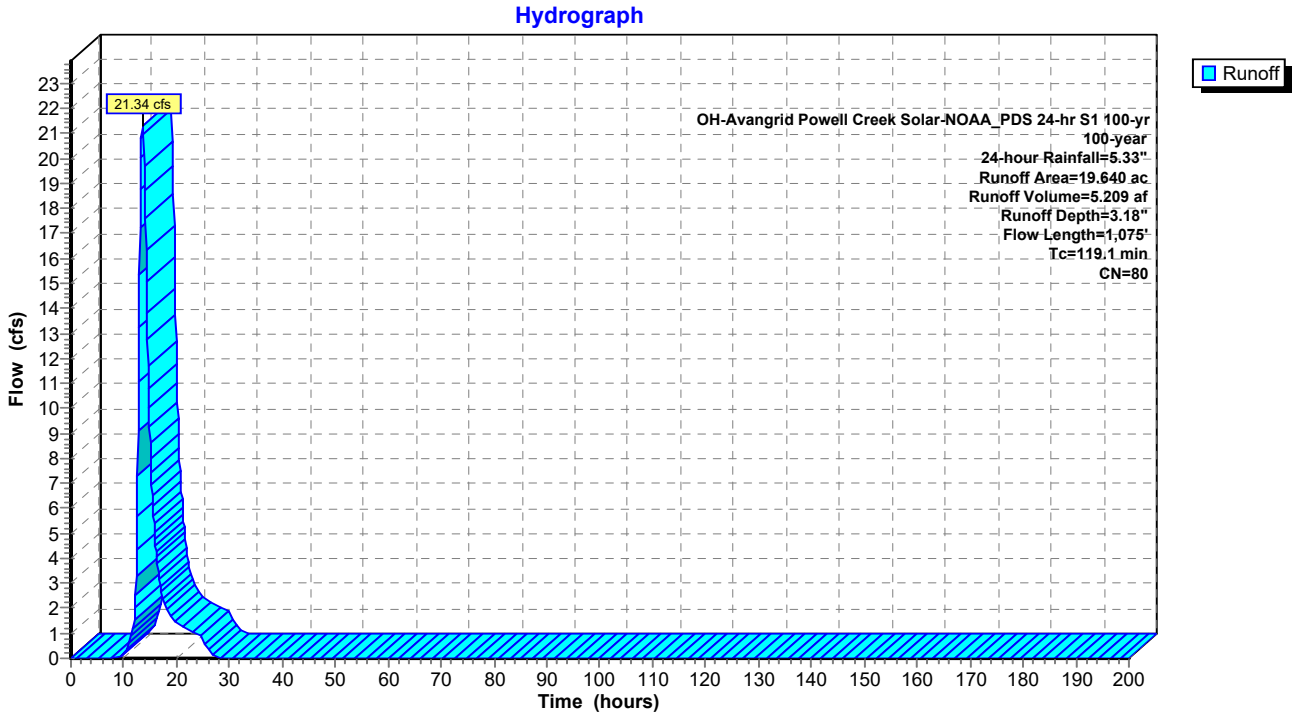
Runoff = 21.34 cfs @ 13.58 hrs, Volume= 5.209 af, Depth= 3.18"
Routed to Pond ST-04-B : ST-04-B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	19.554	80	>75% Grass cover, Good, HSG D
*	0.086	98	Internal Access Road
	19.640	80	Weighted Average
	19.554		99.56% Pervious Area
	0.086		0.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
25.8	343	0.0010	0.22		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
4.5	432	0.0023	1.59	6.35	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
119.1	1,075	Total			

Subcatchment DA-04-B: DA-04-B



Hydrograph for Subcatchment DA-04-B: DA-04-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.33
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.40
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.48
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.57
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.68
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.82
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.99
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.23
1.60	0.08	0.00	0.00	12.00	2.95	1.21	1.67
1.80	0.09	0.00	0.00	12.20	3.52	1.66	2.55
2.00	0.10	0.00	0.00	12.40	3.87	1.93	4.38
2.20	0.12	0.00	0.00	12.60	4.06	2.09	7.26
2.40	0.13	0.00	0.00	12.80	4.15	2.16	11.10
2.60	0.14	0.00	0.00	13.00	4.22	2.22	15.35
2.80	0.15	0.00	0.00	13.20	4.28	2.28	18.81
3.00	0.16	0.00	0.00	13.40	4.33	2.32	20.83
3.20	0.18	0.00	0.00	13.60	4.38	2.36	**21.33**
3.40	0.19	0.00	0.00	13.80	4.43	2.40	20.43
3.60	0.20	0.00	0.00	14.00	4.47	2.43	18.69
3.80	0.21	0.00	0.00	14.20	4.51	2.47	16.35
4.00	0.23	0.00	0.00	14.40	4.54	2.50	13.84
4.20	0.24	0.00	0.00	14.60	4.57	2.52	11.72
4.40	0.25	0.00	0.00	14.80	4.60	2.55	9.99
4.60	0.27	0.00	0.00	15.00	4.63	2.58	8.61
4.80	0.28	0.00	0.00	15.20	4.66	2.60	7.45
5.00	0.30	0.00	0.00	15.40	4.69	2.62	6.49
5.20	0.31	0.00	0.00	15.60	4.71	2.64	5.70
5.40	0.33	0.00	0.00	15.80	4.74	2.67	5.05
5.60	0.34	0.00	0.00	16.00	4.76	2.69	4.50
5.80	0.36	0.00	0.00	16.20	4.78	2.71	4.04
6.00	0.38	0.00	0.00	16.40	4.81	2.72	3.66
6.20	0.39	0.00	0.00	16.60	4.83	2.74	3.34
6.40	0.41	0.00	0.00	16.80	4.85	2.76	3.08
6.60	0.43	0.00	0.00	17.00	4.87	2.78	2.84
6.80	0.45	0.00	0.00	17.20	4.88	2.79	2.64
7.00	0.47	0.00	0.00	17.40	4.90	2.81	2.48
7.20	0.49	0.00	0.00	17.60	4.92	2.82	2.33
7.40	0.51	0.00	0.00	17.80	4.94	2.84	2.20
7.60	0.53	0.00	0.00	18.00	4.96	2.85	2.09
7.80	0.55	0.00	0.00	18.20	4.97	2.87	1.99
8.00	0.57	0.00	0.00	18.40	4.99	2.88	1.89
8.20	0.60	0.00	0.00	18.60	5.00	2.90	1.80
8.40	0.62	0.01	0.01	18.80	5.02	2.91	1.72
8.60	0.65	0.01	0.02	19.00	5.03	2.92	1.66
8.80	0.67	0.01	0.03	19.20	5.05	2.94	1.61
9.00	0.70	0.01	0.05	19.40	5.06	2.95	1.56
9.20	0.73	0.02	0.07	19.60	5.08	2.96	1.51
9.40	0.76	0.02	0.10	19.80	5.09	2.97	1.47
9.60	0.80	0.03	0.13	20.00	5.10	2.98	1.44
9.80	0.83	0.04	0.17	20.20	5.12	3.00	1.40
10.00	0.87	0.05	0.22	20.40	5.13	3.01	1.36
10.20	0.91	0.06	0.27	20.60	5.14	3.02	1.33

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	1.30	31.20	5.33	3.18	0.00
21.00	5.17	3.04	1.27	31.40	5.33	3.18	0.00
21.20	5.18	3.05	1.25	31.60	5.33	3.18	0.00
21.40	5.19	3.06	1.22	31.80	5.33	3.18	0.00
21.60	5.20	3.07	1.20	32.00	5.33	3.18	0.00
21.80	5.21	3.08	1.17	32.20	5.33	3.18	0.00
22.00	5.23	3.09	1.15	32.40	5.33	3.18	0.00
22.20	5.24	3.10	1.13	32.60	5.33	3.18	0.00
22.40	5.25	3.11	1.11	32.80	5.33	3.18	0.00
22.60	5.26	3.12	1.09	33.00	5.33	3.18	0.00
22.80	5.27	3.13	1.07	33.20	5.33	3.18	0.00
23.00	5.28	3.14	1.05	33.40	5.33	3.18	0.00
23.20	5.29	3.15	1.03	33.60	5.33	3.18	0.00
23.40	5.30	3.16	1.02	33.80	5.33	3.18	0.00
23.60	5.31	3.17	1.00	34.00	5.33	3.18	0.00
23.80	5.32	3.17	0.99	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	0.97	34.40	5.33	3.18	0.00
24.20	5.33	3.18	0.96	34.60	5.33	3.18	0.00
24.40	5.33	3.18	0.94	34.80	5.33	3.18	0.00
24.60	5.33	3.18	0.90	35.00	5.33	3.18	0.00
24.80	5.33	3.18	0.86	35.20	5.33	3.18	0.00
25.00	5.33	3.18	0.79	35.40	5.33	3.18	0.00
25.20	5.33	3.18	0.69	35.60	5.33	3.18	0.00
25.40	5.33	3.18	0.59	35.80	5.33	3.18	0.00
25.60	5.33	3.18	0.49	36.00	5.33	3.18	0.00
25.80	5.33	3.18	0.40	36.20	5.33	3.18	0.00
26.00	5.33	3.18	0.31	36.40	5.33	3.18	0.00
26.20	5.33	3.18	0.24	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.19	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.15	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.11	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.09	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.07	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.05	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.04	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.03	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.03	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.02	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.01	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.01	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.01	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.01	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.00	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.00	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.00	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.00	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.00	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.00	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.00	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.00	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.00	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.00	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-04-B: DA-04-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-05-A: DA-05-A

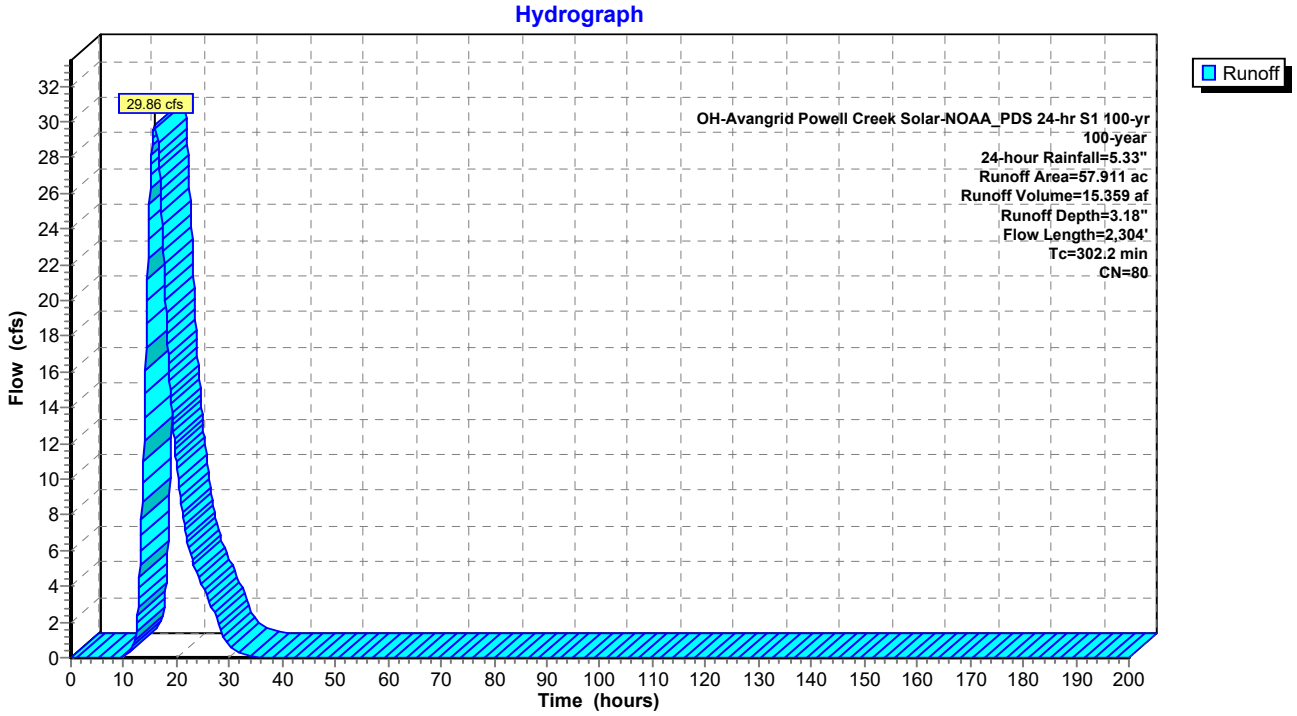
Runoff = 29.86 cfs @ 15.82 hrs, Volume= 15.359 af, Depth= 3.18"
Routed to Pond ST-05-A : ST-05-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	56.866	80	>75% Grass cover, Good, HSG D
*	0.807	98	Internal Access Road
*	0.238	98	Inverter
	57.911	80	Weighted Average
	56.866		98.20% Pervious Area
	1.045		1.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
213.4	2,004	0.0005	0.16		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
302.2	2,304	Total			

Subcatchment DA-05-A: DA-05-A



Hydrograph for Subcatchment DA-05-A: DA-05-A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.12
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.16
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.20
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.26
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.33
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.41
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.52
1.40	0.07	0.00	0.00	11.80	1.87	0.49	0.64
1.60	0.08	0.00	0.00	12.00	2.95	1.21	0.79
1.80	0.09	0.00	0.00	12.20	3.52	1.66	1.11
2.00	0.10	0.00	0.00	12.40	3.87	1.93	1.57
2.20	0.12	0.00	0.00	12.60	4.06	2.09	2.37
2.40	0.13	0.00	0.00	12.80	4.15	2.16	3.30
2.60	0.14	0.00	0.00	13.00	4.22	2.22	4.52
2.80	0.15	0.00	0.00	13.20	4.28	2.28	6.00
3.00	0.16	0.00	0.00	13.40	4.33	2.32	7.72
3.20	0.18	0.00	0.00	13.60	4.38	2.36	9.85
3.40	0.19	0.00	0.00	13.80	4.43	2.40	12.13
3.60	0.20	0.00	0.00	14.00	4.47	2.43	14.78
3.80	0.21	0.00	0.00	14.20	4.51	2.47	17.40
4.00	0.23	0.00	0.00	14.40	4.54	2.50	19.99
4.20	0.24	0.00	0.00	14.60	4.57	2.52	22.33
4.40	0.25	0.00	0.00	14.80	4.60	2.55	24.54
4.60	0.27	0.00	0.00	15.00	4.63	2.58	26.27
4.80	0.28	0.00	0.00	15.20	4.66	2.60	27.67
5.00	0.30	0.00	0.00	15.40	4.69	2.62	28.69
5.20	0.31	0.00	0.00	15.60	4.71	2.64	29.37
5.40	0.33	0.00	0.00	15.80	4.74	2.67	**29.85**
5.60	0.34	0.00	0.00	16.00	4.76	2.69	29.68
5.80	0.36	0.00	0.00	16.20	4.78	2.71	29.40
6.00	0.38	0.00	0.00	16.40	4.81	2.72	28.96
6.20	0.39	0.00	0.00	16.60	4.83	2.74	28.21
6.40	0.41	0.00	0.00	16.80	4.85	2.76	27.33
6.60	0.43	0.00	0.00	17.00	4.87	2.78	26.20
6.80	0.45	0.00	0.00	17.20	4.88	2.79	24.94
7.00	0.47	0.00	0.00	17.40	4.90	2.81	23.48
7.20	0.49	0.00	0.00	17.60	4.92	2.82	22.06
7.40	0.51	0.00	0.00	17.80	4.94	2.84	20.66
7.60	0.53	0.00	0.00	18.00	4.96	2.85	19.36
7.80	0.55	0.00	0.00	18.20	4.97	2.87	18.12
8.00	0.57	0.00	0.00	18.40	4.99	2.88	16.98
8.20	0.60	0.00	0.00	18.60	5.00	2.90	15.95
8.40	0.62	0.01	0.00	18.80	5.02	2.91	15.00
8.60	0.65	0.01	0.00	19.00	5.03	2.92	14.17
8.80	0.67	0.01	0.00	19.20	5.05	2.94	13.38
9.00	0.70	0.01	0.01	19.40	5.06	2.95	12.65
9.20	0.73	0.02	0.01	19.60	5.08	2.96	11.96
9.40	0.76	0.02	0.02	19.80	5.09	2.97	11.30
9.60	0.80	0.03	0.03	20.00	5.10	2.98	10.71
9.80	0.83	0.04	0.05	20.20	5.12	3.00	10.14
10.00	0.87	0.05	0.06	20.40	5.13	3.01	9.63
10.20	0.91	0.06	0.09	20.60	5.14	3.02	9.15

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	8.68	31.20	5.33	3.18	0.36
21.00	5.17	3.04	8.28	31.40	5.33	3.18	0.33
21.20	5.18	3.05	7.89	31.60	5.33	3.18	0.29
21.40	5.19	3.06	7.53	31.80	5.33	3.18	0.27
21.60	5.20	3.07	7.19	32.00	5.33	3.18	0.24
21.80	5.21	3.08	6.89	32.20	5.33	3.18	0.22
22.00	5.23	3.09	6.58	32.40	5.33	3.18	0.20
22.20	5.24	3.10	6.30	32.60	5.33	3.18	0.18
22.40	5.25	3.11	6.06	32.80	5.33	3.18	0.16
22.60	5.26	3.12	5.82	33.00	5.33	3.18	0.15
22.80	5.27	3.13	5.59	33.20	5.33	3.18	0.13
23.00	5.28	3.14	5.39	33.40	5.33	3.18	0.12
23.20	5.29	3.15	5.20	33.60	5.33	3.18	0.11
23.40	5.30	3.16	5.01	33.80	5.33	3.18	0.10
23.60	5.31	3.17	4.85	34.00	5.33	3.18	0.09
23.80	5.32	3.17	4.69	34.20	5.33	3.18	0.08
24.00	**5.33**	**3.18**	4.54	34.40	5.33	3.18	0.07
24.20	5.33	3.18	4.40	34.60	5.33	3.18	0.06
24.40	5.33	3.18	4.27	34.80	5.33	3.18	0.06
24.60	5.33	3.18	4.15	35.00	5.33	3.18	0.05
24.80	5.33	3.18	4.02	35.20	5.33	3.18	0.05
25.00	5.33	3.18	3.90	35.40	5.33	3.18	0.04
25.20	5.33	3.18	3.79	35.60	5.33	3.18	0.04
25.40	5.33	3.18	3.67	35.80	5.33	3.18	0.03
25.60	5.33	3.18	3.54	36.00	5.33	3.18	0.03
25.80	5.33	3.18	3.42	36.20	5.33	3.18	0.03
26.00	5.33	3.18	3.29	36.40	5.33	3.18	0.02
26.20	5.33	3.18	3.16	36.60	5.33	3.18	0.02
26.40	5.33	3.18	3.02	36.80	5.33	3.18	0.02
26.60	5.33	3.18	2.88	37.00	5.33	3.18	0.02
26.80	5.33	3.18	2.72	37.20	5.33	3.18	0.01
27.00	5.33	3.18	2.57	37.40	5.33	3.18	0.01
27.20	5.33	3.18	2.41	37.60	5.33	3.18	0.01
27.40	5.33	3.18	2.25	37.80	5.33	3.18	0.01
27.60	5.33	3.18	2.09	38.00	5.33	3.18	0.01
27.80	5.33	3.18	1.93	38.20	5.33	3.18	0.01
28.00	5.33	3.18	1.78	38.40	5.33	3.18	0.01
28.20	5.33	3.18	1.62	38.60	5.33	3.18	0.01
28.40	5.33	3.18	1.48	38.80	5.33	3.18	0.00
28.60	5.33	3.18	1.34	39.00	5.33	3.18	0.00
28.80	5.33	3.18	1.21	39.20	5.33	3.18	0.00
29.00	5.33	3.18	1.10	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.99	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.89	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.80	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.72	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.65	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.59	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.53	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.48	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.44	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.40	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-A: DA-05-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-05-B: DA-05-B

[47] Hint: Peak is 417% of capacity of segment #3

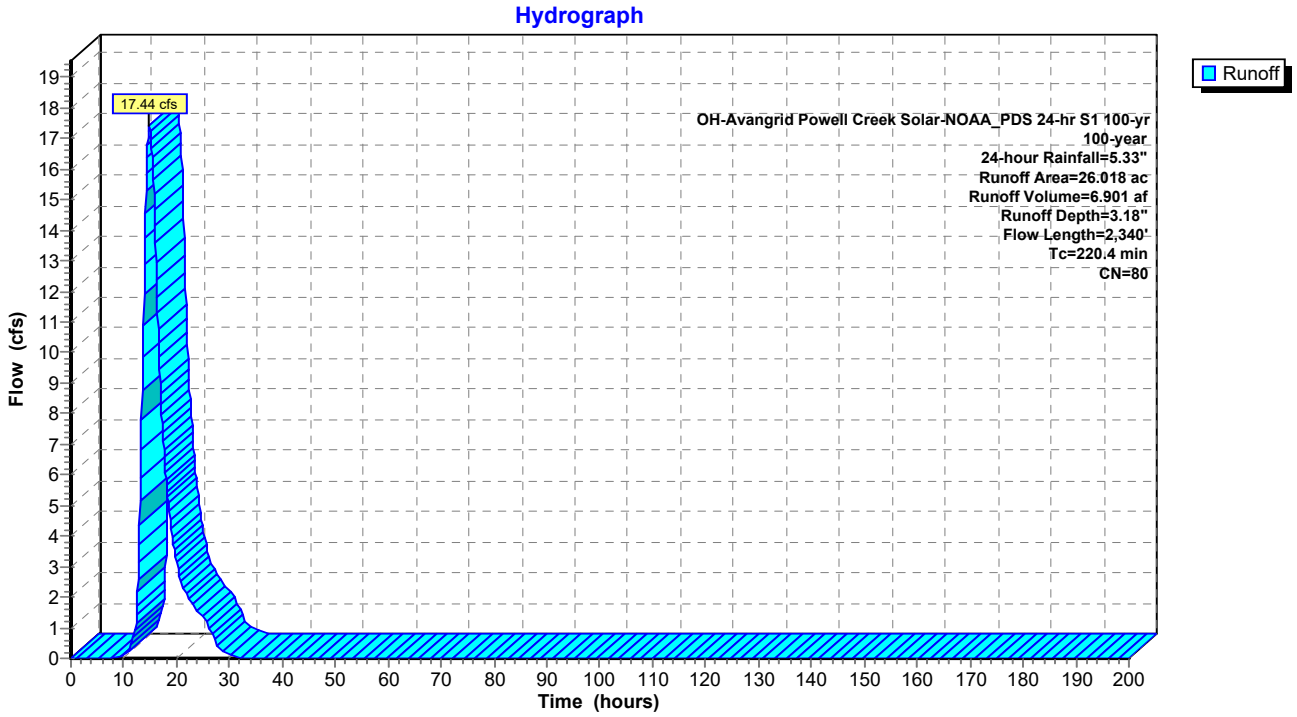
Runoff = 17.44 cfs @ 14.90 hrs, Volume= 6.901 af, Depth= 3.18"
Routed to Pond ST-05-B : ST-05-B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	25.641	80	>75% Grass cover, Good, HSG D
*	0.139	98	Internal Access Road
*	0.238	98	Inverter
	26.018	80	Weighted Average
	25.641		98.55% Pervious Area
	0.377		1.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
127.4	1,775	0.0011	0.23		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
4.2	265	0.0010	1.05	4.19	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
220.4	2,340	Total			

Subcatchment DA-05-B: DA-05-B



Hydrograph for Subcatchment DA-05-B: DA-05-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.13
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.17
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.21
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.26
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.33
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.40
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.49
1.40	0.07	0.00	0.00	11.80	1.87	0.49	0.60
1.60	0.08	0.00	0.00	12.00	2.95	1.21	0.76
1.80	0.09	0.00	0.00	12.20	3.52	1.66	0.98
2.00	0.10	0.00	0.00	12.40	3.87	1.93	1.43
2.20	0.12	0.00	0.00	12.60	4.06	2.09	2.15
2.40	0.13	0.00	0.00	12.80	4.15	2.16	3.14
2.60	0.14	0.00	0.00	13.00	4.22	2.22	4.37
2.80	0.15	0.00	0.00	13.20	4.28	2.28	5.92
3.00	0.16	0.00	0.00	13.40	4.33	2.32	7.77
3.20	0.18	0.00	0.00	13.60	4.38	2.36	9.83
3.40	0.19	0.00	0.00	13.80	4.43	2.40	11.89
3.60	0.20	0.00	0.00	14.00	4.47	2.43	13.76
3.80	0.21	0.00	0.00	14.20	4.51	2.47	15.28
4.00	0.23	0.00	0.00	14.40	4.54	2.50	16.39
4.20	0.24	0.00	0.00	14.60	4.57	2.52	17.02
4.40	0.25	0.00	0.00	14.80	4.60	2.55	**17.35**
4.60	0.27	0.00	0.00	15.00	4.63	2.58	**17.37**
4.80	0.28	0.00	0.00	15.20	4.66	2.60	16.97
5.00	0.30	0.00	0.00	15.40	4.69	2.62	16.41
5.20	0.31	0.00	0.00	15.60	4.71	2.64	15.62
5.40	0.33	0.00	0.00	15.80	4.74	2.67	14.67
5.60	0.34	0.00	0.00	16.00	4.76	2.69	13.57
5.80	0.36	0.00	0.00	16.20	4.78	2.71	12.37
6.00	0.38	0.00	0.00	16.40	4.81	2.72	11.26
6.20	0.39	0.00	0.00	16.60	4.83	2.74	10.29
6.40	0.41	0.00	0.00	16.80	4.85	2.76	9.43
6.60	0.43	0.00	0.00	17.00	4.87	2.78	8.66
6.80	0.45	0.00	0.00	17.20	4.88	2.79	7.97
7.00	0.47	0.00	0.00	17.40	4.90	2.81	7.38
7.20	0.49	0.00	0.00	17.60	4.92	2.82	6.83
7.40	0.51	0.00	0.00	17.80	4.94	2.84	6.33
7.60	0.53	0.00	0.00	18.00	4.96	2.85	5.87
7.80	0.55	0.00	0.00	18.20	4.97	2.87	5.45
8.00	0.57	0.00	0.00	18.40	4.99	2.88	5.08
8.20	0.60	0.00	0.00	18.60	5.00	2.90	4.74
8.40	0.62	0.01	0.00	18.80	5.02	2.91	4.44
8.60	0.65	0.01	0.00	19.00	5.03	2.92	4.17
8.80	0.67	0.01	0.01	19.20	5.05	2.94	3.92
9.00	0.70	0.01	0.01	19.40	5.06	2.95	3.69
9.20	0.73	0.02	0.02	19.60	5.08	2.96	3.47
9.40	0.76	0.02	0.03	19.80	5.09	2.97	3.29
9.60	0.80	0.03	0.04	20.00	5.10	2.98	3.12
9.80	0.83	0.04	0.05	20.20	5.12	3.00	2.97
10.00	0.87	0.05	0.07	20.40	5.13	3.01	2.83
10.20	0.91	0.06	0.10	20.60	5.14	3.02	2.70

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	2.59	31.20	5.33	3.18	0.04
21.00	5.17	3.04	2.47	31.40	5.33	3.18	0.03
21.20	5.18	3.05	2.38	31.60	5.33	3.18	0.03
21.40	5.19	3.06	2.28	31.80	5.33	3.18	0.03
21.60	5.20	3.07	2.20	32.00	5.33	3.18	0.02
21.80	5.21	3.08	2.12	32.20	5.33	3.18	0.02
22.00	5.23	3.09	2.05	32.40	5.33	3.18	0.02
22.20	5.24	3.10	1.98	32.60	5.33	3.18	0.01
22.40	5.25	3.11	1.92	32.80	5.33	3.18	0.01
22.60	5.26	3.12	1.86	33.00	5.33	3.18	0.01
22.80	5.27	3.13	1.81	33.20	5.33	3.18	0.01
23.00	5.28	3.14	1.76	33.40	5.33	3.18	0.01
23.20	5.29	3.15	1.71	33.60	5.33	3.18	0.01
23.40	5.30	3.16	1.67	33.80	5.33	3.18	0.01
23.60	5.31	3.17	1.62	34.00	5.33	3.18	0.00
23.80	5.32	3.17	1.58	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	1.54	34.40	5.33	3.18	0.00
24.20	5.33	3.18	1.50	34.60	5.33	3.18	0.00
24.40	5.33	3.18	1.46	34.80	5.33	3.18	0.00
24.60	5.33	3.18	1.43	35.00	5.33	3.18	0.00
24.80	5.33	3.18	1.39	35.20	5.33	3.18	0.00
25.00	5.33	3.18	1.36	35.40	5.33	3.18	0.00
25.20	5.33	3.18	1.32	35.60	5.33	3.18	0.00
25.40	5.33	3.18	1.27	35.80	5.33	3.18	0.00
25.60	5.33	3.18	1.22	36.00	5.33	3.18	0.00
25.80	5.33	3.18	1.15	36.20	5.33	3.18	0.00
26.00	5.33	3.18	1.08	36.40	5.33	3.18	0.00
26.20	5.33	3.18	1.00	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.92	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.84	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.76	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.68	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.60	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.53	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.46	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.41	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.35	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.31	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.27	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.23	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.20	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.18	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.16	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.14	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.12	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.10	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.09	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.08	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.07	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.06	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.05	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.05	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-05-B: DA-05-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-06: DA-06

[47] Hint: Peak is 1992% of capacity of segment #3

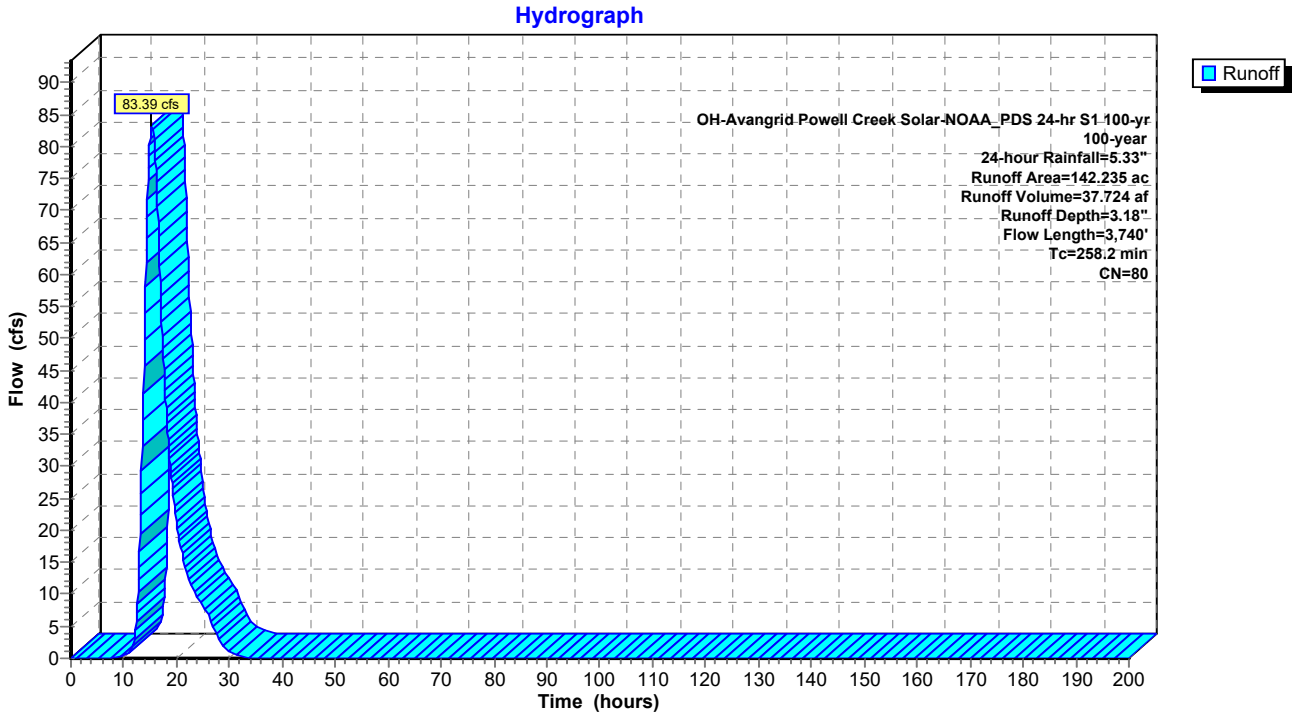
Runoff = 83.39 cfs @ 15.24 hrs, Volume= 37.724 af, Depth= 3.18"
Routed to Pond ST-06 : ST-06

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	139.985	80	>75% Grass cover, Good, HSG D
*	1.299	98	Internal Access Road
*	0.951	98	Inverter
	142.235	80	Weighted Average
	139.985		98.42% Pervious Area
	2.250		1.58% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
56.5	300	0.0031	0.09		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
200.6	3,370	0.0016	0.28		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
1.1	70	0.0010	1.05	4.19	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
258.2	3,740	Total			

Subcatchment DA-06: DA-06



Hydrograph for Subcatchment DA-06: DA-06

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.47
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.61
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.78
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.99
0.80	0.04	0.00	0.00	11.20	1.20	0.15	1.23
1.00	0.05	0.00	0.00	11.40	1.29	0.19	1.52
1.20	0.06	0.00	0.00	11.60	1.50	0.29	1.88
1.40	0.07	0.00	0.00	11.80	1.87	0.49	2.30
1.60	0.08	0.00	0.00	12.00	2.95	1.21	2.81
1.80	0.09	0.00	0.00	12.20	3.52	1.66	4.02
2.00	0.10	0.00	0.00	12.40	3.87	1.93	5.85
2.20	0.12	0.00	0.00	12.60	4.06	2.09	8.53
2.40	0.13	0.00	0.00	12.80	4.15	2.16	12.22
2.60	0.14	0.00	0.00	13.00	4.22	2.22	16.80
2.80	0.15	0.00	0.00	13.20	4.28	2.28	22.39
3.00	0.16	0.00	0.00	13.40	4.33	2.32	29.33
3.20	0.18	0.00	0.00	13.60	4.38	2.36	37.20
3.40	0.19	0.00	0.00	13.80	4.43	2.40	45.65
3.60	0.20	0.00	0.00	14.00	4.47	2.43	54.04
3.80	0.21	0.00	0.00	14.20	4.51	2.47	61.86
4.00	0.23	0.00	0.00	14.40	4.54	2.50	68.94
4.20	0.24	0.00	0.00	14.60	4.57	2.52	74.68
4.40	0.25	0.00	0.00	14.80	4.60	2.55	78.56
4.60	0.27	0.00	0.00	15.00	4.63	2.58	81.44
4.80	0.28	0.00	0.00	15.20	4.66	2.60	**83.30**
5.00	0.30	0.00	0.00	15.40	4.69	2.62	83.01
5.20	0.31	0.00	0.00	15.60	4.71	2.64	82.07
5.40	0.33	0.00	0.00	15.80	4.74	2.67	80.58
5.60	0.34	0.00	0.00	16.00	4.76	2.69	77.83
5.80	0.36	0.00	0.00	16.20	4.78	2.71	74.46
6.00	0.38	0.00	0.00	16.40	4.81	2.72	70.56
6.20	0.39	0.00	0.00	16.60	4.83	2.74	65.88
6.40	0.41	0.00	0.00	16.80	4.85	2.76	61.27
6.60	0.43	0.00	0.00	17.00	4.87	2.78	56.77
6.80	0.45	0.00	0.00	17.20	4.88	2.79	52.45
7.00	0.47	0.00	0.00	17.40	4.90	2.81	48.59
7.20	0.49	0.00	0.00	17.60	4.92	2.82	45.09
7.40	0.51	0.00	0.00	17.80	4.94	2.84	41.94
7.60	0.53	0.00	0.00	18.00	4.96	2.85	39.22
7.80	0.55	0.00	0.00	18.20	4.97	2.87	36.68
8.00	0.57	0.00	0.00	18.40	4.99	2.88	34.30
8.20	0.60	0.00	0.00	18.60	5.00	2.90	32.13
8.40	0.62	0.01	0.00	18.80	5.02	2.91	30.13
8.60	0.65	0.01	0.01	19.00	5.03	2.92	28.28
8.80	0.67	0.01	0.02	19.20	5.05	2.94	26.59
9.00	0.70	0.01	0.03	19.40	5.06	2.95	25.03
9.20	0.73	0.02	0.05	19.60	5.08	2.96	23.60
9.40	0.76	0.02	0.08	19.80	5.09	2.97	22.30
9.60	0.80	0.03	0.13	20.00	5.10	2.98	21.09
9.80	0.83	0.04	0.18	20.20	5.12	3.00	19.99
10.00	0.87	0.05	0.26	20.40	5.13	3.01	18.98
10.20	0.91	0.06	0.35	20.60	5.14	3.02	18.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	17.15	31.20	5.33	3.18	0.46
21.00	5.17	3.04	16.36	31.40	5.33	3.18	0.41
21.20	5.18	3.05	15.60	31.60	5.33	3.18	0.36
21.40	5.19	3.06	14.94	31.80	5.33	3.18	0.33
21.60	5.20	3.07	14.32	32.00	5.33	3.18	0.29
21.80	5.21	3.08	13.73	32.20	5.33	3.18	0.26
22.00	5.23	3.09	13.22	32.40	5.33	3.18	0.23
22.20	5.24	3.10	12.72	32.60	5.33	3.18	0.20
22.40	5.25	3.11	12.24	32.80	5.33	3.18	0.18
22.60	5.26	3.12	11.84	33.00	5.33	3.18	0.16
22.80	5.27	3.13	11.43	33.20	5.33	3.18	0.14
23.00	5.28	3.14	11.04	33.40	5.33	3.18	0.12
23.20	5.29	3.15	10.71	33.60	5.33	3.18	0.11
23.40	5.30	3.16	10.38	33.80	5.33	3.18	0.10
23.60	5.31	3.17	10.07	34.00	5.33	3.18	0.09
23.80	5.32	3.17	9.79	34.20	5.33	3.18	0.07
24.00	**5.33**	**3.18**	9.52	34.40	5.33	3.18	0.07
24.20	5.33	3.18	9.27	34.60	5.33	3.18	0.06
24.40	5.33	3.18	9.04	34.80	5.33	3.18	0.05
24.60	5.33	3.18	8.81	35.00	5.33	3.18	0.04
24.80	5.33	3.18	8.58	35.20	5.33	3.18	0.04
25.00	5.33	3.18	8.35	35.40	5.33	3.18	0.03
25.20	5.33	3.18	8.09	35.60	5.33	3.18	0.03
25.40	5.33	3.18	7.83	35.80	5.33	3.18	0.02
25.60	5.33	3.18	7.54	36.00	5.33	3.18	0.02
25.80	5.33	3.18	7.21	36.20	5.33	3.18	0.02
26.00	5.33	3.18	6.86	36.40	5.33	3.18	0.01
26.20	5.33	3.18	6.48	36.60	5.33	3.18	0.01
26.40	5.33	3.18	6.06	36.80	5.33	3.18	0.01
26.60	5.33	3.18	5.66	37.00	5.33	3.18	0.01
26.80	5.33	3.18	5.25	37.20	5.33	3.18	0.01
27.00	5.33	3.18	4.82	37.40	5.33	3.18	0.00
27.20	5.33	3.18	4.43	37.60	5.33	3.18	0.00
27.40	5.33	3.18	4.04	37.80	5.33	3.18	0.00
27.60	5.33	3.18	3.66	38.00	5.33	3.18	0.00
27.80	5.33	3.18	3.30	38.20	5.33	3.18	0.00
28.00	5.33	3.18	2.97	38.40	5.33	3.18	0.00
28.20	5.33	3.18	2.65	38.60	5.33	3.18	0.00
28.40	5.33	3.18	2.36	38.80	5.33	3.18	0.00
28.60	5.33	3.18	2.10	39.00	5.33	3.18	0.00
28.80	5.33	3.18	1.86	39.20	5.33	3.18	0.00
29.00	5.33	3.18	1.65	39.40	5.33	3.18	0.00
29.20	5.33	3.18	1.47	39.60	5.33	3.18	0.00
29.40	5.33	3.18	1.31	39.80	5.33	3.18	0.00
29.60	5.33	3.18	1.17	40.00	5.33	3.18	0.00
29.80	5.33	3.18	1.04	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.93	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.83	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.74	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.66	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.58	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.52	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-06: DA-06 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-07: DA-07

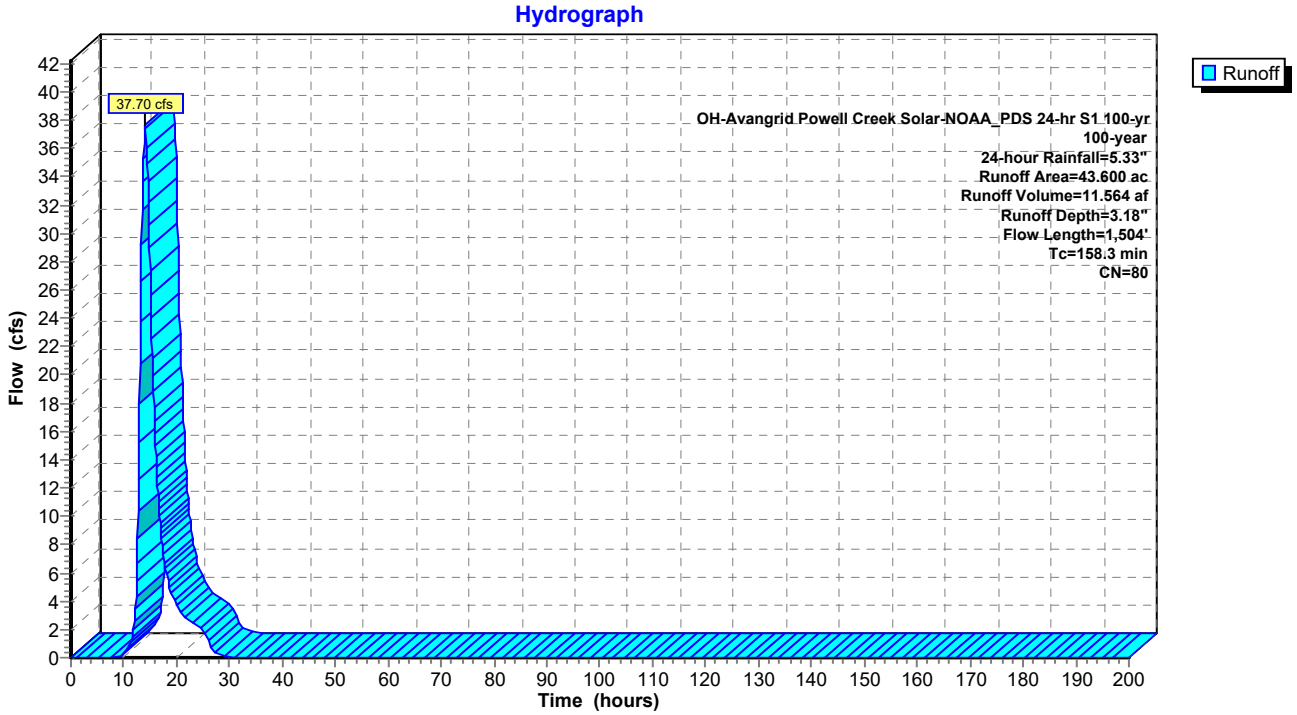
Runoff = 37.70 cfs @ 14.07 hrs, Volume= 11.564 af, Depth= 3.18"
Routed to Pond ST-07 : ST-07

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	42.948	80	>75% Grass cover, Good, HSG D
*	0.414	98	Internal Access Road
*	0.238	98	Inverter
	43.600	80	Weighted Average
	42.948		98.50% Pervious Area
	0.652		1.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
69.5	1,204	0.0017	0.29		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
158.3	1,504	Total			

Subcatchment DA-07: DA-07



Hydrograph for Subcatchment DA-07: DA-07

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.46
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.57
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.70
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.84
0.80	0.04	0.00	0.00	11.20	1.20	0.15	1.02
1.00	0.05	0.00	0.00	11.40	1.29	0.19	1.22
1.20	0.06	0.00	0.00	11.60	1.50	0.29	1.47
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.82
1.60	0.08	0.00	0.00	12.00	2.95	1.21	2.36
1.80	0.09	0.00	0.00	12.20	3.52	1.66	3.48
2.00	0.10	0.00	0.00	12.40	3.87	1.93	5.40
2.20	0.12	0.00	0.00	12.60	4.06	2.09	8.43
2.40	0.13	0.00	0.00	12.80	4.15	2.16	12.63
2.60	0.14	0.00	0.00	13.00	4.22	2.22	17.94
2.80	0.15	0.00	0.00	13.20	4.28	2.28	23.72
3.00	0.16	0.00	0.00	13.40	4.33	2.32	29.28
3.20	0.18	0.00	0.00	13.60	4.38	2.36	33.64
3.40	0.19	0.00	0.00	13.80	4.43	2.40	36.47
3.60	0.20	0.00	0.00	14.00	4.47	2.43	**37.64**
3.80	0.21	0.00	0.00	14.20	4.51	2.47	**37.48**
4.00	0.23	0.00	0.00	14.40	4.54	2.50	36.02
4.20	0.24	0.00	0.00	14.60	4.57	2.52	33.70
4.40	0.25	0.00	0.00	14.80	4.60	2.55	30.62
4.60	0.27	0.00	0.00	15.00	4.63	2.58	27.32
4.80	0.28	0.00	0.00	15.20	4.66	2.60	24.05
5.00	0.30	0.00	0.00	15.40	4.69	2.62	21.21
5.20	0.31	0.00	0.00	15.60	4.71	2.64	18.80
5.40	0.33	0.00	0.00	15.80	4.74	2.67	16.76
5.60	0.34	0.00	0.00	16.00	4.76	2.69	15.02
5.80	0.36	0.00	0.00	16.20	4.78	2.71	13.49
6.00	0.38	0.00	0.00	16.40	4.81	2.72	12.17
6.20	0.39	0.00	0.00	16.60	4.83	2.74	11.01
6.40	0.41	0.00	0.00	16.80	4.85	2.76	10.01
6.60	0.43	0.00	0.00	17.00	4.87	2.78	9.14
6.80	0.45	0.00	0.00	17.20	4.88	2.79	8.37
7.00	0.47	0.00	0.00	17.40	4.90	2.81	7.71
7.20	0.49	0.00	0.00	17.60	4.92	2.82	7.12
7.40	0.51	0.00	0.00	17.80	4.94	2.84	6.62
7.60	0.53	0.00	0.00	18.00	4.96	2.85	6.17
7.80	0.55	0.00	0.00	18.20	4.97	2.87	5.79
8.00	0.57	0.00	0.00	18.40	4.99	2.88	5.45
8.20	0.60	0.00	0.00	18.60	5.00	2.90	5.13
8.40	0.62	0.01	0.01	18.80	5.02	2.91	4.87
8.60	0.65	0.01	0.01	19.00	5.03	2.92	4.61
8.80	0.67	0.01	0.03	19.20	5.05	2.94	4.40
9.00	0.70	0.01	0.05	19.40	5.06	2.95	4.20
9.20	0.73	0.02	0.07	19.60	5.08	2.96	4.03
9.40	0.76	0.02	0.11	19.80	5.09	2.97	3.87
9.60	0.80	0.03	0.16	20.00	5.10	2.98	3.72
9.80	0.83	0.04	0.21	20.20	5.12	3.00	3.58
10.00	0.87	0.05	0.28	20.40	5.13	3.01	3.45
10.20	0.91	0.06	0.36	20.60	5.14	3.02	3.33

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	3.21	31.20	5.33	3.18	0.01
21.00	5.17	3.04	3.11	31.40	5.33	3.18	0.01
21.20	5.18	3.05	3.02	31.60	5.33	3.18	0.00
21.40	5.19	3.06	2.94	31.80	5.33	3.18	0.00
21.60	5.20	3.07	2.87	32.00	5.33	3.18	0.00
21.80	5.21	3.08	2.80	32.20	5.33	3.18	0.00
22.00	5.23	3.09	2.74	32.40	5.33	3.18	0.00
22.20	5.24	3.10	2.68	32.60	5.33	3.18	0.00
22.40	5.25	3.11	2.63	32.80	5.33	3.18	0.00
22.60	5.26	3.12	2.58	33.00	5.33	3.18	0.00
22.80	5.27	3.13	2.53	33.20	5.33	3.18	0.00
23.00	5.28	3.14	2.48	33.40	5.33	3.18	0.00
23.20	5.29	3.15	2.43	33.60	5.33	3.18	0.00
23.40	5.30	3.16	2.39	33.80	5.33	3.18	0.00
23.60	5.31	3.17	2.35	34.00	5.33	3.18	0.00
23.80	5.32	3.17	2.31	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	2.27	34.40	5.33	3.18	0.00
24.20	5.33	3.18	2.24	34.60	5.33	3.18	0.00
24.40	5.33	3.18	2.20	34.80	5.33	3.18	0.00
24.60	5.33	3.18	2.15	35.00	5.33	3.18	0.00
24.80	5.33	3.18	2.08	35.20	5.33	3.18	0.00
25.00	5.33	3.18	2.00	35.40	5.33	3.18	0.00
25.20	5.33	3.18	1.88	35.60	5.33	3.18	0.00
25.40	5.33	3.18	1.74	35.80	5.33	3.18	0.00
25.60	5.33	3.18	1.58	36.00	5.33	3.18	0.00
25.80	5.33	3.18	1.40	36.20	5.33	3.18	0.00
26.00	5.33	3.18	1.22	36.40	5.33	3.18	0.00
26.20	5.33	3.18	1.05	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.89	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.74	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.61	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.51	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.42	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.35	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.29	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.24	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.20	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.16	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.14	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.11	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.09	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.08	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.06	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.05	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.04	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.04	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.03	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.02	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.02	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.02	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.01	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.01	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-07: DA-07 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-08: DA-08

[47] Hint: Peak is 577% of capacity of segment #3

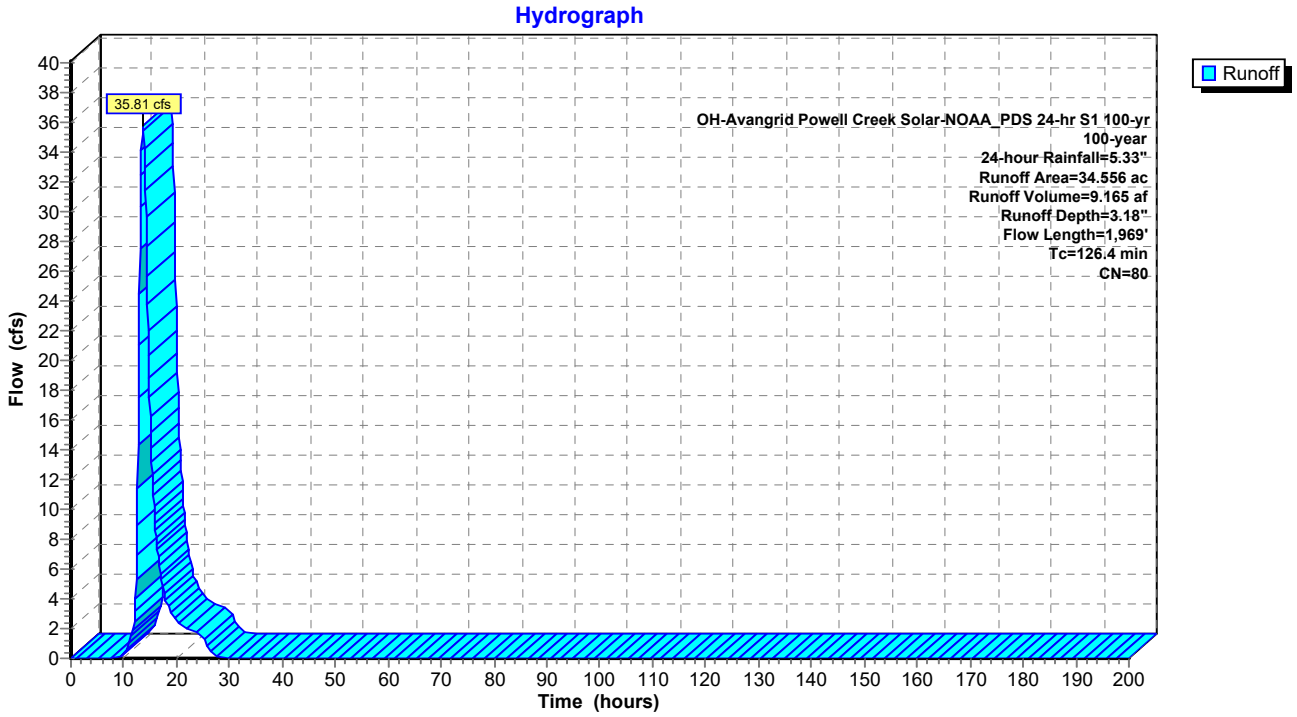
Runoff = 35.81 cfs @ 13.63 hrs, Volume= 9.165 af, Depth= 3.18"
Routed to Pond ST-08 : ST-08

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	33.954	80	>75% Grass cover, Good, HSG D
*	0.364	98	Internal Access Road
*	0.238	98	Inverter
	34.556	80	Weighted Average
	33.954		98.26% Pervious Area
	0.602		1.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
23.0	306	0.0010	0.22		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
14.6	1,363	0.0022	1.55	6.21	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
126.4	1,969	Total			

Subcatchment DA-08: DA-08



Hydrograph for Subcatchment DA-08: DA-08

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.53
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.65
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.78
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.93
0.80	0.04	0.00	0.00	11.20	1.20	0.15	1.12
1.00	0.05	0.00	0.00	11.40	1.29	0.19	1.34
1.20	0.06	0.00	0.00	11.60	1.50	0.29	1.61
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.98
1.60	0.08	0.00	0.00	12.00	2.95	1.21	2.63
1.80	0.09	0.00	0.00	12.20	3.52	1.66	4.04
2.00	0.10	0.00	0.00	12.40	3.87	1.93	6.97
2.20	0.12	0.00	0.00	12.60	4.06	2.09	11.45
2.40	0.13	0.00	0.00	12.80	4.15	2.16	17.55
2.60	0.14	0.00	0.00	13.00	4.22	2.22	24.44
2.80	0.15	0.00	0.00	13.20	4.28	2.28	30.31
3.00	0.16	0.00	0.00	13.40	4.33	2.32	34.10
3.20	0.18	0.00	0.00	13.60	4.38	2.36	**35.77**
3.40	0.19	0.00	0.00	13.80	4.43	2.40	35.11
3.60	0.20	0.00	0.00	14.00	4.47	2.43	32.98
3.80	0.21	0.00	0.00	14.20	4.51	2.47	29.67
4.00	0.23	0.00	0.00	14.40	4.54	2.50	25.65
4.20	0.24	0.00	0.00	14.60	4.57	2.52	21.98
4.40	0.25	0.00	0.00	14.80	4.60	2.55	18.85
4.60	0.27	0.00	0.00	15.00	4.63	2.58	16.27
4.80	0.28	0.00	0.00	15.20	4.66	2.60	14.15
5.00	0.30	0.00	0.00	15.40	4.69	2.62	12.36
5.20	0.31	0.00	0.00	15.60	4.71	2.64	10.88
5.40	0.33	0.00	0.00	15.80	4.74	2.67	9.63
5.60	0.34	0.00	0.00	16.00	4.76	2.69	8.57
5.80	0.36	0.00	0.00	16.20	4.78	2.71	7.70
6.00	0.38	0.00	0.00	16.40	4.81	2.72	6.95
6.20	0.39	0.00	0.00	16.60	4.83	2.74	6.32
6.40	0.41	0.00	0.00	16.80	4.85	2.76	5.79
6.60	0.43	0.00	0.00	17.00	4.87	2.78	5.35
6.80	0.45	0.00	0.00	17.20	4.88	2.79	4.95
7.00	0.47	0.00	0.00	17.40	4.90	2.81	4.61
7.20	0.49	0.00	0.00	17.60	4.92	2.82	4.33
7.40	0.51	0.00	0.00	17.80	4.94	2.84	4.07
7.60	0.53	0.00	0.00	18.00	4.96	2.85	3.85
7.80	0.55	0.00	0.00	18.20	4.97	2.87	3.66
8.00	0.57	0.00	0.00	18.40	4.99	2.88	3.49
8.20	0.60	0.00	0.00	18.60	5.00	2.90	3.32
8.40	0.62	0.01	0.01	18.80	5.02	2.91	3.17
8.60	0.65	0.01	0.02	19.00	5.03	2.92	3.03
8.80	0.67	0.01	0.04	19.20	5.05	2.94	2.91
9.00	0.70	0.01	0.07	19.40	5.06	2.95	2.81
9.20	0.73	0.02	0.11	19.60	5.08	2.96	2.72
9.40	0.76	0.02	0.15	19.80	5.09	2.97	2.65
9.60	0.80	0.03	0.21	20.00	5.10	2.98	2.57
9.80	0.83	0.04	0.27	20.20	5.12	3.00	2.50
10.00	0.87	0.05	0.35	20.40	5.13	3.01	2.44
10.20	0.91	0.06	0.43	20.60	5.14	3.02	2.38

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	2.33	31.20	5.33	3.18	0.00
21.00	5.17	3.04	2.27	31.40	5.33	3.18	0.00
21.20	5.18	3.05	2.23	31.60	5.33	3.18	0.00
21.40	5.19	3.06	2.18	31.80	5.33	3.18	0.00
21.60	5.20	3.07	2.13	32.00	5.33	3.18	0.00
21.80	5.21	3.08	2.09	32.20	5.33	3.18	0.00
22.00	5.23	3.09	2.05	32.40	5.33	3.18	0.00
22.20	5.24	3.10	2.01	32.60	5.33	3.18	0.00
22.40	5.25	3.11	1.97	32.80	5.33	3.18	0.00
22.60	5.26	3.12	1.94	33.00	5.33	3.18	0.00
22.80	5.27	3.13	1.90	33.20	5.33	3.18	0.00
23.00	5.28	3.14	1.87	33.40	5.33	3.18	0.00
23.20	5.29	3.15	1.84	33.60	5.33	3.18	0.00
23.40	5.30	3.16	1.81	33.80	5.33	3.18	0.00
23.60	5.31	3.17	1.78	34.00	5.33	3.18	0.00
23.80	5.32	3.17	1.75	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	1.72	34.40	5.33	3.18	0.00
24.20	5.33	3.18	1.70	34.60	5.33	3.18	0.00
24.40	5.33	3.18	1.66	34.80	5.33	3.18	0.00
24.60	5.33	3.18	1.61	35.00	5.33	3.18	0.00
24.80	5.33	3.18	1.54	35.20	5.33	3.18	0.00
25.00	5.33	3.18	1.43	35.40	5.33	3.18	0.00
25.20	5.33	3.18	1.29	35.60	5.33	3.18	0.00
25.40	5.33	3.18	1.12	35.80	5.33	3.18	0.00
25.60	5.33	3.18	0.95	36.00	5.33	3.18	0.00
25.80	5.33	3.18	0.78	36.20	5.33	3.18	0.00
26.00	5.33	3.18	0.63	36.40	5.33	3.18	0.00
26.20	5.33	3.18	0.50	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.39	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.31	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.25	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.20	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.15	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.12	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.10	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.08	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.06	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.05	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.04	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.03	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.02	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.02	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.01	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.01	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.01	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.01	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.00	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.00	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.00	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.00	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.00	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.00	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-08: DA-08 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-09-A: DA-09-A

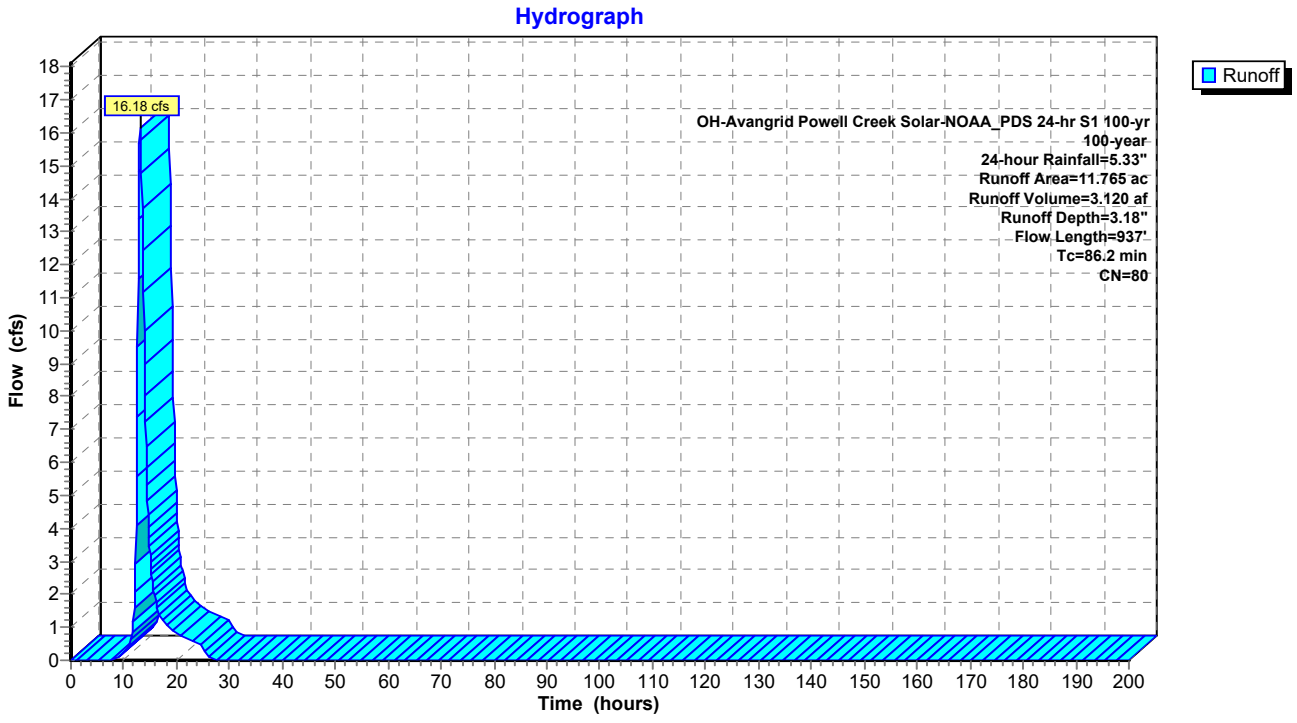
Runoff = 16.18 cfs @ 13.13 hrs, Volume= 3.120 af, Depth= 3.18"
Routed to Pond ST-09-A : ST-09-A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	11.532	80	>75% Grass cover, Good, HSG D
*	0.233	98	Internal Access Road
	11.765	80	Weighted Average
	11.532		98.02% Pervious Area
	0.233		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
50.5	300	0.0041	0.10		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
35.7	637	0.0018	0.30		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
86.2	937	Total			

Subcatchment DA-09-A: DA-09-A



Hydrograph for Subcatchment DA-09-A: DA-09-A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.29
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.34
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.41
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.49
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.58
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.70
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.85
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.09
1.60	0.08	0.00	0.00	12.00	2.95	1.21	1.60
1.80	0.09	0.00	0.00	12.20	3.52	1.66	2.92
2.00	0.10	0.00	0.00	12.40	3.87	1.93	5.59
2.20	0.12	0.00	0.00	12.60	4.06	2.09	9.50
2.40	0.13	0.00	0.00	12.80	4.15	2.16	13.40
2.60	0.14	0.00	0.00	13.00	4.22	2.22	**15.70**
2.80	0.15	0.00	0.00	13.20	4.28	2.28	**16.05**
3.00	0.16	0.00	0.00	13.40	4.33	2.32	14.75
3.20	0.18	0.00	0.00	13.60	4.38	2.36	12.41
3.40	0.19	0.00	0.00	13.80	4.43	2.40	10.01
3.60	0.20	0.00	0.00	14.00	4.47	2.43	8.02
3.80	0.21	0.00	0.00	14.20	4.51	2.47	6.49
4.00	0.23	0.00	0.00	14.40	4.54	2.50	5.32
4.20	0.24	0.00	0.00	14.60	4.57	2.52	4.43
4.40	0.25	0.00	0.00	14.80	4.60	2.55	3.74
4.60	0.27	0.00	0.00	15.00	4.63	2.58	3.20
4.80	0.28	0.00	0.00	15.20	4.66	2.60	2.79
5.00	0.30	0.00	0.00	15.40	4.69	2.62	2.46
5.20	0.31	0.00	0.00	15.60	4.71	2.64	2.20
5.40	0.33	0.00	0.00	15.80	4.74	2.67	2.00
5.60	0.34	0.00	0.00	16.00	4.76	2.69	1.83
5.80	0.36	0.00	0.00	16.20	4.78	2.71	1.69
6.00	0.38	0.00	0.00	16.40	4.81	2.72	1.57
6.20	0.39	0.00	0.00	16.60	4.83	2.74	1.46
6.40	0.41	0.00	0.00	16.80	4.85	2.76	1.37
6.60	0.43	0.00	0.00	17.00	4.87	2.78	1.29
6.80	0.45	0.00	0.00	17.20	4.88	2.79	1.23
7.00	0.47	0.00	0.00	17.40	4.90	2.81	1.18
7.20	0.49	0.00	0.00	17.60	4.92	2.82	1.14
7.40	0.51	0.00	0.00	17.80	4.94	2.84	1.10
7.60	0.53	0.00	0.00	18.00	4.96	2.85	1.06
7.80	0.55	0.00	0.00	18.20	4.97	2.87	1.02
8.00	0.57	0.00	0.00	18.40	4.99	2.88	0.99
8.20	0.60	0.00	0.01	18.60	5.00	2.90	0.96
8.40	0.62	0.01	0.01	18.80	5.02	2.91	0.93
8.60	0.65	0.01	0.02	19.00	5.03	2.92	0.91
8.80	0.67	0.01	0.04	19.20	5.05	2.94	0.88
9.00	0.70	0.01	0.06	19.40	5.06	2.95	0.86
9.20	0.73	0.02	0.08	19.60	5.08	2.96	0.84
9.40	0.76	0.02	0.10	19.80	5.09	2.97	0.82
9.60	0.80	0.03	0.13	20.00	5.10	2.98	0.80
9.80	0.83	0.04	0.16	20.20	5.12	3.00	0.78
10.00	0.87	0.05	0.20	20.40	5.13	3.01	0.77
10.20	0.91	0.06	0.24	20.60	5.14	3.02	0.75

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	0.73	31.20	5.33	3.18	0.00
21.00	5.17	3.04	0.72	31.40	5.33	3.18	0.00
21.20	5.18	3.05	0.71	31.60	5.33	3.18	0.00
21.40	5.19	3.06	0.69	31.80	5.33	3.18	0.00
21.60	5.20	3.07	0.68	32.00	5.33	3.18	0.00
21.80	5.21	3.08	0.67	32.20	5.33	3.18	0.00
22.00	5.23	3.09	0.65	32.40	5.33	3.18	0.00
22.20	5.24	3.10	0.64	32.60	5.33	3.18	0.00
22.40	5.25	3.11	0.63	32.80	5.33	3.18	0.00
22.60	5.26	3.12	0.62	33.00	5.33	3.18	0.00
22.80	5.27	3.13	0.61	33.20	5.33	3.18	0.00
23.00	5.28	3.14	0.60	33.40	5.33	3.18	0.00
23.20	5.29	3.15	0.59	33.60	5.33	3.18	0.00
23.40	5.30	3.16	0.58	33.80	5.33	3.18	0.00
23.60	5.31	3.17	0.57	34.00	5.33	3.18	0.00
23.80	5.32	3.17	0.57	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	0.56	34.40	5.33	3.18	0.00
24.20	5.33	3.18	0.55	34.60	5.33	3.18	0.00
24.40	5.33	3.18	0.53	34.80	5.33	3.18	0.00
24.60	5.33	3.18	0.50	35.00	5.33	3.18	0.00
24.80	5.33	3.18	0.43	35.20	5.33	3.18	0.00
25.00	5.33	3.18	0.35	35.40	5.33	3.18	0.00
25.20	5.33	3.18	0.27	35.60	5.33	3.18	0.00
25.40	5.33	3.18	0.20	35.80	5.33	3.18	0.00
25.60	5.33	3.18	0.14	36.00	5.33	3.18	0.00
25.80	5.33	3.18	0.10	36.20	5.33	3.18	0.00
26.00	5.33	3.18	0.07	36.40	5.33	3.18	0.00
26.20	5.33	3.18	0.05	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.04	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.02	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.02	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.01	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.01	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.01	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.00	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.00	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.00	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.00	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.00	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.00	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.00	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.00	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.00	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.00	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.00	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.00	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.00	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.00	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.00	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.00	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.00	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.00	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-A: DA-09-A (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-09-B: DA-09-B

[47] Hint: Peak is 536% of capacity of segment #3

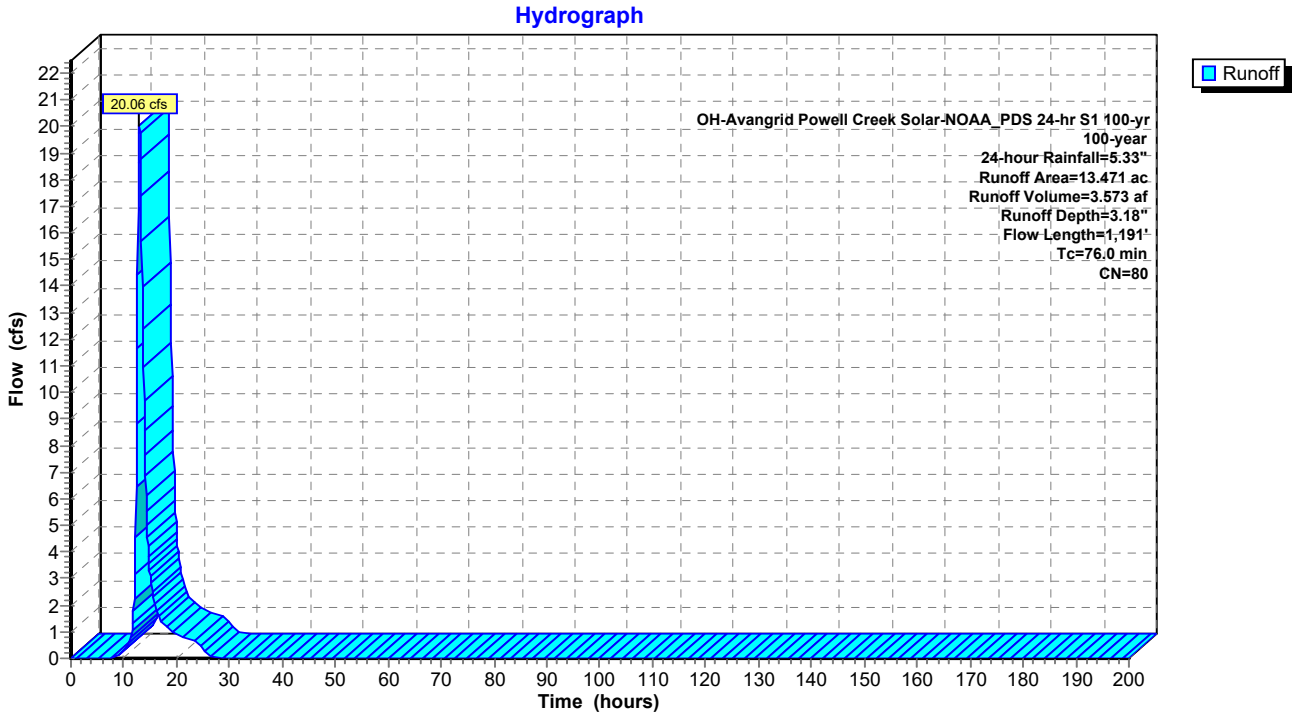
Runoff = 20.06 cfs @ 13.00 hrs, Volume= 3.573 af, Depth= 3.18"
Routed to Pond ST-09-B : ST-09-B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	13.150	80	>75% Grass cover, Good, HSG D
*	0.083	98	Internal Access Road
*	0.238	98	Inverter
	13.471	80	Weighted Average
	13.150		97.62% Pervious Area
	0.321		2.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.9	300	0.0074	0.13		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
30.0	550	0.0019	0.31		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
6.1	341	0.0008	0.94	3.74	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
76.0	1,191	Total			

Subcatchment DA-09-B: DA-09-B



Hydrograph for Subcatchment DA-09-B: DA-09-B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.37
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.44
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.52
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.62
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.74
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.90
1.20	0.06	0.00	0.00	11.60	1.50	0.29	1.10
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.44
1.60	0.08	0.00	0.00	12.00	2.95	1.21	2.26
1.80	0.09	0.00	0.00	12.20	3.52	1.66	4.54
2.00	0.10	0.00	0.00	12.40	3.87	1.93	8.85
2.20	0.12	0.00	0.00	12.60	4.06	2.09	14.44
2.40	0.13	0.00	0.00	12.80	4.15	2.16	18.65
2.60	0.14	0.00	0.00	13.00	4.22	2.22	**20.06**
2.80	0.15	0.00	0.00	13.20	4.28	2.28	18.78
3.00	0.16	0.00	0.00	13.40	4.33	2.32	15.68
3.20	0.18	0.00	0.00	13.60	4.38	2.36	12.39
3.40	0.19	0.00	0.00	13.80	4.43	2.40	9.68
3.60	0.20	0.00	0.00	14.00	4.47	2.43	7.62
3.80	0.21	0.00	0.00	14.20	4.51	2.47	6.13
4.00	0.23	0.00	0.00	14.40	4.54	2.50	5.02
4.20	0.24	0.00	0.00	14.60	4.57	2.52	4.19
4.40	0.25	0.00	0.00	14.80	4.60	2.55	3.57
4.60	0.27	0.00	0.00	15.00	4.63	2.58	3.09
4.80	0.28	0.00	0.00	15.20	4.66	2.60	2.73
5.00	0.30	0.00	0.00	15.40	4.69	2.62	2.45
5.20	0.31	0.00	0.00	15.60	4.71	2.64	2.22
5.40	0.33	0.00	0.00	15.80	4.74	2.67	2.04
5.60	0.34	0.00	0.00	16.00	4.76	2.69	1.88
5.80	0.36	0.00	0.00	16.20	4.78	2.71	1.74
6.00	0.38	0.00	0.00	16.40	4.81	2.72	1.63
6.20	0.39	0.00	0.00	16.60	4.83	2.74	1.55
6.40	0.41	0.00	0.00	16.80	4.85	2.76	1.48
6.60	0.43	0.00	0.00	17.00	4.87	2.78	1.41
6.80	0.45	0.00	0.00	17.20	4.88	2.79	1.36
7.00	0.47	0.00	0.00	17.40	4.90	2.81	1.30
7.20	0.49	0.00	0.00	17.60	4.92	2.82	1.26
7.40	0.51	0.00	0.00	17.80	4.94	2.84	1.22
7.60	0.53	0.00	0.00	18.00	4.96	2.85	1.18
7.80	0.55	0.00	0.00	18.20	4.97	2.87	1.14
8.00	0.57	0.00	0.00	18.40	4.99	2.88	1.10
8.20	0.60	0.00	0.01	18.60	5.00	2.90	1.07
8.40	0.62	0.01	0.02	18.80	5.02	2.91	1.04
8.60	0.65	0.01	0.03	19.00	5.03	2.92	1.02
8.80	0.67	0.01	0.05	19.20	5.05	2.94	0.99
9.00	0.70	0.01	0.08	19.40	5.06	2.95	0.96
9.20	0.73	0.02	0.11	19.60	5.08	2.96	0.94
9.40	0.76	0.02	0.14	19.80	5.09	2.97	0.92
9.60	0.80	0.03	0.17	20.00	5.10	2.98	0.90
9.80	0.83	0.04	0.21	20.20	5.12	3.00	0.88
10.00	0.87	0.05	0.26	20.40	5.13	3.01	0.86
10.20	0.91	0.06	0.31	20.60	5.14	3.02	0.84

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	0.83	31.20	5.33	3.18	0.00
21.00	5.17	3.04	0.81	31.40	5.33	3.18	0.00
21.20	5.18	3.05	0.79	31.60	5.33	3.18	0.00
21.40	5.19	3.06	0.78	31.80	5.33	3.18	0.00
21.60	5.20	3.07	0.77	32.00	5.33	3.18	0.00
21.80	5.21	3.08	0.75	32.20	5.33	3.18	0.00
22.00	5.23	3.09	0.74	32.40	5.33	3.18	0.00
22.20	5.24	3.10	0.73	32.60	5.33	3.18	0.00
22.40	5.25	3.11	0.71	32.80	5.33	3.18	0.00
22.60	5.26	3.12	0.70	33.00	5.33	3.18	0.00
22.80	5.27	3.13	0.69	33.20	5.33	3.18	0.00
23.00	5.28	3.14	0.68	33.40	5.33	3.18	0.00
23.20	5.29	3.15	0.67	33.60	5.33	3.18	0.00
23.40	5.30	3.16	0.66	33.80	5.33	3.18	0.00
23.60	5.31	3.17	0.65	34.00	5.33	3.18	0.00
23.80	5.32	3.17	0.64	34.20	5.33	3.18	0.00
24.00	**5.33**	**3.18**	0.63	34.40	5.33	3.18	0.00
24.20	5.33	3.18	0.62	34.60	5.33	3.18	0.00
24.40	5.33	3.18	0.60	34.80	5.33	3.18	0.00
24.60	5.33	3.18	0.54	35.00	5.33	3.18	0.00
24.80	5.33	3.18	0.45	35.20	5.33	3.18	0.00
25.00	5.33	3.18	0.34	35.40	5.33	3.18	0.00
25.20	5.33	3.18	0.24	35.60	5.33	3.18	0.00
25.40	5.33	3.18	0.16	35.80	5.33	3.18	0.00
25.60	5.33	3.18	0.11	36.00	5.33	3.18	0.00
25.80	5.33	3.18	0.07	36.20	5.33	3.18	0.00
26.00	5.33	3.18	0.05	36.40	5.33	3.18	0.00
26.20	5.33	3.18	0.03	36.60	5.33	3.18	0.00
26.40	5.33	3.18	0.02	36.80	5.33	3.18	0.00
26.60	5.33	3.18	0.02	37.00	5.33	3.18	0.00
26.80	5.33	3.18	0.01	37.20	5.33	3.18	0.00
27.00	5.33	3.18	0.01	37.40	5.33	3.18	0.00
27.20	5.33	3.18	0.00	37.60	5.33	3.18	0.00
27.40	5.33	3.18	0.00	37.80	5.33	3.18	0.00
27.60	5.33	3.18	0.00	38.00	5.33	3.18	0.00
27.80	5.33	3.18	0.00	38.20	5.33	3.18	0.00
28.00	5.33	3.18	0.00	38.40	5.33	3.18	0.00
28.20	5.33	3.18	0.00	38.60	5.33	3.18	0.00
28.40	5.33	3.18	0.00	38.80	5.33	3.18	0.00
28.60	5.33	3.18	0.00	39.00	5.33	3.18	0.00
28.80	5.33	3.18	0.00	39.20	5.33	3.18	0.00
29.00	5.33	3.18	0.00	39.40	5.33	3.18	0.00
29.20	5.33	3.18	0.00	39.60	5.33	3.18	0.00
29.40	5.33	3.18	0.00	39.80	5.33	3.18	0.00
29.60	5.33	3.18	0.00	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.00	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.00	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.00	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.00	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.00	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.00	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.00	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-09-B: DA-09-B (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-10: DA-10

[47] Hint: Peak is 507% of capacity of segment #3

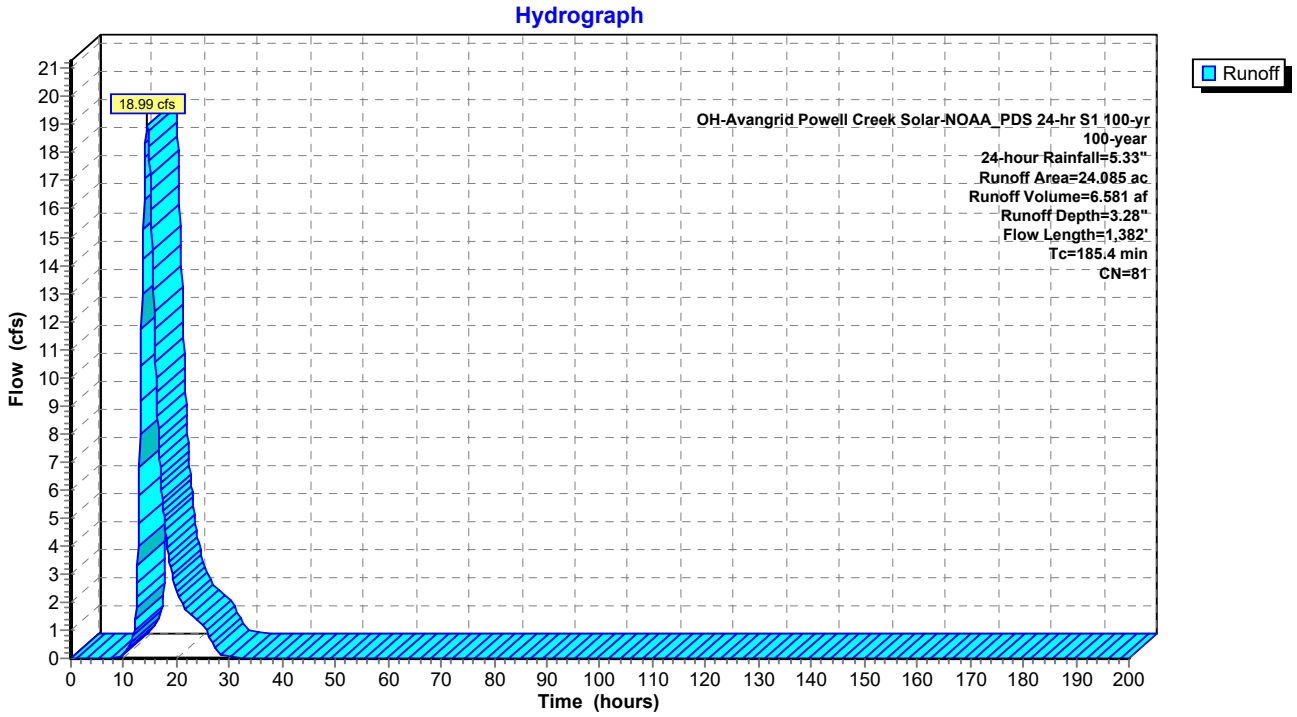
Runoff = 18.99 cfs @ 14.41 hrs, Volume= 6.581 af, Depth= 3.28"
Routed to Pond ST-10 : ST-10

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	23.300	80	>75% Grass cover, Good, HSG D
*	0.547	98	Internal Access Road
*	0.238	98	Inverter
	24.085	81	Weighted Average
	23.300		96.74% Pervious Area
	0.785		3.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
128.2	300	0.0004	0.04		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
48.1	571	0.0008	0.20		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
9.1	511	0.0008	0.94	3.74	**Trap/Vee/Rect Channel Flow, Swale** Bot.W=1.00' D=1.00' Z= 3.0 '/' Top.W=7.00' n= 0.030 Earth, grassed & winding
185.4	1,382	Total			

Subcatchment DA-10: DA-10



Hydrograph for Subcatchment DA-10: DA-10

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.08	0.24
0.20	0.01	0.00	0.00	10.60	1.01	0.10	0.29
0.40	0.02	0.00	0.00	10.80	1.06	0.12	0.36
0.60	0.03	0.00	0.00	11.00	1.13	0.14	0.43
0.80	0.04	0.00	0.00	11.20	1.20	0.17	0.51
1.00	0.05	0.00	0.00	11.40	1.29	0.21	0.61
1.20	0.06	0.00	0.00	11.60	1.50	0.31	0.73
1.40	0.07	0.00	0.00	11.80	1.87	0.52	0.87
1.60	0.08	0.00	0.00	12.00	2.95	1.27	1.10
1.80	0.09	0.00	0.00	12.20	3.52	1.73	1.52
2.00	0.10	0.00	0.00	12.40	3.87	2.01	2.20
2.20	0.12	0.00	0.00	12.60	4.06	2.17	3.28
2.40	0.13	0.00	0.00	12.80	4.15	2.24	4.82
2.60	0.14	0.00	0.00	13.00	4.22	2.31	6.79
2.80	0.15	0.00	0.00	13.20	4.28	2.36	9.16
3.00	0.16	0.00	0.00	13.40	4.33	2.41	11.70
3.20	0.18	0.00	0.00	13.60	4.38	2.45	14.22
3.40	0.19	0.00	0.00	13.80	4.43	2.49	16.32
3.60	0.20	0.00	0.00	14.00	4.47	2.52	17.81
3.80	0.21	0.00	0.00	14.20	4.51	2.55	18.76
4.00	0.23	0.00	0.00	14.40	4.54	2.58	**18.99**
4.20	0.24	0.00	0.00	14.60	4.57	2.61	18.86
4.40	0.25	0.00	0.00	14.80	4.60	2.64	18.19
4.60	0.27	0.00	0.00	15.00	4.63	2.66	17.22
4.80	0.28	0.00	0.00	15.20	4.66	2.69	15.96
5.00	0.30	0.00	0.00	15.40	4.69	2.71	14.56
5.20	0.31	0.00	0.00	15.60	4.71	2.73	13.08
5.40	0.33	0.00	0.00	15.80	4.74	2.75	11.70
5.60	0.34	0.00	0.00	16.00	4.76	2.78	10.51
5.80	0.36	0.00	0.00	16.20	4.78	2.80	9.49
6.00	0.38	0.00	0.00	16.40	4.81	2.81	8.60
6.20	0.39	0.00	0.00	16.60	4.83	2.83	7.82
6.40	0.41	0.00	0.00	16.80	4.85	2.85	7.13
6.60	0.43	0.00	0.00	17.00	4.87	2.87	6.51
6.80	0.45	0.00	0.00	17.20	4.88	2.88	5.96
7.00	0.47	0.00	0.00	17.40	4.90	2.90	5.47
7.20	0.49	0.00	0.00	17.60	4.92	2.92	5.04
7.40	0.51	0.00	0.00	17.80	4.94	2.93	4.66
7.60	0.53	0.00	0.00	18.00	4.96	2.95	4.32
7.80	0.55	0.00	0.00	18.20	4.97	2.96	4.02
8.00	0.57	0.00	0.00	18.40	4.99	2.97	3.75
8.20	0.60	0.01	0.00	18.60	5.00	2.99	3.50
8.40	0.62	0.01	0.01	18.80	5.02	3.00	3.29
8.60	0.65	0.01	0.01	19.00	5.03	3.02	3.10
8.80	0.67	0.02	0.02	19.20	5.05	3.03	2.93
9.00	0.70	0.02	0.03	19.40	5.06	3.04	2.78
9.20	0.73	0.03	0.05	19.60	5.08	3.05	2.64
9.40	0.76	0.03	0.07	19.80	5.09	3.07	2.51
9.60	0.80	0.04	0.09	20.00	5.10	3.08	2.40
9.80	0.83	0.05	0.12	20.20	5.12	3.09	2.29
10.00	0.87	0.06	0.15	20.40	5.13	3.10	2.20
10.20	0.91	0.07	0.19	20.60	5.14	3.11	2.12

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.12	2.04	31.20	5.33	3.28	0.01
21.00	5.17	3.13	1.97	31.40	5.33	3.28	0.01
21.20	5.18	3.14	1.90	31.60	5.33	3.28	0.01
21.40	5.19	3.16	1.84	31.80	5.33	3.28	0.01
21.60	5.20	3.17	1.78	32.00	5.33	3.28	0.01
21.80	5.21	3.18	1.72	32.20	5.33	3.28	0.01
22.00	5.23	3.19	1.67	32.40	5.33	3.28	0.00
22.20	5.24	3.20	1.62	32.60	5.33	3.28	0.00
22.40	5.25	3.21	1.57	32.80	5.33	3.28	0.00
22.60	5.26	3.21	1.53	33.00	5.33	3.28	0.00
22.80	5.27	3.22	1.49	33.20	5.33	3.28	0.00
23.00	5.28	3.23	1.46	33.40	5.33	3.28	0.00
23.20	5.29	3.24	1.43	33.60	5.33	3.28	0.00
23.40	5.30	3.25	1.40	33.80	5.33	3.28	0.00
23.60	5.31	3.26	1.38	34.00	5.33	3.28	0.00
23.80	5.32	3.27	1.35	34.20	5.33	3.28	0.00
24.00	**5.33**	**3.28**	1.33	34.40	5.33	3.28	0.00
24.20	5.33	3.28	1.30	34.60	5.33	3.28	0.00
24.40	5.33	3.28	1.28	34.80	5.33	3.28	0.00
24.60	5.33	3.28	1.25	35.00	5.33	3.28	0.00
24.80	5.33	3.28	1.22	35.20	5.33	3.28	0.00
25.00	5.33	3.28	1.18	35.40	5.33	3.28	0.00
25.20	5.33	3.28	1.14	35.60	5.33	3.28	0.00
25.40	5.33	3.28	1.08	35.80	5.33	3.28	0.00
25.60	5.33	3.28	1.01	36.00	5.33	3.28	0.00
25.80	5.33	3.28	0.93	36.20	5.33	3.28	0.00
26.00	5.33	3.28	0.84	36.40	5.33	3.28	0.00
26.20	5.33	3.28	0.76	36.60	5.33	3.28	0.00
26.40	5.33	3.28	0.67	36.80	5.33	3.28	0.00
26.60	5.33	3.28	0.59	37.00	5.33	3.28	0.00
26.80	5.33	3.28	0.51	37.20	5.33	3.28	0.00
27.00	5.33	3.28	0.44	37.40	5.33	3.28	0.00
27.20	5.33	3.28	0.37	37.60	5.33	3.28	0.00
27.40	5.33	3.28	0.32	37.80	5.33	3.28	0.00
27.60	5.33	3.28	0.27	38.00	5.33	3.28	0.00
27.80	5.33	3.28	0.23	38.20	5.33	3.28	0.00
28.00	5.33	3.28	0.19	38.40	5.33	3.28	0.00
28.20	5.33	3.28	0.17	38.60	5.33	3.28	0.00
28.40	5.33	3.28	0.14	38.80	5.33	3.28	0.00
28.60	5.33	3.28	0.12	39.00	5.33	3.28	0.00
28.80	5.33	3.28	0.10	39.20	5.33	3.28	0.00
29.00	5.33	3.28	0.09	39.40	5.33	3.28	0.00
29.20	5.33	3.28	0.07	39.60	5.33	3.28	0.00
29.40	5.33	3.28	0.06	39.80	5.33	3.28	0.00
29.60	5.33	3.28	0.05	40.00	5.33	3.28	0.00
29.80	5.33	3.28	0.05	40.20	5.33	3.28	0.00
30.00	5.33	3.28	0.04	40.40	5.33	3.28	0.00
30.20	5.33	3.28	0.03	40.60	5.33	3.28	0.00
30.40	5.33	3.28	0.03	40.80	5.33	3.28	0.00
30.60	5.33	3.28	0.02	41.00	5.33	3.28	0.00
30.80	5.33	3.28	0.02	41.20	5.33	3.28	0.00
31.00	5.33	3.28	0.02	41.40	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.28	0.00	52.00	5.33	3.28	0.00
41.80	5.33	3.28	0.00	52.20	5.33	3.28	0.00
42.00	5.33	3.28	0.00	52.40	5.33	3.28	0.00
42.20	5.33	3.28	0.00	52.60	5.33	3.28	0.00
42.40	5.33	3.28	0.00	52.80	5.33	3.28	0.00
42.60	5.33	3.28	0.00	53.00	5.33	3.28	0.00
42.80	5.33	3.28	0.00	53.20	5.33	3.28	0.00
43.00	5.33	3.28	0.00	53.40	5.33	3.28	0.00
43.20	5.33	3.28	0.00	53.60	5.33	3.28	0.00
43.40	5.33	3.28	0.00	53.80	5.33	3.28	0.00
43.60	5.33	3.28	0.00	54.00	5.33	3.28	0.00
43.80	5.33	3.28	0.00	54.20	5.33	3.28	0.00
44.00	5.33	3.28	0.00	54.40	5.33	3.28	0.00
44.20	5.33	3.28	0.00	54.60	5.33	3.28	0.00
44.40	5.33	3.28	0.00	54.80	5.33	3.28	0.00
44.60	5.33	3.28	0.00	55.00	5.33	3.28	0.00
44.80	5.33	3.28	0.00	55.20	5.33	3.28	0.00
45.00	5.33	3.28	0.00	55.40	5.33	3.28	0.00
45.20	5.33	3.28	0.00	55.60	5.33	3.28	0.00
45.40	5.33	3.28	0.00	55.80	5.33	3.28	0.00
45.60	5.33	3.28	0.00	56.00	5.33	3.28	0.00
45.80	5.33	3.28	0.00	56.20	5.33	3.28	0.00
46.00	5.33	3.28	0.00	56.40	5.33	3.28	0.00
46.20	5.33	3.28	0.00	56.60	5.33	3.28	0.00
46.40	5.33	3.28	0.00	56.80	5.33	3.28	0.00
46.60	5.33	3.28	0.00	57.00	5.33	3.28	0.00
46.80	5.33	3.28	0.00	57.20	5.33	3.28	0.00
47.00	5.33	3.28	0.00	57.40	5.33	3.28	0.00
47.20	5.33	3.28	0.00	57.60	5.33	3.28	0.00
47.40	5.33	3.28	0.00	57.80	5.33	3.28	0.00
47.60	5.33	3.28	0.00	58.00	5.33	3.28	0.00
47.80	5.33	3.28	0.00	58.20	5.33	3.28	0.00
48.00	5.33	3.28	0.00	58.40	5.33	3.28	0.00
48.20	5.33	3.28	0.00	58.60	5.33	3.28	0.00
48.40	5.33	3.28	0.00	58.80	5.33	3.28	0.00
48.60	5.33	3.28	0.00	59.00	5.33	3.28	0.00
48.80	5.33	3.28	0.00	59.20	5.33	3.28	0.00
49.00	5.33	3.28	0.00	59.40	5.33	3.28	0.00
49.20	5.33	3.28	0.00	59.60	5.33	3.28	0.00
49.40	5.33	3.28	0.00	59.80	5.33	3.28	0.00
49.60	5.33	3.28	0.00	60.00	5.33	3.28	0.00
49.80	5.33	3.28	0.00	60.20	5.33	3.28	0.00
50.00	5.33	3.28	0.00	60.40	5.33	3.28	0.00
50.20	5.33	3.28	0.00	60.60	5.33	3.28	0.00
50.40	5.33	3.28	0.00	60.80	5.33	3.28	0.00
50.60	5.33	3.28	0.00	61.00	5.33	3.28	0.00
50.80	5.33	3.28	0.00	61.20	5.33	3.28	0.00
51.00	5.33	3.28	0.00	61.40	5.33	3.28	0.00
51.20	5.33	3.28	0.00	61.60	5.33	3.28	0.00
51.40	5.33	3.28	0.00	61.80	5.33	3.28	0.00
51.60	5.33	3.28	0.00	62.00	5.33	3.28	0.00
51.80	5.33	3.28	0.00	62.20	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.28	0.00	72.80	5.33	3.28	0.00
62.60	5.33	3.28	0.00	73.00	5.33	3.28	0.00
62.80	5.33	3.28	0.00	73.20	5.33	3.28	0.00
63.00	5.33	3.28	0.00	73.40	5.33	3.28	0.00
63.20	5.33	3.28	0.00	73.60	5.33	3.28	0.00
63.40	5.33	3.28	0.00	73.80	5.33	3.28	0.00
63.60	5.33	3.28	0.00	74.00	5.33	3.28	0.00
63.80	5.33	3.28	0.00	74.20	5.33	3.28	0.00
64.00	5.33	3.28	0.00	74.40	5.33	3.28	0.00
64.20	5.33	3.28	0.00	74.60	5.33	3.28	0.00
64.40	5.33	3.28	0.00	74.80	5.33	3.28	0.00
64.60	5.33	3.28	0.00	75.00	5.33	3.28	0.00
64.80	5.33	3.28	0.00	75.20	5.33	3.28	0.00
65.00	5.33	3.28	0.00	75.40	5.33	3.28	0.00
65.20	5.33	3.28	0.00	75.60	5.33	3.28	0.00
65.40	5.33	3.28	0.00	75.80	5.33	3.28	0.00
65.60	5.33	3.28	0.00	76.00	5.33	3.28	0.00
65.80	5.33	3.28	0.00	76.20	5.33	3.28	0.00
66.00	5.33	3.28	0.00	76.40	5.33	3.28	0.00
66.20	5.33	3.28	0.00	76.60	5.33	3.28	0.00
66.40	5.33	3.28	0.00	76.80	5.33	3.28	0.00
66.60	5.33	3.28	0.00	77.00	5.33	3.28	0.00
66.80	5.33	3.28	0.00	77.20	5.33	3.28	0.00
67.00	5.33	3.28	0.00	77.40	5.33	3.28	0.00
67.20	5.33	3.28	0.00	77.60	5.33	3.28	0.00
67.40	5.33	3.28	0.00	77.80	5.33	3.28	0.00
67.60	5.33	3.28	0.00	78.00	5.33	3.28	0.00
67.80	5.33	3.28	0.00	78.20	5.33	3.28	0.00
68.00	5.33	3.28	0.00	78.40	5.33	3.28	0.00
68.20	5.33	3.28	0.00	78.60	5.33	3.28	0.00
68.40	5.33	3.28	0.00	78.80	5.33	3.28	0.00
68.60	5.33	3.28	0.00	79.00	5.33	3.28	0.00
68.80	5.33	3.28	0.00	79.20	5.33	3.28	0.00
69.00	5.33	3.28	0.00	79.40	5.33	3.28	0.00
69.20	5.33	3.28	0.00	79.60	5.33	3.28	0.00
69.40	5.33	3.28	0.00	79.80	5.33	3.28	0.00
69.60	5.33	3.28	0.00	80.00	5.33	3.28	0.00
69.80	5.33	3.28	0.00	80.20	5.33	3.28	0.00
70.00	5.33	3.28	0.00	80.40	5.33	3.28	0.00
70.20	5.33	3.28	0.00	80.60	5.33	3.28	0.00
70.40	5.33	3.28	0.00	80.80	5.33	3.28	0.00
70.60	5.33	3.28	0.00	81.00	5.33	3.28	0.00
70.80	5.33	3.28	0.00	81.20	5.33	3.28	0.00
71.00	5.33	3.28	0.00	81.40	5.33	3.28	0.00
71.20	5.33	3.28	0.00	81.60	5.33	3.28	0.00
71.40	5.33	3.28	0.00	81.80	5.33	3.28	0.00
71.60	5.33	3.28	0.00	82.00	5.33	3.28	0.00
71.80	5.33	3.28	0.00	82.20	5.33	3.28	0.00
72.00	5.33	3.28	0.00	82.40	5.33	3.28	0.00
72.20	5.33	3.28	0.00	82.60	5.33	3.28	0.00
72.40	5.33	3.28	0.00	82.80	5.33	3.28	0.00
72.60	5.33	3.28	0.00	83.00	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.28	0.00	93.60	5.33	3.28	0.00
83.40	5.33	3.28	0.00	93.80	5.33	3.28	0.00
83.60	5.33	3.28	0.00	94.00	5.33	3.28	0.00
83.80	5.33	3.28	0.00	94.20	5.33	3.28	0.00
84.00	5.33	3.28	0.00	94.40	5.33	3.28	0.00
84.20	5.33	3.28	0.00	94.60	5.33	3.28	0.00
84.40	5.33	3.28	0.00	94.80	5.33	3.28	0.00
84.60	5.33	3.28	0.00	95.00	5.33	3.28	0.00
84.80	5.33	3.28	0.00	95.20	5.33	3.28	0.00
85.00	5.33	3.28	0.00	95.40	5.33	3.28	0.00
85.20	5.33	3.28	0.00	95.60	5.33	3.28	0.00
85.40	5.33	3.28	0.00	95.80	5.33	3.28	0.00
85.60	5.33	3.28	0.00	96.00	5.33	3.28	0.00
85.80	5.33	3.28	0.00	96.20	5.33	3.28	0.00
86.00	5.33	3.28	0.00	96.40	5.33	3.28	0.00
86.20	5.33	3.28	0.00	96.60	5.33	3.28	0.00
86.40	5.33	3.28	0.00	96.80	5.33	3.28	0.00
86.60	5.33	3.28	0.00	97.00	5.33	3.28	0.00
86.80	5.33	3.28	0.00	97.20	5.33	3.28	0.00
87.00	5.33	3.28	0.00	97.40	5.33	3.28	0.00
87.20	5.33	3.28	0.00	97.60	5.33	3.28	0.00
87.40	5.33	3.28	0.00	97.80	5.33	3.28	0.00
87.60	5.33	3.28	0.00	98.00	5.33	3.28	0.00
87.80	5.33	3.28	0.00	98.20	5.33	3.28	0.00
88.00	5.33	3.28	0.00	98.40	5.33	3.28	0.00
88.20	5.33	3.28	0.00	98.60	5.33	3.28	0.00
88.40	5.33	3.28	0.00	98.80	5.33	3.28	0.00
88.60	5.33	3.28	0.00	99.00	5.33	3.28	0.00
88.80	5.33	3.28	0.00	99.20	5.33	3.28	0.00
89.00	5.33	3.28	0.00	99.40	5.33	3.28	0.00
89.20	5.33	3.28	0.00	99.60	5.33	3.28	0.00
89.40	5.33	3.28	0.00	99.80	5.33	3.28	0.00
89.60	5.33	3.28	0.00	100.00	5.33	3.28	0.00
89.80	5.33	3.28	0.00	100.20	5.33	3.28	0.00
90.00	5.33	3.28	0.00	100.40	5.33	3.28	0.00
90.20	5.33	3.28	0.00	100.60	5.33	3.28	0.00
90.40	5.33	3.28	0.00	100.80	5.33	3.28	0.00
90.60	5.33	3.28	0.00	101.00	5.33	3.28	0.00
90.80	5.33	3.28	0.00	101.20	5.33	3.28	0.00
91.00	5.33	3.28	0.00	101.40	5.33	3.28	0.00
91.20	5.33	3.28	0.00	101.60	5.33	3.28	0.00
91.40	5.33	3.28	0.00	101.80	5.33	3.28	0.00
91.60	5.33	3.28	0.00	102.00	5.33	3.28	0.00
91.80	5.33	3.28	0.00	102.20	5.33	3.28	0.00
92.00	5.33	3.28	0.00	102.40	5.33	3.28	0.00
92.20	5.33	3.28	0.00	102.60	5.33	3.28	0.00
92.40	5.33	3.28	0.00	102.80	5.33	3.28	0.00
92.60	5.33	3.28	0.00	103.00	5.33	3.28	0.00
92.80	5.33	3.28	0.00	103.20	5.33	3.28	0.00
93.00	5.33	3.28	0.00	103.40	5.33	3.28	0.00
93.20	5.33	3.28	0.00	103.60	5.33	3.28	0.00
93.40	5.33	3.28	0.00	103.80	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.28	0.00	114.40	5.33	3.28	0.00
104.20	5.33	3.28	0.00	114.60	5.33	3.28	0.00
104.40	5.33	3.28	0.00	114.80	5.33	3.28	0.00
104.60	5.33	3.28	0.00	115.00	5.33	3.28	0.00
104.80	5.33	3.28	0.00	115.20	5.33	3.28	0.00
105.00	5.33	3.28	0.00	115.40	5.33	3.28	0.00
105.20	5.33	3.28	0.00	115.60	5.33	3.28	0.00
105.40	5.33	3.28	0.00	115.80	5.33	3.28	0.00
105.60	5.33	3.28	0.00	116.00	5.33	3.28	0.00
105.80	5.33	3.28	0.00	116.20	5.33	3.28	0.00
106.00	5.33	3.28	0.00	116.40	5.33	3.28	0.00
106.20	5.33	3.28	0.00	116.60	5.33	3.28	0.00
106.40	5.33	3.28	0.00	116.80	5.33	3.28	0.00
106.60	5.33	3.28	0.00	117.00	5.33	3.28	0.00
106.80	5.33	3.28	0.00	117.20	5.33	3.28	0.00
107.00	5.33	3.28	0.00	117.40	5.33	3.28	0.00
107.20	5.33	3.28	0.00	117.60	5.33	3.28	0.00
107.40	5.33	3.28	0.00	117.80	5.33	3.28	0.00
107.60	5.33	3.28	0.00	118.00	5.33	3.28	0.00
107.80	5.33	3.28	0.00	118.20	5.33	3.28	0.00
108.00	5.33	3.28	0.00	118.40	5.33	3.28	0.00
108.20	5.33	3.28	0.00	118.60	5.33	3.28	0.00
108.40	5.33	3.28	0.00	118.80	5.33	3.28	0.00
108.60	5.33	3.28	0.00	119.00	5.33	3.28	0.00
108.80	5.33	3.28	0.00	119.20	5.33	3.28	0.00
109.00	5.33	3.28	0.00	119.40	5.33	3.28	0.00
109.20	5.33	3.28	0.00	119.60	5.33	3.28	0.00
109.40	5.33	3.28	0.00	119.80	5.33	3.28	0.00
109.60	5.33	3.28	0.00	120.00	5.33	3.28	0.00
109.80	5.33	3.28	0.00	120.20	5.33	3.28	0.00
110.00	5.33	3.28	0.00	120.40	5.33	3.28	0.00
110.20	5.33	3.28	0.00	120.60	5.33	3.28	0.00
110.40	5.33	3.28	0.00	120.80	5.33	3.28	0.00
110.60	5.33	3.28	0.00	121.00	5.33	3.28	0.00
110.80	5.33	3.28	0.00	121.20	5.33	3.28	0.00
111.00	5.33	3.28	0.00	121.40	5.33	3.28	0.00
111.20	5.33	3.28	0.00	121.60	5.33	3.28	0.00
111.40	5.33	3.28	0.00	121.80	5.33	3.28	0.00
111.60	5.33	3.28	0.00	122.00	5.33	3.28	0.00
111.80	5.33	3.28	0.00	122.20	5.33	3.28	0.00
112.00	5.33	3.28	0.00	122.40	5.33	3.28	0.00
112.20	5.33	3.28	0.00	122.60	5.33	3.28	0.00
112.40	5.33	3.28	0.00	122.80	5.33	3.28	0.00
112.60	5.33	3.28	0.00	123.00	5.33	3.28	0.00
112.80	5.33	3.28	0.00	123.20	5.33	3.28	0.00
113.00	5.33	3.28	0.00	123.40	5.33	3.28	0.00
113.20	5.33	3.28	0.00	123.60	5.33	3.28	0.00
113.40	5.33	3.28	0.00	123.80	5.33	3.28	0.00
113.60	5.33	3.28	0.00	124.00	5.33	3.28	0.00
113.80	5.33	3.28	0.00	124.20	5.33	3.28	0.00
114.00	5.33	3.28	0.00	124.40	5.33	3.28	0.00
114.20	5.33	3.28	0.00	124.60	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.28	0.00	135.20	5.33	3.28	0.00
125.00	5.33	3.28	0.00	135.40	5.33	3.28	0.00
125.20	5.33	3.28	0.00	135.60	5.33	3.28	0.00
125.40	5.33	3.28	0.00	135.80	5.33	3.28	0.00
125.60	5.33	3.28	0.00	136.00	5.33	3.28	0.00
125.80	5.33	3.28	0.00	136.20	5.33	3.28	0.00
126.00	5.33	3.28	0.00	136.40	5.33	3.28	0.00
126.20	5.33	3.28	0.00	136.60	5.33	3.28	0.00
126.40	5.33	3.28	0.00	136.80	5.33	3.28	0.00
126.60	5.33	3.28	0.00	137.00	5.33	3.28	0.00
126.80	5.33	3.28	0.00	137.20	5.33	3.28	0.00
127.00	5.33	3.28	0.00	137.40	5.33	3.28	0.00
127.20	5.33	3.28	0.00	137.60	5.33	3.28	0.00
127.40	5.33	3.28	0.00	137.80	5.33	3.28	0.00
127.60	5.33	3.28	0.00	138.00	5.33	3.28	0.00
127.80	5.33	3.28	0.00	138.20	5.33	3.28	0.00
128.00	5.33	3.28	0.00	138.40	5.33	3.28	0.00
128.20	5.33	3.28	0.00	138.60	5.33	3.28	0.00
128.40	5.33	3.28	0.00	138.80	5.33	3.28	0.00
128.60	5.33	3.28	0.00	139.00	5.33	3.28	0.00
128.80	5.33	3.28	0.00	139.20	5.33	3.28	0.00
129.00	5.33	3.28	0.00	139.40	5.33	3.28	0.00
129.20	5.33	3.28	0.00	139.60	5.33	3.28	0.00
129.40	5.33	3.28	0.00	139.80	5.33	3.28	0.00
129.60	5.33	3.28	0.00	140.00	5.33	3.28	0.00
129.80	5.33	3.28	0.00	140.20	5.33	3.28	0.00
130.00	5.33	3.28	0.00	140.40	5.33	3.28	0.00
130.20	5.33	3.28	0.00	140.60	5.33	3.28	0.00
130.40	5.33	3.28	0.00	140.80	5.33	3.28	0.00
130.60	5.33	3.28	0.00	141.00	5.33	3.28	0.00
130.80	5.33	3.28	0.00	141.20	5.33	3.28	0.00
131.00	5.33	3.28	0.00	141.40	5.33	3.28	0.00
131.20	5.33	3.28	0.00	141.60	5.33	3.28	0.00
131.40	5.33	3.28	0.00	141.80	5.33	3.28	0.00
131.60	5.33	3.28	0.00	142.00	5.33	3.28	0.00
131.80	5.33	3.28	0.00	142.20	5.33	3.28	0.00
132.00	5.33	3.28	0.00	142.40	5.33	3.28	0.00
132.20	5.33	3.28	0.00	142.60	5.33	3.28	0.00
132.40	5.33	3.28	0.00	142.80	5.33	3.28	0.00
132.60	5.33	3.28	0.00	143.00	5.33	3.28	0.00
132.80	5.33	3.28	0.00	143.20	5.33	3.28	0.00
133.00	5.33	3.28	0.00	143.40	5.33	3.28	0.00
133.20	5.33	3.28	0.00	143.60	5.33	3.28	0.00
133.40	5.33	3.28	0.00	143.80	5.33	3.28	0.00
133.60	5.33	3.28	0.00	144.00	5.33	3.28	0.00
133.80	5.33	3.28	0.00	144.20	5.33	3.28	0.00
134.00	5.33	3.28	0.00	144.40	5.33	3.28	0.00
134.20	5.33	3.28	0.00	144.60	5.33	3.28	0.00
134.40	5.33	3.28	0.00	144.80	5.33	3.28	0.00
134.60	5.33	3.28	0.00	145.00	5.33	3.28	0.00
134.80	5.33	3.28	0.00	145.20	5.33	3.28	0.00
135.00	5.33	3.28	0.00	145.40	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.28	0.00	156.00	5.33	3.28	0.00
145.80	5.33	3.28	0.00	156.20	5.33	3.28	0.00
146.00	5.33	3.28	0.00	156.40	5.33	3.28	0.00
146.20	5.33	3.28	0.00	156.60	5.33	3.28	0.00
146.40	5.33	3.28	0.00	156.80	5.33	3.28	0.00
146.60	5.33	3.28	0.00	157.00	5.33	3.28	0.00
146.80	5.33	3.28	0.00	157.20	5.33	3.28	0.00
147.00	5.33	3.28	0.00	157.40	5.33	3.28	0.00
147.20	5.33	3.28	0.00	157.60	5.33	3.28	0.00
147.40	5.33	3.28	0.00	157.80	5.33	3.28	0.00
147.60	5.33	3.28	0.00	158.00	5.33	3.28	0.00
147.80	5.33	3.28	0.00	158.20	5.33	3.28	0.00
148.00	5.33	3.28	0.00	158.40	5.33	3.28	0.00
148.20	5.33	3.28	0.00	158.60	5.33	3.28	0.00
148.40	5.33	3.28	0.00	158.80	5.33	3.28	0.00
148.60	5.33	3.28	0.00	159.00	5.33	3.28	0.00
148.80	5.33	3.28	0.00	159.20	5.33	3.28	0.00
149.00	5.33	3.28	0.00	159.40	5.33	3.28	0.00
149.20	5.33	3.28	0.00	159.60	5.33	3.28	0.00
149.40	5.33	3.28	0.00	159.80	5.33	3.28	0.00
149.60	5.33	3.28	0.00	160.00	5.33	3.28	0.00
149.80	5.33	3.28	0.00	160.20	5.33	3.28	0.00
150.00	5.33	3.28	0.00	160.40	5.33	3.28	0.00
150.20	5.33	3.28	0.00	160.60	5.33	3.28	0.00
150.40	5.33	3.28	0.00	160.80	5.33	3.28	0.00
150.60	5.33	3.28	0.00	161.00	5.33	3.28	0.00
150.80	5.33	3.28	0.00	161.20	5.33	3.28	0.00
151.00	5.33	3.28	0.00	161.40	5.33	3.28	0.00
151.20	5.33	3.28	0.00	161.60	5.33	3.28	0.00
151.40	5.33	3.28	0.00	161.80	5.33	3.28	0.00
151.60	5.33	3.28	0.00	162.00	5.33	3.28	0.00
151.80	5.33	3.28	0.00	162.20	5.33	3.28	0.00
152.00	5.33	3.28	0.00	162.40	5.33	3.28	0.00
152.20	5.33	3.28	0.00	162.60	5.33	3.28	0.00
152.40	5.33	3.28	0.00	162.80	5.33	3.28	0.00
152.60	5.33	3.28	0.00	163.00	5.33	3.28	0.00
152.80	5.33	3.28	0.00	163.20	5.33	3.28	0.00
153.00	5.33	3.28	0.00	163.40	5.33	3.28	0.00
153.20	5.33	3.28	0.00	163.60	5.33	3.28	0.00
153.40	5.33	3.28	0.00	163.80	5.33	3.28	0.00
153.60	5.33	3.28	0.00	164.00	5.33	3.28	0.00
153.80	5.33	3.28	0.00	164.20	5.33	3.28	0.00
154.00	5.33	3.28	0.00	164.40	5.33	3.28	0.00
154.20	5.33	3.28	0.00	164.60	5.33	3.28	0.00
154.40	5.33	3.28	0.00	164.80	5.33	3.28	0.00
154.60	5.33	3.28	0.00	165.00	5.33	3.28	0.00
154.80	5.33	3.28	0.00	165.20	5.33	3.28	0.00
155.00	5.33	3.28	0.00	165.40	5.33	3.28	0.00
155.20	5.33	3.28	0.00	165.60	5.33	3.28	0.00
155.40	5.33	3.28	0.00	165.80	5.33	3.28	0.00
155.60	5.33	3.28	0.00	166.00	5.33	3.28	0.00
155.80	5.33	3.28	0.00	166.20	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.28	0.00	176.80	5.33	3.28	0.00
166.60	5.33	3.28	0.00	177.00	5.33	3.28	0.00
166.80	5.33	3.28	0.00	177.20	5.33	3.28	0.00
167.00	5.33	3.28	0.00	177.40	5.33	3.28	0.00
167.20	5.33	3.28	0.00	177.60	5.33	3.28	0.00
167.40	5.33	3.28	0.00	177.80	5.33	3.28	0.00
167.60	5.33	3.28	0.00	178.00	5.33	3.28	0.00
167.80	5.33	3.28	0.00	178.20	5.33	3.28	0.00
168.00	5.33	3.28	0.00	178.40	5.33	3.28	0.00
168.20	5.33	3.28	0.00	178.60	5.33	3.28	0.00
168.40	5.33	3.28	0.00	178.80	5.33	3.28	0.00
168.60	5.33	3.28	0.00	179.00	5.33	3.28	0.00
168.80	5.33	3.28	0.00	179.20	5.33	3.28	0.00
169.00	5.33	3.28	0.00	179.40	5.33	3.28	0.00
169.20	5.33	3.28	0.00	179.60	5.33	3.28	0.00
169.40	5.33	3.28	0.00	179.80	5.33	3.28	0.00
169.60	5.33	3.28	0.00	180.00	5.33	3.28	0.00
169.80	5.33	3.28	0.00	180.20	5.33	3.28	0.00
170.00	5.33	3.28	0.00	180.40	5.33	3.28	0.00
170.20	5.33	3.28	0.00	180.60	5.33	3.28	0.00
170.40	5.33	3.28	0.00	180.80	5.33	3.28	0.00
170.60	5.33	3.28	0.00	181.00	5.33	3.28	0.00
170.80	5.33	3.28	0.00	181.20	5.33	3.28	0.00
171.00	5.33	3.28	0.00	181.40	5.33	3.28	0.00
171.20	5.33	3.28	0.00	181.60	5.33	3.28	0.00
171.40	5.33	3.28	0.00	181.80	5.33	3.28	0.00
171.60	5.33	3.28	0.00	182.00	5.33	3.28	0.00
171.80	5.33	3.28	0.00	182.20	5.33	3.28	0.00
172.00	5.33	3.28	0.00	182.40	5.33	3.28	0.00
172.20	5.33	3.28	0.00	182.60	5.33	3.28	0.00
172.40	5.33	3.28	0.00	182.80	5.33	3.28	0.00
172.60	5.33	3.28	0.00	183.00	5.33	3.28	0.00
172.80	5.33	3.28	0.00	183.20	5.33	3.28	0.00
173.00	5.33	3.28	0.00	183.40	5.33	3.28	0.00
173.20	5.33	3.28	0.00	183.60	5.33	3.28	0.00
173.40	5.33	3.28	0.00	183.80	5.33	3.28	0.00
173.60	5.33	3.28	0.00	184.00	5.33	3.28	0.00
173.80	5.33	3.28	0.00	184.20	5.33	3.28	0.00
174.00	5.33	3.28	0.00	184.40	5.33	3.28	0.00
174.20	5.33	3.28	0.00	184.60	5.33	3.28	0.00
174.40	5.33	3.28	0.00	184.80	5.33	3.28	0.00
174.60	5.33	3.28	0.00	185.00	5.33	3.28	0.00
174.80	5.33	3.28	0.00	185.20	5.33	3.28	0.00
175.00	5.33	3.28	0.00	185.40	5.33	3.28	0.00
175.20	5.33	3.28	0.00	185.60	5.33	3.28	0.00
175.40	5.33	3.28	0.00	185.80	5.33	3.28	0.00
175.60	5.33	3.28	0.00	186.00	5.33	3.28	0.00
175.80	5.33	3.28	0.00	186.20	5.33	3.28	0.00
176.00	5.33	3.28	0.00	186.40	5.33	3.28	0.00
176.20	5.33	3.28	0.00	186.60	5.33	3.28	0.00
176.40	5.33	3.28	0.00	186.80	5.33	3.28	0.00
176.60	5.33	3.28	0.00	187.00	5.33	3.28	0.00

Hydrograph for Subcatchment DA-10: DA-10 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.28	0.00
187.40	5.33	3.28	0.00
187.60	5.33	3.28	0.00
187.80	5.33	3.28	0.00
188.00	5.33	3.28	0.00
188.20	5.33	3.28	0.00
188.40	5.33	3.28	0.00
188.60	5.33	3.28	0.00
188.80	5.33	3.28	0.00
189.00	5.33	3.28	0.00
189.20	5.33	3.28	0.00
189.40	5.33	3.28	0.00
189.60	5.33	3.28	0.00
189.80	5.33	3.28	0.00
190.00	5.33	3.28	0.00
190.20	5.33	3.28	0.00
190.40	5.33	3.28	0.00
190.60	5.33	3.28	0.00
190.80	5.33	3.28	0.00
191.00	5.33	3.28	0.00
191.20	5.33	3.28	0.00
191.40	5.33	3.28	0.00
191.60	5.33	3.28	0.00
191.80	5.33	3.28	0.00
192.00	5.33	3.28	0.00
192.20	5.33	3.28	0.00
192.40	5.33	3.28	0.00
192.60	5.33	3.28	0.00
192.80	5.33	3.28	0.00
193.00	5.33	3.28	0.00
193.20	5.33	3.28	0.00
193.40	5.33	3.28	0.00
193.60	5.33	3.28	0.00
193.80	5.33	3.28	0.00
194.00	5.33	3.28	0.00
194.20	5.33	3.28	0.00
194.40	5.33	3.28	0.00
194.60	5.33	3.28	0.00
194.80	5.33	3.28	0.00
195.00	5.33	3.28	0.00
195.20	5.33	3.28	0.00
195.40	5.33	3.28	0.00
195.60	5.33	3.28	0.00
195.80	5.33	3.28	0.00
196.00	5.33	3.28	0.00
196.20	5.33	3.28	0.00
196.40	5.33	3.28	0.00
196.60	5.33	3.28	0.00
196.80	5.33	3.28	0.00
197.00	5.33	3.28	0.00
197.20	5.33	3.28	0.00
197.40	5.33	3.28	0.00
197.60	5.33	3.28	0.00
197.80	5.33	3.28	0.00
198.00	5.33	3.28	0.00
198.20	5.33	3.28	0.00
198.40	5.33	3.28	0.00
198.60	5.33	3.28	0.00
198.80	5.33	3.28	0.00
199.00	5.33	3.28	0.00
199.20	5.33	3.28	0.00
199.40	5.33	3.28	0.00
199.60	5.33	3.28	0.00
199.80	5.33	3.28	0.00
200.00	5.33	3.28	0.00

Summary for Subcatchment DA-11: DA-11

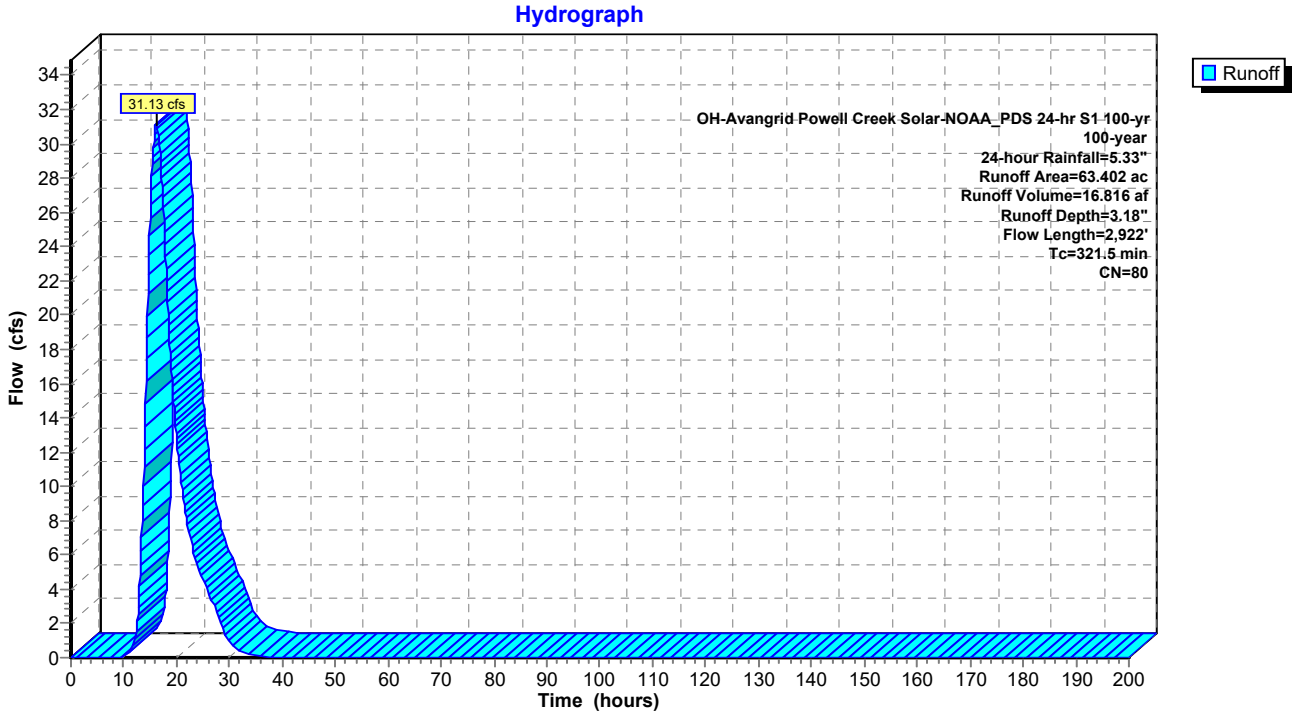
Runoff = 31.13 cfs @ 16.11 hrs, Volume= 16.816 af, Depth= 3.18"
Routed to Pond ST-11 : ST-11

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	61.965	80	>75% Grass cover, Good, HSG D
*	0.962	98	Internal Access Road
*	0.475	98	Inverter
	63.402	80	Weighted Average
	61.965		97.73% Pervious Area
	1.437		2.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
85.5	300	0.0011	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
236.0	2,622	0.0007	0.19		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
321.5	2,922	Total			

Subcatchment DA-11: DA-11



Hydrograph for Subcatchment DA-11: DA-11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.11
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.14
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.19
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.24
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.31
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.38
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.48
1.40	0.07	0.00	0.00	11.80	1.87	0.49	0.59
1.60	0.08	0.00	0.00	12.00	2.95	1.21	0.74
1.80	0.09	0.00	0.00	12.20	3.52	1.66	0.97
2.00	0.10	0.00	0.00	12.40	3.87	1.93	1.44
2.20	0.12	0.00	0.00	12.60	4.06	2.09	2.12
2.40	0.13	0.00	0.00	12.80	4.15	2.16	3.01
2.60	0.14	0.00	0.00	13.00	4.22	2.22	4.15
2.80	0.15	0.00	0.00	13.20	4.28	2.28	5.41
3.00	0.16	0.00	0.00	13.40	4.33	2.32	7.09
3.20	0.18	0.00	0.00	13.60	4.38	2.36	8.89
3.40	0.19	0.00	0.00	13.80	4.43	2.40	11.10
3.60	0.20	0.00	0.00	14.00	4.47	2.43	13.47
3.80	0.21	0.00	0.00	14.20	4.51	2.47	16.13
4.00	0.23	0.00	0.00	14.40	4.54	2.50	18.72
4.20	0.24	0.00	0.00	14.60	4.57	2.52	21.26
4.40	0.25	0.00	0.00	14.80	4.60	2.55	23.53
4.60	0.27	0.00	0.00	15.00	4.63	2.58	25.69
4.80	0.28	0.00	0.00	15.20	4.66	2.60	27.34
5.00	0.30	0.00	0.00	15.40	4.69	2.62	28.81
5.20	0.31	0.00	0.00	15.60	4.71	2.64	29.73
5.40	0.33	0.00	0.00	15.80	4.74	2.67	30.48
5.60	0.34	0.00	0.00	16.00	4.76	2.69	**30.98**
5.80	0.36	0.00	0.00	16.20	4.78	2.71	**31.02**
6.00	0.38	0.00	0.00	16.40	4.81	2.72	30.78
6.20	0.39	0.00	0.00	16.60	4.83	2.74	30.34
6.40	0.41	0.00	0.00	16.80	4.85	2.76	29.82
6.60	0.43	0.00	0.00	17.00	4.87	2.78	28.97
6.80	0.45	0.00	0.00	17.20	4.88	2.79	28.03
7.00	0.47	0.00	0.00	17.40	4.90	2.81	26.88
7.20	0.49	0.00	0.00	17.60	4.92	2.82	25.59
7.40	0.51	0.00	0.00	17.80	4.94	2.84	24.13
7.60	0.53	0.00	0.00	18.00	4.96	2.85	22.72
7.80	0.55	0.00	0.00	18.20	4.97	2.87	21.34
8.00	0.57	0.00	0.00	18.40	4.99	2.88	20.09
8.20	0.60	0.00	0.00	18.60	5.00	2.90	18.87
8.40	0.62	0.01	0.00	18.80	5.02	2.91	17.78
8.60	0.65	0.01	0.00	19.00	5.03	2.92	16.74
8.80	0.67	0.01	0.00	19.20	5.05	2.94	15.82
9.00	0.70	0.01	0.01	19.40	5.06	2.95	14.97
9.20	0.73	0.02	0.01	19.60	5.08	2.96	14.19
9.40	0.76	0.02	0.02	19.80	5.09	2.97	13.46
9.60	0.80	0.03	0.03	20.00	5.10	2.98	12.76
9.80	0.83	0.04	0.04	20.20	5.12	3.00	12.12
10.00	0.87	0.05	0.06	20.40	5.13	3.01	11.49
10.20	0.91	0.06	0.08	20.60	5.14	3.02	10.92

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	10.39	31.20	5.33	3.18	0.50
21.00	5.17	3.04	9.90	31.40	5.33	3.18	0.45
21.20	5.18	3.05	9.44	31.60	5.33	3.18	0.41
21.40	5.19	3.06	8.99	31.80	5.33	3.18	0.38
21.60	5.20	3.07	8.60	32.00	5.33	3.18	0.34
21.80	5.21	3.08	8.22	32.20	5.33	3.18	0.31
22.00	5.23	3.09	7.86	32.40	5.33	3.18	0.28
22.20	5.24	3.10	7.52	32.60	5.33	3.18	0.26
22.40	5.25	3.11	7.23	32.80	5.33	3.18	0.23
22.60	5.26	3.12	6.94	33.00	5.33	3.18	0.21
22.80	5.27	3.13	6.65	33.20	5.33	3.18	0.19
23.00	5.28	3.14	6.40	33.40	5.33	3.18	0.18
23.20	5.29	3.15	6.16	33.60	5.33	3.18	0.16
23.40	5.30	3.16	5.94	33.80	5.33	3.18	0.15
23.60	5.31	3.17	5.72	34.00	5.33	3.18	0.13
23.80	5.32	3.17	5.53	34.20	5.33	3.18	0.12
24.00	**5.33**	**3.18**	5.35	34.40	5.33	3.18	0.11
24.20	5.33	3.18	5.17	34.60	5.33	3.18	0.10
24.40	5.33	3.18	5.01	34.80	5.33	3.18	0.09
24.60	5.33	3.18	4.86	35.00	5.33	3.18	0.08
24.80	5.33	3.18	4.71	35.20	5.33	3.18	0.07
25.00	5.33	3.18	4.56	35.40	5.33	3.18	0.07
25.20	5.33	3.18	4.43	35.60	5.33	3.18	0.06
25.40	5.33	3.18	4.29	35.80	5.33	3.18	0.05
25.60	5.33	3.18	4.14	36.00	5.33	3.18	0.05
25.80	5.33	3.18	4.00	36.20	5.33	3.18	0.04
26.00	5.33	3.18	3.86	36.40	5.33	3.18	0.04
26.20	5.33	3.18	3.71	36.60	5.33	3.18	0.04
26.40	5.33	3.18	3.56	36.80	5.33	3.18	0.03
26.60	5.33	3.18	3.40	37.00	5.33	3.18	0.03
26.80	5.33	3.18	3.24	37.20	5.33	3.18	0.03
27.00	5.33	3.18	3.07	37.40	5.33	3.18	0.02
27.20	5.33	3.18	2.90	37.60	5.33	3.18	0.02
27.40	5.33	3.18	2.73	37.80	5.33	3.18	0.02
27.60	5.33	3.18	2.56	38.00	5.33	3.18	0.02
27.80	5.33	3.18	2.39	38.20	5.33	3.18	0.01
28.00	5.33	3.18	2.23	38.40	5.33	3.18	0.01
28.20	5.33	3.18	2.07	38.60	5.33	3.18	0.01
28.40	5.33	3.18	1.91	38.80	5.33	3.18	0.01
28.60	5.33	3.18	1.76	39.00	5.33	3.18	0.01
28.80	5.33	3.18	1.61	39.20	5.33	3.18	0.01
29.00	5.33	3.18	1.47	39.40	5.33	3.18	0.01
29.20	5.33	3.18	1.34	39.60	5.33	3.18	0.01
29.40	5.33	3.18	1.22	39.80	5.33	3.18	0.01
29.60	5.33	3.18	1.10	40.00	5.33	3.18	0.00
29.80	5.33	3.18	0.99	40.20	5.33	3.18	0.00
30.00	5.33	3.18	0.89	40.40	5.33	3.18	0.00
30.20	5.33	3.18	0.81	40.60	5.33	3.18	0.00
30.40	5.33	3.18	0.73	40.80	5.33	3.18	0.00
30.60	5.33	3.18	0.66	41.00	5.33	3.18	0.00
30.80	5.33	3.18	0.60	41.20	5.33	3.18	0.00
31.00	5.33	3.18	0.55	41.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.00	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.00	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.00	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.00	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.00	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.00	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.00	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.00	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.00	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.00	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.00	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.00	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.00	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.00	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.00	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.00	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.00	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-11: DA-11 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Subcatchment DA-12: DA-12

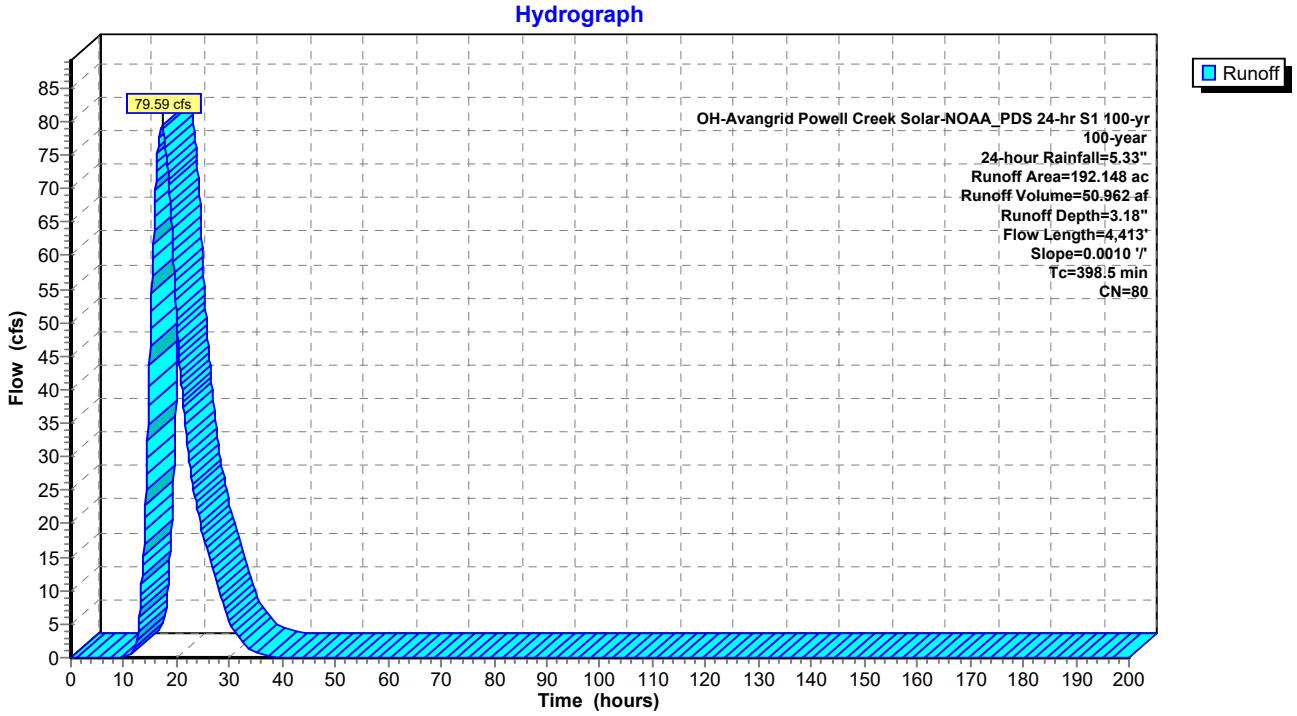
Runoff = 79.59 cfs @ 17.26 hrs, Volume= 50.962 af, Depth= 3.18"
Routed to Pond ST-12 : ST-12

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
OH-Avangrid Powell Creek Solar-NOAA_PDS 24-hr S1 100-yr 100-year, 24-hour Rainfall=5.33"

	Area (ac)	CN	Description
	188.321	80	>75% Grass cover, Good, HSG D
*	2.638	98	Internal Access Road
*	1.189	98	Inverter
	192.148	80	Weighted Average
	188.321		98.01% Pervious Area
	3.827		1.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
88.8	300	0.0010	0.06		**Sheet Flow, SheetFlow** Grass: Short n= 0.150 P2= 2.48"
309.7	4,113	0.0010	0.22		**Shallow Concentrated Flow, ShallowConcFlow** Short Grass Pasture Kv= 7.0 fps
398.5	4,413	Total			

Subcatchment DA-12: DA-12



Hydrograph for Subcatchment DA-12: DA-12

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	10.40	0.96	0.07	0.17
0.20	0.01	0.00	0.00	10.60	1.01	0.09	0.22
0.40	0.02	0.00	0.00	10.80	1.06	0.10	0.30
0.60	0.03	0.00	0.00	11.00	1.13	0.13	0.38
0.80	0.04	0.00	0.00	11.20	1.20	0.15	0.49
1.00	0.05	0.00	0.00	11.40	1.29	0.19	0.62
1.20	0.06	0.00	0.00	11.60	1.50	0.29	0.79
1.40	0.07	0.00	0.00	11.80	1.87	0.49	1.00
1.60	0.08	0.00	0.00	12.00	2.95	1.21	1.23
1.80	0.09	0.00	0.00	12.20	3.52	1.66	1.55
2.00	0.10	0.00	0.00	12.40	3.87	1.93	1.92
2.20	0.12	0.00	0.00	12.60	4.06	2.09	3.00
2.40	0.13	0.00	0.00	12.80	4.15	2.16	4.13
2.60	0.14	0.00	0.00	13.00	4.22	2.22	6.11
2.80	0.15	0.00	0.00	13.20	4.28	2.28	8.30
3.00	0.16	0.00	0.00	13.40	4.33	2.32	10.90
3.20	0.18	0.00	0.00	13.60	4.38	2.36	13.80
3.40	0.19	0.00	0.00	13.80	4.43	2.40	17.05
3.60	0.20	0.00	0.00	14.00	4.47	2.43	20.92
3.80	0.21	0.00	0.00	14.20	4.51	2.47	24.97
4.00	0.23	0.00	0.00	14.40	4.54	2.50	29.91
4.20	0.24	0.00	0.00	14.60	4.57	2.52	34.89
4.40	0.25	0.00	0.00	14.80	4.60	2.55	40.62
4.60	0.27	0.00	0.00	15.00	4.63	2.58	46.43
4.80	0.28	0.00	0.00	15.20	4.66	2.60	51.84
5.00	0.30	0.00	0.00	15.40	4.69	2.62	57.09
5.20	0.31	0.00	0.00	15.60	4.71	2.64	61.78
5.40	0.33	0.00	0.00	15.80	4.74	2.67	65.93
5.60	0.34	0.00	0.00	16.00	4.76	2.69	69.70
5.80	0.36	0.00	0.00	16.20	4.78	2.71	72.55
6.00	0.38	0.00	0.00	16.40	4.81	2.72	75.24
6.20	0.39	0.00	0.00	16.60	4.83	2.74	76.68
6.40	0.41	0.00	0.00	16.80	4.85	2.76	78.07
6.60	0.43	0.00	0.00	17.00	4.87	2.78	78.83
6.80	0.45	0.00	0.00	17.20	4.88	2.79	**79.49**
7.00	0.47	0.00	0.00	17.40	4.90	2.81	**79.14**
7.20	0.49	0.00	0.00	17.60	4.92	2.82	78.26
7.40	0.51	0.00	0.00	17.80	4.94	2.84	77.19
7.60	0.53	0.00	0.00	18.00	4.96	2.85	75.86
7.80	0.55	0.00	0.00	18.20	4.97	2.87	74.40
8.00	0.57	0.00	0.00	18.40	4.99	2.88	72.45
8.20	0.60	0.00	0.00	18.60	5.00	2.90	70.46
8.40	0.62	0.01	0.00	18.80	5.02	2.91	67.95
8.60	0.65	0.01	0.00	19.00	5.03	2.92	65.40
8.80	0.67	0.01	0.01	19.20	5.05	2.94	62.33
9.00	0.70	0.01	0.01	19.40	5.06	2.95	59.12
9.20	0.73	0.02	0.02	19.60	5.08	2.96	56.11
9.40	0.76	0.02	0.03	19.80	5.09	2.97	53.25
9.60	0.80	0.03	0.04	20.00	5.10	2.98	50.58
9.80	0.83	0.04	0.06	20.20	5.12	3.00	48.23
10.00	0.87	0.05	0.09	20.40	5.13	3.01	45.94
10.20	0.91	0.06	0.12	20.60	5.14	3.02	43.87

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
20.80	5.16	3.03	41.81	31.20	5.33	3.18	3.54
21.00	5.17	3.04	39.98	31.40	5.33	3.18	3.28
21.20	5.18	3.05	38.17	31.60	5.33	3.18	3.05
21.40	5.19	3.06	36.59	31.80	5.33	3.18	2.83
21.60	5.20	3.07	35.09	32.00	5.33	3.18	2.63
21.80	5.21	3.08	33.66	32.20	5.33	3.18	2.44
22.00	5.23	3.09	32.30	32.40	5.33	3.18	2.26
22.20	5.24	3.10	30.96	32.60	5.33	3.18	2.10
22.40	5.25	3.11	29.69	32.80	5.33	3.18	1.94
22.60	5.26	3.12	28.43	33.00	5.33	3.18	1.79
22.80	5.27	3.13	27.31	33.20	5.33	3.18	1.65
23.00	5.28	3.14	26.19	33.40	5.33	3.18	1.52
23.20	5.29	3.15	25.23	33.60	5.33	3.18	1.39
23.40	5.30	3.16	24.29	33.80	5.33	3.18	1.28
23.60	5.31	3.17	23.39	34.00	5.33	3.18	1.17
23.80	5.32	3.17	22.52	34.20	5.33	3.18	1.06
24.00	**5.33**	**3.18**	21.70	34.40	5.33	3.18	0.96
24.20	5.33	3.18	20.96	34.60	5.33	3.18	0.87
24.40	5.33	3.18	20.22	34.80	5.33	3.18	0.80
24.60	5.33	3.18	19.53	35.00	5.33	3.18	0.74
24.80	5.33	3.18	18.84	35.20	5.33	3.18	0.68
25.00	5.33	3.18	18.24	35.40	5.33	3.18	0.63
25.20	5.33	3.18	17.65	35.60	5.33	3.18	0.58
25.40	5.33	3.18	17.05	35.80	5.33	3.18	0.54
25.60	5.33	3.18	16.44	36.00	5.33	3.18	0.50
25.80	5.33	3.18	15.89	36.20	5.33	3.18	0.46
26.00	5.33	3.18	15.38	36.40	5.33	3.18	0.42
26.20	5.33	3.18	14.86	36.60	5.33	3.18	0.39
26.40	5.33	3.18	14.32	36.80	5.33	3.18	0.36
26.60	5.33	3.18	13.80	37.00	5.33	3.18	0.33
26.80	5.33	3.18	13.29	37.20	5.33	3.18	0.30
27.00	5.33	3.18	12.78	37.40	5.33	3.18	0.28
27.20	5.33	3.18	12.25	37.60	5.33	3.18	0.26
27.40	5.33	3.18	11.71	37.80	5.33	3.18	0.24
27.60	5.33	3.18	11.19	38.00	5.33	3.18	0.22
27.80	5.33	3.18	10.69	38.20	5.33	3.18	0.20
28.00	5.33	3.18	10.16	38.40	5.33	3.18	0.19
28.20	5.33	3.18	9.63	38.60	5.33	3.18	0.17
28.40	5.33	3.18	9.11	38.80	5.33	3.18	0.16
28.60	5.33	3.18	8.62	39.00	5.33	3.18	0.15
28.80	5.33	3.18	8.14	39.20	5.33	3.18	0.14
29.00	5.33	3.18	7.65	39.40	5.33	3.18	0.12
29.20	5.33	3.18	7.17	39.60	5.33	3.18	0.11
29.40	5.33	3.18	6.74	39.80	5.33	3.18	0.10
29.60	5.33	3.18	6.31	40.00	5.33	3.18	0.10
29.80	5.33	3.18	5.90	40.20	5.33	3.18	0.09
30.00	5.33	3.18	5.50	40.40	5.33	3.18	0.08
30.20	5.33	3.18	5.12	40.60	5.33	3.18	0.07
30.40	5.33	3.18	4.76	40.80	5.33	3.18	0.07
30.60	5.33	3.18	4.42	41.00	5.33	3.18	0.06
30.80	5.33	3.18	4.11	41.20	5.33	3.18	0.06
31.00	5.33	3.18	3.81	41.40	5.33	3.18	0.05

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
41.60	5.33	3.18	0.05	52.00	5.33	3.18	0.00
41.80	5.33	3.18	0.04	52.20	5.33	3.18	0.00
42.00	5.33	3.18	0.04	52.40	5.33	3.18	0.00
42.20	5.33	3.18	0.03	52.60	5.33	3.18	0.00
42.40	5.33	3.18	0.03	52.80	5.33	3.18	0.00
42.60	5.33	3.18	0.03	53.00	5.33	3.18	0.00
42.80	5.33	3.18	0.03	53.20	5.33	3.18	0.00
43.00	5.33	3.18	0.02	53.40	5.33	3.18	0.00
43.20	5.33	3.18	0.02	53.60	5.33	3.18	0.00
43.40	5.33	3.18	0.02	53.80	5.33	3.18	0.00
43.60	5.33	3.18	0.02	54.00	5.33	3.18	0.00
43.80	5.33	3.18	0.01	54.20	5.33	3.18	0.00
44.00	5.33	3.18	0.01	54.40	5.33	3.18	0.00
44.20	5.33	3.18	0.01	54.60	5.33	3.18	0.00
44.40	5.33	3.18	0.01	54.80	5.33	3.18	0.00
44.60	5.33	3.18	0.01	55.00	5.33	3.18	0.00
44.80	5.33	3.18	0.01	55.20	5.33	3.18	0.00
45.00	5.33	3.18	0.00	55.40	5.33	3.18	0.00
45.20	5.33	3.18	0.00	55.60	5.33	3.18	0.00
45.40	5.33	3.18	0.00	55.80	5.33	3.18	0.00
45.60	5.33	3.18	0.00	56.00	5.33	3.18	0.00
45.80	5.33	3.18	0.00	56.20	5.33	3.18	0.00
46.00	5.33	3.18	0.00	56.40	5.33	3.18	0.00
46.20	5.33	3.18	0.00	56.60	5.33	3.18	0.00
46.40	5.33	3.18	0.00	56.80	5.33	3.18	0.00
46.60	5.33	3.18	0.00	57.00	5.33	3.18	0.00
46.80	5.33	3.18	0.00	57.20	5.33	3.18	0.00
47.00	5.33	3.18	0.00	57.40	5.33	3.18	0.00
47.20	5.33	3.18	0.00	57.60	5.33	3.18	0.00
47.40	5.33	3.18	0.00	57.80	5.33	3.18	0.00
47.60	5.33	3.18	0.00	58.00	5.33	3.18	0.00
47.80	5.33	3.18	0.00	58.20	5.33	3.18	0.00
48.00	5.33	3.18	0.00	58.40	5.33	3.18	0.00
48.20	5.33	3.18	0.00	58.60	5.33	3.18	0.00
48.40	5.33	3.18	0.00	58.80	5.33	3.18	0.00
48.60	5.33	3.18	0.00	59.00	5.33	3.18	0.00
48.80	5.33	3.18	0.00	59.20	5.33	3.18	0.00
49.00	5.33	3.18	0.00	59.40	5.33	3.18	0.00
49.20	5.33	3.18	0.00	59.60	5.33	3.18	0.00
49.40	5.33	3.18	0.00	59.80	5.33	3.18	0.00
49.60	5.33	3.18	0.00	60.00	5.33	3.18	0.00
49.80	5.33	3.18	0.00	60.20	5.33	3.18	0.00
50.00	5.33	3.18	0.00	60.40	5.33	3.18	0.00
50.20	5.33	3.18	0.00	60.60	5.33	3.18	0.00
50.40	5.33	3.18	0.00	60.80	5.33	3.18	0.00
50.60	5.33	3.18	0.00	61.00	5.33	3.18	0.00
50.80	5.33	3.18	0.00	61.20	5.33	3.18	0.00
51.00	5.33	3.18	0.00	61.40	5.33	3.18	0.00
51.20	5.33	3.18	0.00	61.60	5.33	3.18	0.00
51.40	5.33	3.18	0.00	61.80	5.33	3.18	0.00
51.60	5.33	3.18	0.00	62.00	5.33	3.18	0.00
51.80	5.33	3.18	0.00	62.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
62.40	5.33	3.18	0.00	72.80	5.33	3.18	0.00
62.60	5.33	3.18	0.00	73.00	5.33	3.18	0.00
62.80	5.33	3.18	0.00	73.20	5.33	3.18	0.00
63.00	5.33	3.18	0.00	73.40	5.33	3.18	0.00
63.20	5.33	3.18	0.00	73.60	5.33	3.18	0.00
63.40	5.33	3.18	0.00	73.80	5.33	3.18	0.00
63.60	5.33	3.18	0.00	74.00	5.33	3.18	0.00
63.80	5.33	3.18	0.00	74.20	5.33	3.18	0.00
64.00	5.33	3.18	0.00	74.40	5.33	3.18	0.00
64.20	5.33	3.18	0.00	74.60	5.33	3.18	0.00
64.40	5.33	3.18	0.00	74.80	5.33	3.18	0.00
64.60	5.33	3.18	0.00	75.00	5.33	3.18	0.00
64.80	5.33	3.18	0.00	75.20	5.33	3.18	0.00
65.00	5.33	3.18	0.00	75.40	5.33	3.18	0.00
65.20	5.33	3.18	0.00	75.60	5.33	3.18	0.00
65.40	5.33	3.18	0.00	75.80	5.33	3.18	0.00
65.60	5.33	3.18	0.00	76.00	5.33	3.18	0.00
65.80	5.33	3.18	0.00	76.20	5.33	3.18	0.00
66.00	5.33	3.18	0.00	76.40	5.33	3.18	0.00
66.20	5.33	3.18	0.00	76.60	5.33	3.18	0.00
66.40	5.33	3.18	0.00	76.80	5.33	3.18	0.00
66.60	5.33	3.18	0.00	77.00	5.33	3.18	0.00
66.80	5.33	3.18	0.00	77.20	5.33	3.18	0.00
67.00	5.33	3.18	0.00	77.40	5.33	3.18	0.00
67.20	5.33	3.18	0.00	77.60	5.33	3.18	0.00
67.40	5.33	3.18	0.00	77.80	5.33	3.18	0.00
67.60	5.33	3.18	0.00	78.00	5.33	3.18	0.00
67.80	5.33	3.18	0.00	78.20	5.33	3.18	0.00
68.00	5.33	3.18	0.00	78.40	5.33	3.18	0.00
68.20	5.33	3.18	0.00	78.60	5.33	3.18	0.00
68.40	5.33	3.18	0.00	78.80	5.33	3.18	0.00
68.60	5.33	3.18	0.00	79.00	5.33	3.18	0.00
68.80	5.33	3.18	0.00	79.20	5.33	3.18	0.00
69.00	5.33	3.18	0.00	79.40	5.33	3.18	0.00
69.20	5.33	3.18	0.00	79.60	5.33	3.18	0.00
69.40	5.33	3.18	0.00	79.80	5.33	3.18	0.00
69.60	5.33	3.18	0.00	80.00	5.33	3.18	0.00
69.80	5.33	3.18	0.00	80.20	5.33	3.18	0.00
70.00	5.33	3.18	0.00	80.40	5.33	3.18	0.00
70.20	5.33	3.18	0.00	80.60	5.33	3.18	0.00
70.40	5.33	3.18	0.00	80.80	5.33	3.18	0.00
70.60	5.33	3.18	0.00	81.00	5.33	3.18	0.00
70.80	5.33	3.18	0.00	81.20	5.33	3.18	0.00
71.00	5.33	3.18	0.00	81.40	5.33	3.18	0.00
71.20	5.33	3.18	0.00	81.60	5.33	3.18	0.00
71.40	5.33	3.18	0.00	81.80	5.33	3.18	0.00
71.60	5.33	3.18	0.00	82.00	5.33	3.18	0.00
71.80	5.33	3.18	0.00	82.20	5.33	3.18	0.00
72.00	5.33	3.18	0.00	82.40	5.33	3.18	0.00
72.20	5.33	3.18	0.00	82.60	5.33	3.18	0.00
72.40	5.33	3.18	0.00	82.80	5.33	3.18	0.00
72.60	5.33	3.18	0.00	83.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
83.20	5.33	3.18	0.00	93.60	5.33	3.18	0.00
83.40	5.33	3.18	0.00	93.80	5.33	3.18	0.00
83.60	5.33	3.18	0.00	94.00	5.33	3.18	0.00
83.80	5.33	3.18	0.00	94.20	5.33	3.18	0.00
84.00	5.33	3.18	0.00	94.40	5.33	3.18	0.00
84.20	5.33	3.18	0.00	94.60	5.33	3.18	0.00
84.40	5.33	3.18	0.00	94.80	5.33	3.18	0.00
84.60	5.33	3.18	0.00	95.00	5.33	3.18	0.00
84.80	5.33	3.18	0.00	95.20	5.33	3.18	0.00
85.00	5.33	3.18	0.00	95.40	5.33	3.18	0.00
85.20	5.33	3.18	0.00	95.60	5.33	3.18	0.00
85.40	5.33	3.18	0.00	95.80	5.33	3.18	0.00
85.60	5.33	3.18	0.00	96.00	5.33	3.18	0.00
85.80	5.33	3.18	0.00	96.20	5.33	3.18	0.00
86.00	5.33	3.18	0.00	96.40	5.33	3.18	0.00
86.20	5.33	3.18	0.00	96.60	5.33	3.18	0.00
86.40	5.33	3.18	0.00	96.80	5.33	3.18	0.00
86.60	5.33	3.18	0.00	97.00	5.33	3.18	0.00
86.80	5.33	3.18	0.00	97.20	5.33	3.18	0.00
87.00	5.33	3.18	0.00	97.40	5.33	3.18	0.00
87.20	5.33	3.18	0.00	97.60	5.33	3.18	0.00
87.40	5.33	3.18	0.00	97.80	5.33	3.18	0.00
87.60	5.33	3.18	0.00	98.00	5.33	3.18	0.00
87.80	5.33	3.18	0.00	98.20	5.33	3.18	0.00
88.00	5.33	3.18	0.00	98.40	5.33	3.18	0.00
88.20	5.33	3.18	0.00	98.60	5.33	3.18	0.00
88.40	5.33	3.18	0.00	98.80	5.33	3.18	0.00
88.60	5.33	3.18	0.00	99.00	5.33	3.18	0.00
88.80	5.33	3.18	0.00	99.20	5.33	3.18	0.00
89.00	5.33	3.18	0.00	99.40	5.33	3.18	0.00
89.20	5.33	3.18	0.00	99.60	5.33	3.18	0.00
89.40	5.33	3.18	0.00	99.80	5.33	3.18	0.00
89.60	5.33	3.18	0.00	100.00	5.33	3.18	0.00
89.80	5.33	3.18	0.00	100.20	5.33	3.18	0.00
90.00	5.33	3.18	0.00	100.40	5.33	3.18	0.00
90.20	5.33	3.18	0.00	100.60	5.33	3.18	0.00
90.40	5.33	3.18	0.00	100.80	5.33	3.18	0.00
90.60	5.33	3.18	0.00	101.00	5.33	3.18	0.00
90.80	5.33	3.18	0.00	101.20	5.33	3.18	0.00
91.00	5.33	3.18	0.00	101.40	5.33	3.18	0.00
91.20	5.33	3.18	0.00	101.60	5.33	3.18	0.00
91.40	5.33	3.18	0.00	101.80	5.33	3.18	0.00
91.60	5.33	3.18	0.00	102.00	5.33	3.18	0.00
91.80	5.33	3.18	0.00	102.20	5.33	3.18	0.00
92.00	5.33	3.18	0.00	102.40	5.33	3.18	0.00
92.20	5.33	3.18	0.00	102.60	5.33	3.18	0.00
92.40	5.33	3.18	0.00	102.80	5.33	3.18	0.00
92.60	5.33	3.18	0.00	103.00	5.33	3.18	0.00
92.80	5.33	3.18	0.00	103.20	5.33	3.18	0.00
93.00	5.33	3.18	0.00	103.40	5.33	3.18	0.00
93.20	5.33	3.18	0.00	103.60	5.33	3.18	0.00
93.40	5.33	3.18	0.00	103.80	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
104.00	5.33	3.18	0.00	114.40	5.33	3.18	0.00
104.20	5.33	3.18	0.00	114.60	5.33	3.18	0.00
104.40	5.33	3.18	0.00	114.80	5.33	3.18	0.00
104.60	5.33	3.18	0.00	115.00	5.33	3.18	0.00
104.80	5.33	3.18	0.00	115.20	5.33	3.18	0.00
105.00	5.33	3.18	0.00	115.40	5.33	3.18	0.00
105.20	5.33	3.18	0.00	115.60	5.33	3.18	0.00
105.40	5.33	3.18	0.00	115.80	5.33	3.18	0.00
105.60	5.33	3.18	0.00	116.00	5.33	3.18	0.00
105.80	5.33	3.18	0.00	116.20	5.33	3.18	0.00
106.00	5.33	3.18	0.00	116.40	5.33	3.18	0.00
106.20	5.33	3.18	0.00	116.60	5.33	3.18	0.00
106.40	5.33	3.18	0.00	116.80	5.33	3.18	0.00
106.60	5.33	3.18	0.00	117.00	5.33	3.18	0.00
106.80	5.33	3.18	0.00	117.20	5.33	3.18	0.00
107.00	5.33	3.18	0.00	117.40	5.33	3.18	0.00
107.20	5.33	3.18	0.00	117.60	5.33	3.18	0.00
107.40	5.33	3.18	0.00	117.80	5.33	3.18	0.00
107.60	5.33	3.18	0.00	118.00	5.33	3.18	0.00
107.80	5.33	3.18	0.00	118.20	5.33	3.18	0.00
108.00	5.33	3.18	0.00	118.40	5.33	3.18	0.00
108.20	5.33	3.18	0.00	118.60	5.33	3.18	0.00
108.40	5.33	3.18	0.00	118.80	5.33	3.18	0.00
108.60	5.33	3.18	0.00	119.00	5.33	3.18	0.00
108.80	5.33	3.18	0.00	119.20	5.33	3.18	0.00
109.00	5.33	3.18	0.00	119.40	5.33	3.18	0.00
109.20	5.33	3.18	0.00	119.60	5.33	3.18	0.00
109.40	5.33	3.18	0.00	119.80	5.33	3.18	0.00
109.60	5.33	3.18	0.00	120.00	5.33	3.18	0.00
109.80	5.33	3.18	0.00	120.20	5.33	3.18	0.00
110.00	5.33	3.18	0.00	120.40	5.33	3.18	0.00
110.20	5.33	3.18	0.00	120.60	5.33	3.18	0.00
110.40	5.33	3.18	0.00	120.80	5.33	3.18	0.00
110.60	5.33	3.18	0.00	121.00	5.33	3.18	0.00
110.80	5.33	3.18	0.00	121.20	5.33	3.18	0.00
111.00	5.33	3.18	0.00	121.40	5.33	3.18	0.00
111.20	5.33	3.18	0.00	121.60	5.33	3.18	0.00
111.40	5.33	3.18	0.00	121.80	5.33	3.18	0.00
111.60	5.33	3.18	0.00	122.00	5.33	3.18	0.00
111.80	5.33	3.18	0.00	122.20	5.33	3.18	0.00
112.00	5.33	3.18	0.00	122.40	5.33	3.18	0.00
112.20	5.33	3.18	0.00	122.60	5.33	3.18	0.00
112.40	5.33	3.18	0.00	122.80	5.33	3.18	0.00
112.60	5.33	3.18	0.00	123.00	5.33	3.18	0.00
112.80	5.33	3.18	0.00	123.20	5.33	3.18	0.00
113.00	5.33	3.18	0.00	123.40	5.33	3.18	0.00
113.20	5.33	3.18	0.00	123.60	5.33	3.18	0.00
113.40	5.33	3.18	0.00	123.80	5.33	3.18	0.00
113.60	5.33	3.18	0.00	124.00	5.33	3.18	0.00
113.80	5.33	3.18	0.00	124.20	5.33	3.18	0.00
114.00	5.33	3.18	0.00	124.40	5.33	3.18	0.00
114.20	5.33	3.18	0.00	124.60	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
124.80	5.33	3.18	0.00	135.20	5.33	3.18	0.00
125.00	5.33	3.18	0.00	135.40	5.33	3.18	0.00
125.20	5.33	3.18	0.00	135.60	5.33	3.18	0.00
125.40	5.33	3.18	0.00	135.80	5.33	3.18	0.00
125.60	5.33	3.18	0.00	136.00	5.33	3.18	0.00
125.80	5.33	3.18	0.00	136.20	5.33	3.18	0.00
126.00	5.33	3.18	0.00	136.40	5.33	3.18	0.00
126.20	5.33	3.18	0.00	136.60	5.33	3.18	0.00
126.40	5.33	3.18	0.00	136.80	5.33	3.18	0.00
126.60	5.33	3.18	0.00	137.00	5.33	3.18	0.00
126.80	5.33	3.18	0.00	137.20	5.33	3.18	0.00
127.00	5.33	3.18	0.00	137.40	5.33	3.18	0.00
127.20	5.33	3.18	0.00	137.60	5.33	3.18	0.00
127.40	5.33	3.18	0.00	137.80	5.33	3.18	0.00
127.60	5.33	3.18	0.00	138.00	5.33	3.18	0.00
127.80	5.33	3.18	0.00	138.20	5.33	3.18	0.00
128.00	5.33	3.18	0.00	138.40	5.33	3.18	0.00
128.20	5.33	3.18	0.00	138.60	5.33	3.18	0.00
128.40	5.33	3.18	0.00	138.80	5.33	3.18	0.00
128.60	5.33	3.18	0.00	139.00	5.33	3.18	0.00
128.80	5.33	3.18	0.00	139.20	5.33	3.18	0.00
129.00	5.33	3.18	0.00	139.40	5.33	3.18	0.00
129.20	5.33	3.18	0.00	139.60	5.33	3.18	0.00
129.40	5.33	3.18	0.00	139.80	5.33	3.18	0.00
129.60	5.33	3.18	0.00	140.00	5.33	3.18	0.00
129.80	5.33	3.18	0.00	140.20	5.33	3.18	0.00
130.00	5.33	3.18	0.00	140.40	5.33	3.18	0.00
130.20	5.33	3.18	0.00	140.60	5.33	3.18	0.00
130.40	5.33	3.18	0.00	140.80	5.33	3.18	0.00
130.60	5.33	3.18	0.00	141.00	5.33	3.18	0.00
130.80	5.33	3.18	0.00	141.20	5.33	3.18	0.00
131.00	5.33	3.18	0.00	141.40	5.33	3.18	0.00
131.20	5.33	3.18	0.00	141.60	5.33	3.18	0.00
131.40	5.33	3.18	0.00	141.80	5.33	3.18	0.00
131.60	5.33	3.18	0.00	142.00	5.33	3.18	0.00
131.80	5.33	3.18	0.00	142.20	5.33	3.18	0.00
132.00	5.33	3.18	0.00	142.40	5.33	3.18	0.00
132.20	5.33	3.18	0.00	142.60	5.33	3.18	0.00
132.40	5.33	3.18	0.00	142.80	5.33	3.18	0.00
132.60	5.33	3.18	0.00	143.00	5.33	3.18	0.00
132.80	5.33	3.18	0.00	143.20	5.33	3.18	0.00
133.00	5.33	3.18	0.00	143.40	5.33	3.18	0.00
133.20	5.33	3.18	0.00	143.60	5.33	3.18	0.00
133.40	5.33	3.18	0.00	143.80	5.33	3.18	0.00
133.60	5.33	3.18	0.00	144.00	5.33	3.18	0.00
133.80	5.33	3.18	0.00	144.20	5.33	3.18	0.00
134.00	5.33	3.18	0.00	144.40	5.33	3.18	0.00
134.20	5.33	3.18	0.00	144.60	5.33	3.18	0.00
134.40	5.33	3.18	0.00	144.80	5.33	3.18	0.00
134.60	5.33	3.18	0.00	145.00	5.33	3.18	0.00
134.80	5.33	3.18	0.00	145.20	5.33	3.18	0.00
135.00	5.33	3.18	0.00	145.40	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
145.60	5.33	3.18	0.00	156.00	5.33	3.18	0.00
145.80	5.33	3.18	0.00	156.20	5.33	3.18	0.00
146.00	5.33	3.18	0.00	156.40	5.33	3.18	0.00
146.20	5.33	3.18	0.00	156.60	5.33	3.18	0.00
146.40	5.33	3.18	0.00	156.80	5.33	3.18	0.00
146.60	5.33	3.18	0.00	157.00	5.33	3.18	0.00
146.80	5.33	3.18	0.00	157.20	5.33	3.18	0.00
147.00	5.33	3.18	0.00	157.40	5.33	3.18	0.00
147.20	5.33	3.18	0.00	157.60	5.33	3.18	0.00
147.40	5.33	3.18	0.00	157.80	5.33	3.18	0.00
147.60	5.33	3.18	0.00	158.00	5.33	3.18	0.00
147.80	5.33	3.18	0.00	158.20	5.33	3.18	0.00
148.00	5.33	3.18	0.00	158.40	5.33	3.18	0.00
148.20	5.33	3.18	0.00	158.60	5.33	3.18	0.00
148.40	5.33	3.18	0.00	158.80	5.33	3.18	0.00
148.60	5.33	3.18	0.00	159.00	5.33	3.18	0.00
148.80	5.33	3.18	0.00	159.20	5.33	3.18	0.00
149.00	5.33	3.18	0.00	159.40	5.33	3.18	0.00
149.20	5.33	3.18	0.00	159.60	5.33	3.18	0.00
149.40	5.33	3.18	0.00	159.80	5.33	3.18	0.00
149.60	5.33	3.18	0.00	160.00	5.33	3.18	0.00
149.80	5.33	3.18	0.00	160.20	5.33	3.18	0.00
150.00	5.33	3.18	0.00	160.40	5.33	3.18	0.00
150.20	5.33	3.18	0.00	160.60	5.33	3.18	0.00
150.40	5.33	3.18	0.00	160.80	5.33	3.18	0.00
150.60	5.33	3.18	0.00	161.00	5.33	3.18	0.00
150.80	5.33	3.18	0.00	161.20	5.33	3.18	0.00
151.00	5.33	3.18	0.00	161.40	5.33	3.18	0.00
151.20	5.33	3.18	0.00	161.60	5.33	3.18	0.00
151.40	5.33	3.18	0.00	161.80	5.33	3.18	0.00
151.60	5.33	3.18	0.00	162.00	5.33	3.18	0.00
151.80	5.33	3.18	0.00	162.20	5.33	3.18	0.00
152.00	5.33	3.18	0.00	162.40	5.33	3.18	0.00
152.20	5.33	3.18	0.00	162.60	5.33	3.18	0.00
152.40	5.33	3.18	0.00	162.80	5.33	3.18	0.00
152.60	5.33	3.18	0.00	163.00	5.33	3.18	0.00
152.80	5.33	3.18	0.00	163.20	5.33	3.18	0.00
153.00	5.33	3.18	0.00	163.40	5.33	3.18	0.00
153.20	5.33	3.18	0.00	163.60	5.33	3.18	0.00
153.40	5.33	3.18	0.00	163.80	5.33	3.18	0.00
153.60	5.33	3.18	0.00	164.00	5.33	3.18	0.00
153.80	5.33	3.18	0.00	164.20	5.33	3.18	0.00
154.00	5.33	3.18	0.00	164.40	5.33	3.18	0.00
154.20	5.33	3.18	0.00	164.60	5.33	3.18	0.00
154.40	5.33	3.18	0.00	164.80	5.33	3.18	0.00
154.60	5.33	3.18	0.00	165.00	5.33	3.18	0.00
154.80	5.33	3.18	0.00	165.20	5.33	3.18	0.00
155.00	5.33	3.18	0.00	165.40	5.33	3.18	0.00
155.20	5.33	3.18	0.00	165.60	5.33	3.18	0.00
155.40	5.33	3.18	0.00	165.80	5.33	3.18	0.00
155.60	5.33	3.18	0.00	166.00	5.33	3.18	0.00
155.80	5.33	3.18	0.00	166.20	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
166.40	5.33	3.18	0.00	176.80	5.33	3.18	0.00
166.60	5.33	3.18	0.00	177.00	5.33	3.18	0.00
166.80	5.33	3.18	0.00	177.20	5.33	3.18	0.00
167.00	5.33	3.18	0.00	177.40	5.33	3.18	0.00
167.20	5.33	3.18	0.00	177.60	5.33	3.18	0.00
167.40	5.33	3.18	0.00	177.80	5.33	3.18	0.00
167.60	5.33	3.18	0.00	178.00	5.33	3.18	0.00
167.80	5.33	3.18	0.00	178.20	5.33	3.18	0.00
168.00	5.33	3.18	0.00	178.40	5.33	3.18	0.00
168.20	5.33	3.18	0.00	178.60	5.33	3.18	0.00
168.40	5.33	3.18	0.00	178.80	5.33	3.18	0.00
168.60	5.33	3.18	0.00	179.00	5.33	3.18	0.00
168.80	5.33	3.18	0.00	179.20	5.33	3.18	0.00
169.00	5.33	3.18	0.00	179.40	5.33	3.18	0.00
169.20	5.33	3.18	0.00	179.60	5.33	3.18	0.00
169.40	5.33	3.18	0.00	179.80	5.33	3.18	0.00
169.60	5.33	3.18	0.00	180.00	5.33	3.18	0.00
169.80	5.33	3.18	0.00	180.20	5.33	3.18	0.00
170.00	5.33	3.18	0.00	180.40	5.33	3.18	0.00
170.20	5.33	3.18	0.00	180.60	5.33	3.18	0.00
170.40	5.33	3.18	0.00	180.80	5.33	3.18	0.00
170.60	5.33	3.18	0.00	181.00	5.33	3.18	0.00
170.80	5.33	3.18	0.00	181.20	5.33	3.18	0.00
171.00	5.33	3.18	0.00	181.40	5.33	3.18	0.00
171.20	5.33	3.18	0.00	181.60	5.33	3.18	0.00
171.40	5.33	3.18	0.00	181.80	5.33	3.18	0.00
171.60	5.33	3.18	0.00	182.00	5.33	3.18	0.00
171.80	5.33	3.18	0.00	182.20	5.33	3.18	0.00
172.00	5.33	3.18	0.00	182.40	5.33	3.18	0.00
172.20	5.33	3.18	0.00	182.60	5.33	3.18	0.00
172.40	5.33	3.18	0.00	182.80	5.33	3.18	0.00
172.60	5.33	3.18	0.00	183.00	5.33	3.18	0.00
172.80	5.33	3.18	0.00	183.20	5.33	3.18	0.00
173.00	5.33	3.18	0.00	183.40	5.33	3.18	0.00
173.20	5.33	3.18	0.00	183.60	5.33	3.18	0.00
173.40	5.33	3.18	0.00	183.80	5.33	3.18	0.00
173.60	5.33	3.18	0.00	184.00	5.33	3.18	0.00
173.80	5.33	3.18	0.00	184.20	5.33	3.18	0.00
174.00	5.33	3.18	0.00	184.40	5.33	3.18	0.00
174.20	5.33	3.18	0.00	184.60	5.33	3.18	0.00
174.40	5.33	3.18	0.00	184.80	5.33	3.18	0.00
174.60	5.33	3.18	0.00	185.00	5.33	3.18	0.00
174.80	5.33	3.18	0.00	185.20	5.33	3.18	0.00
175.00	5.33	3.18	0.00	185.40	5.33	3.18	0.00
175.20	5.33	3.18	0.00	185.60	5.33	3.18	0.00
175.40	5.33	3.18	0.00	185.80	5.33	3.18	0.00
175.60	5.33	3.18	0.00	186.00	5.33	3.18	0.00
175.80	5.33	3.18	0.00	186.20	5.33	3.18	0.00
176.00	5.33	3.18	0.00	186.40	5.33	3.18	0.00
176.20	5.33	3.18	0.00	186.60	5.33	3.18	0.00
176.40	5.33	3.18	0.00	186.80	5.33	3.18	0.00
176.60	5.33	3.18	0.00	187.00	5.33	3.18	0.00

Hydrograph for Subcatchment DA-12: DA-12 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
187.20	5.33	3.18	0.00
187.40	5.33	3.18	0.00
187.60	5.33	3.18	0.00
187.80	5.33	3.18	0.00
188.00	5.33	3.18	0.00
188.20	5.33	3.18	0.00
188.40	5.33	3.18	0.00
188.60	5.33	3.18	0.00
188.80	5.33	3.18	0.00
189.00	5.33	3.18	0.00
189.20	5.33	3.18	0.00
189.40	5.33	3.18	0.00
189.60	5.33	3.18	0.00
189.80	5.33	3.18	0.00
190.00	5.33	3.18	0.00
190.20	5.33	3.18	0.00
190.40	5.33	3.18	0.00
190.60	5.33	3.18	0.00
190.80	5.33	3.18	0.00
191.00	5.33	3.18	0.00
191.20	5.33	3.18	0.00
191.40	5.33	3.18	0.00
191.60	5.33	3.18	0.00
191.80	5.33	3.18	0.00
192.00	5.33	3.18	0.00
192.20	5.33	3.18	0.00
192.40	5.33	3.18	0.00
192.60	5.33	3.18	0.00
192.80	5.33	3.18	0.00
193.00	5.33	3.18	0.00
193.20	5.33	3.18	0.00
193.40	5.33	3.18	0.00
193.60	5.33	3.18	0.00
193.80	5.33	3.18	0.00
194.00	5.33	3.18	0.00
194.20	5.33	3.18	0.00
194.40	5.33	3.18	0.00
194.60	5.33	3.18	0.00
194.80	5.33	3.18	0.00
195.00	5.33	3.18	0.00
195.20	5.33	3.18	0.00
195.40	5.33	3.18	0.00
195.60	5.33	3.18	0.00
195.80	5.33	3.18	0.00
196.00	5.33	3.18	0.00
196.20	5.33	3.18	0.00
196.40	5.33	3.18	0.00
196.60	5.33	3.18	0.00
196.80	5.33	3.18	0.00
197.00	5.33	3.18	0.00
197.20	5.33	3.18	0.00
197.40	5.33	3.18	0.00
197.60	5.33	3.18	0.00
197.80	5.33	3.18	0.00
198.00	5.33	3.18	0.00
198.20	5.33	3.18	0.00
198.40	5.33	3.18	0.00
198.60	5.33	3.18	0.00
198.80	5.33	3.18	0.00
199.00	5.33	3.18	0.00
199.20	5.33	3.18	0.00
199.40	5.33	3.18	0.00
199.60	5.33	3.18	0.00
199.80	5.33	3.18	0.00
200.00	5.33	3.18	0.00

Summary for Pond ST-01: ST-01

Inflow Area = 70.883 ac, 1.56% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 32.31 cfs @ 16.87 hrs, Volume= 18.800 af
Outflow = 31.69 cfs @ 17.16 hrs, Volume= 14.369 af, Atten= 2%, Lag= 17.8 min
Primary = 31.69 cfs @ 17.16 hrs, Volume= 14.369 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 733.24' @ 17.16 hrs Surf.Area= 3.410 ac Storage= 5.256 af

Plug-Flow detention time= 207.3 min calculated for 14.369 af (76% of inflow)
Center-of-Mass det. time= 100.2 min (1,238.1 - 1,137.9)

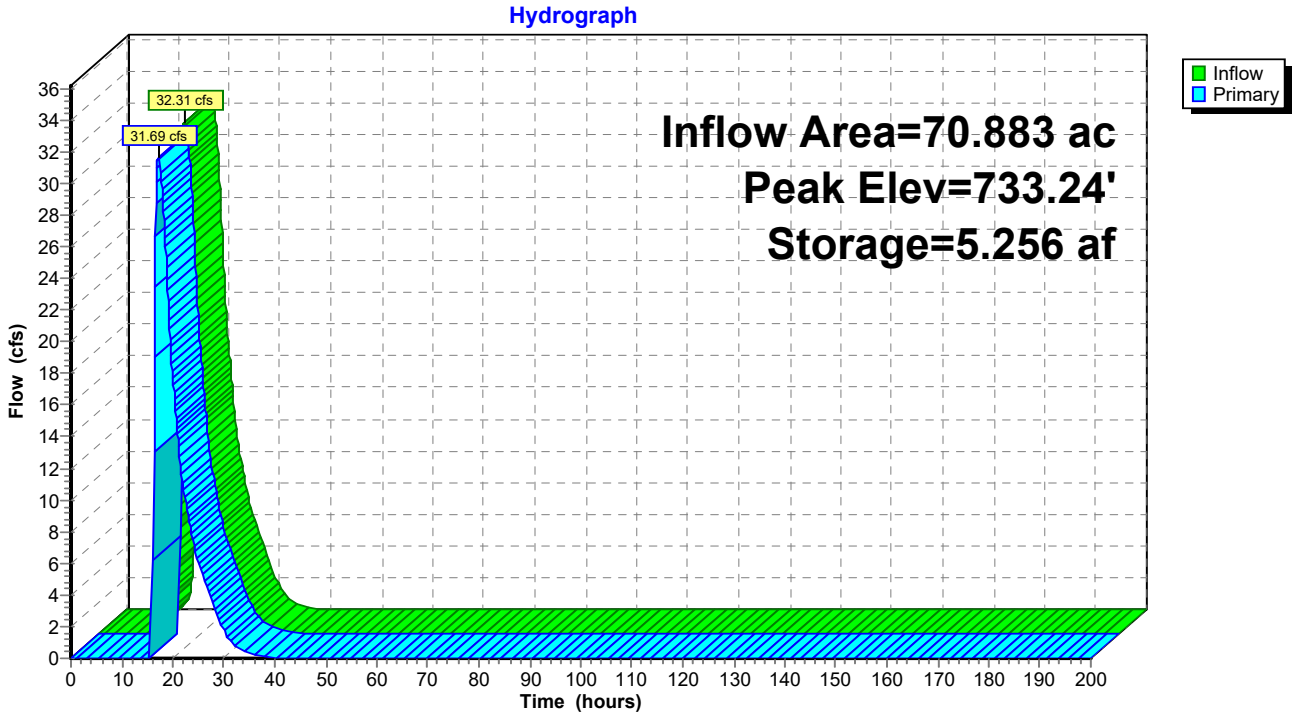
Volume	Invert	Avail.Storage	Storage Description
#1	731.50'	6.137 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
731.50	2.610	0.000	0.000
732.00	2.839	1.362	1.362
733.00	3.298	3.068	4.431
733.50	3.529	1.707	6.137

Device	Routing	Invert	Outlet Devices
#1	Primary	733.00'	**110.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=31.67 cfs @ 17.16 hrs HW=733.24' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 31.67 cfs @ 1.19 fps)

Pond ST-01: ST-01



Hydrograph for Pond ST-01: ST-01

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	731.50	0.00
0.50	0.00	0.000	731.50	0.00
1.00	0.00	0.000	731.50	0.00
1.50	0.00	0.000	731.50	0.00
2.00	0.00	0.000	731.50	0.00
2.50	0.00	0.000	731.50	0.00
3.00	0.00	0.000	731.50	0.00
3.50	0.00	0.000	731.50	0.00
4.00	0.00	0.000	731.50	0.00
4.50	0.00	0.000	731.50	0.00
5.00	0.00	0.000	731.50	0.00
5.50	0.00	0.000	731.50	0.00
6.00	0.00	0.000	731.50	0.00
6.50	0.00	0.000	731.50	0.00
7.00	0.00	0.000	731.50	0.00
7.50	0.00	0.000	731.50	0.00
8.00	0.00	0.000	731.50	0.00
8.50	0.00	0.000	731.50	0.00
9.00	0.01	0.000	731.50	0.00
9.50	0.02	0.001	731.50	0.00
10.00	0.05	0.002	731.50	0.00
10.50	0.10	0.005	731.50	0.00
11.00	0.20	0.011	731.50	0.00
11.50	0.37	0.022	731.51	0.00
12.00	0.67	0.043	731.52	0.00
12.50	1.30	0.082	731.53	0.00
13.00	2.84	0.164	731.56	0.00
13.50	5.98	0.343	731.63	0.00
14.00	10.28	0.674	731.75	0.00
14.50	15.80	1.208	731.94	0.00
15.00	22.14	1.992	732.21	0.00
15.50	27.29	3.019	732.54	0.00
16.00	30.66	4.224	732.93	0.00
16.50	**32.09**	5.110	733.20	23.45
17.00	**32.13**	**5.252**	**733.24**	**31.45**
17.50	30.54	**5.246**	**733.24**	**31.13**
18.00	28.25	5.214	733.23	29.23
18.50	25.28	5.167	733.22	26.56
19.00	21.74	5.107	733.20	23.26
19.50	18.83	5.045	733.18	20.17
20.00	16.50	4.993	733.16	17.67
20.50	14.52	4.948	733.15	15.58
21.00	12.92	4.908	733.14	13.80
21.50	11.49	4.873	733.13	12.32
22.00	10.23	4.840	733.12	10.96
22.50	9.20	4.811	733.11	9.86
23.00	8.30	4.786	733.10	8.87
23.50	7.53	4.764	733.10	8.05
24.00	6.87	4.743	733.09	7.33
24.50	6.28	4.725	733.09	6.70
25.00	5.78	4.709	733.08	6.14
25.50	5.32	4.694	733.08	5.67

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	4.88	4.680	733.07	5.23
26.50	4.44	4.665	733.07	4.79
27.00	3.97	4.650	733.06	4.33
27.50	3.49	4.635	733.06	3.87
28.00	3.03	4.619	733.06	3.44
28.50	2.57	4.601	733.05	2.99
29.00	2.15	4.584	733.04	2.55
29.50	1.78	4.568	733.04	2.14
30.00	1.45	4.553	733.04	1.83
30.50	1.17	4.538	733.03	1.52
31.00	0.93	4.524	733.03	1.25
31.50	0.74	4.512	733.02	1.00
32.00	0.58	4.502	733.02	0.80
32.50	0.46	4.493	733.02	0.68
33.00	0.37	4.484	733.02	0.58
33.50	0.30	4.475	733.01	0.49
34.00	0.24	4.468	733.01	0.41
34.50	0.19	4.461	733.01	0.34
35.00	0.15	4.456	733.01	0.27
35.50	0.12	4.451	733.01	0.22
36.00	0.10	4.447	733.00	0.18
36.50	0.08	4.444	733.00	0.15
37.00	0.06	4.442	733.00	0.12
37.50	0.05	4.440	733.00	0.10
38.00	0.04	4.438	733.00	0.08
38.50	0.03	4.436	733.00	0.06
39.00	0.02	4.435	733.00	0.05
39.50	0.02	4.434	733.00	0.04
40.00	0.01	4.434	733.00	0.03
40.50	0.01	4.433	733.00	0.02
41.00	0.01	4.432	733.00	0.02
41.50	0.01	4.432	733.00	0.01
42.00	0.00	4.432	733.00	0.01
42.50	0.00	4.431	733.00	0.01
43.00	0.00	4.431	733.00	0.01
43.50	0.00	4.431	733.00	0.00
44.00	0.00	4.431	733.00	0.00
44.50	0.00	4.431	733.00	0.00
45.00	0.00	4.431	733.00	0.00
45.50	0.00	4.431	733.00	0.00
46.00	0.00	4.431	733.00	0.00
46.50	0.00	4.431	733.00	0.00
47.00	0.00	4.431	733.00	0.00
47.50	0.00	4.431	733.00	0.00
48.00	0.00	4.431	733.00	0.00
48.50	0.00	4.431	733.00	0.00
49.00	0.00	4.431	733.00	0.00
49.50	0.00	4.431	733.00	0.00
50.00	0.00	4.431	733.00	0.00
50.50	0.00	4.431	733.00	0.00
51.00	0.00	4.431	733.00	0.00
51.50	0.00	4.431	733.00	0.00

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	4.431	733.00	0.00
52.50	0.00	4.431	733.00	0.00
53.00	0.00	4.431	733.00	0.00
53.50	0.00	4.431	733.00	0.00
54.00	0.00	4.431	733.00	0.00
54.50	0.00	4.431	733.00	0.00
55.00	0.00	4.431	733.00	0.00
55.50	0.00	4.431	733.00	0.00
56.00	0.00	4.431	733.00	0.00
56.50	0.00	4.431	733.00	0.00
57.00	0.00	4.431	733.00	0.00
57.50	0.00	4.431	733.00	0.00
58.00	0.00	4.431	733.00	0.00
58.50	0.00	4.431	733.00	0.00
59.00	0.00	4.431	733.00	0.00
59.50	0.00	4.431	733.00	0.00
60.00	0.00	4.431	733.00	0.00
60.50	0.00	4.431	733.00	0.00
61.00	0.00	4.431	733.00	0.00
61.50	0.00	4.431	733.00	0.00
62.00	0.00	4.431	733.00	0.00
62.50	0.00	4.431	733.00	0.00
63.00	0.00	4.431	733.00	0.00
63.50	0.00	4.431	733.00	0.00
64.00	0.00	4.431	733.00	0.00
64.50	0.00	4.431	733.00	0.00
65.00	0.00	4.431	733.00	0.00
65.50	0.00	4.431	733.00	0.00
66.00	0.00	4.431	733.00	0.00
66.50	0.00	4.431	733.00	0.00
67.00	0.00	4.431	733.00	0.00
67.50	0.00	4.431	733.00	0.00
68.00	0.00	4.431	733.00	0.00
68.50	0.00	4.431	733.00	0.00
69.00	0.00	4.431	733.00	0.00
69.50	0.00	4.431	733.00	0.00
70.00	0.00	4.431	733.00	0.00
70.50	0.00	4.431	733.00	0.00
71.00	0.00	4.431	733.00	0.00
71.50	0.00	4.431	733.00	0.00
72.00	0.00	4.431	733.00	0.00
72.50	0.00	4.431	733.00	0.00
73.00	0.00	4.431	733.00	0.00
73.50	0.00	4.431	733.00	0.00
74.00	0.00	4.431	733.00	0.00
74.50	0.00	4.431	733.00	0.00
75.00	0.00	4.431	733.00	0.00
75.50	0.00	4.431	733.00	0.00
76.00	0.00	4.431	733.00	0.00
76.50	0.00	4.431	733.00	0.00
77.00	0.00	4.431	733.00	0.00
77.50	0.00	4.431	733.00	0.00

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	4.431	733.00	0.00
78.50	0.00	4.431	733.00	0.00
79.00	0.00	4.431	733.00	0.00
79.50	0.00	4.431	733.00	0.00
80.00	0.00	4.431	733.00	0.00
80.50	0.00	4.431	733.00	0.00
81.00	0.00	4.431	733.00	0.00
81.50	0.00	4.431	733.00	0.00
82.00	0.00	4.431	733.00	0.00
82.50	0.00	4.431	733.00	0.00
83.00	0.00	4.431	733.00	0.00
83.50	0.00	4.431	733.00	0.00
84.00	0.00	4.431	733.00	0.00
84.50	0.00	4.431	733.00	0.00
85.00	0.00	4.431	733.00	0.00
85.50	0.00	4.431	733.00	0.00
86.00	0.00	4.431	733.00	0.00
86.50	0.00	4.431	733.00	0.00
87.00	0.00	4.431	733.00	0.00
87.50	0.00	4.431	733.00	0.00
88.00	0.00	4.431	733.00	0.00
88.50	0.00	4.431	733.00	0.00
89.00	0.00	4.431	733.00	0.00
89.50	0.00	4.431	733.00	0.00
90.00	0.00	4.431	733.00	0.00
90.50	0.00	4.431	733.00	0.00
91.00	0.00	4.431	733.00	0.00
91.50	0.00	4.431	733.00	0.00
92.00	0.00	4.431	733.00	0.00
92.50	0.00	4.431	733.00	0.00
93.00	0.00	4.431	733.00	0.00
93.50	0.00	4.431	733.00	0.00
94.00	0.00	4.431	733.00	0.00
94.50	0.00	4.431	733.00	0.00
95.00	0.00	4.431	733.00	0.00
95.50	0.00	4.431	733.00	0.00
96.00	0.00	4.431	733.00	0.00
96.50	0.00	4.431	733.00	0.00
97.00	0.00	4.431	733.00	0.00
97.50	0.00	4.431	733.00	0.00
98.00	0.00	4.431	733.00	0.00
98.50	0.00	4.431	733.00	0.00
99.00	0.00	4.431	733.00	0.00
99.50	0.00	4.431	733.00	0.00
100.00	0.00	4.431	733.00	0.00
100.50	0.00	4.431	733.00	0.00
101.00	0.00	4.431	733.00	0.00
101.50	0.00	4.431	733.00	0.00
102.00	0.00	4.431	733.00	0.00
102.50	0.00	4.431	733.00	0.00
103.00	0.00	4.431	733.00	0.00
103.50	0.00	4.431	733.00	0.00

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	4.431	733.00	0.00
104.50	0.00	4.431	733.00	0.00
105.00	0.00	4.431	733.00	0.00
105.50	0.00	4.431	733.00	0.00
106.00	0.00	4.431	733.00	0.00
106.50	0.00	4.431	733.00	0.00
107.00	0.00	4.431	733.00	0.00
107.50	0.00	4.431	733.00	0.00
108.00	0.00	4.431	733.00	0.00
108.50	0.00	4.431	733.00	0.00
109.00	0.00	4.431	733.00	0.00
109.50	0.00	4.431	733.00	0.00
110.00	0.00	4.431	733.00	0.00
110.50	0.00	4.431	733.00	0.00
111.00	0.00	4.431	733.00	0.00
111.50	0.00	4.431	733.00	0.00
112.00	0.00	4.431	733.00	0.00
112.50	0.00	4.431	733.00	0.00
113.00	0.00	4.431	733.00	0.00
113.50	0.00	4.431	733.00	0.00
114.00	0.00	4.431	733.00	0.00
114.50	0.00	4.431	733.00	0.00
115.00	0.00	4.431	733.00	0.00
115.50	0.00	4.431	733.00	0.00
116.00	0.00	4.431	733.00	0.00
116.50	0.00	4.431	733.00	0.00
117.00	0.00	4.431	733.00	0.00
117.50	0.00	4.431	733.00	0.00
118.00	0.00	4.431	733.00	0.00
118.50	0.00	4.431	733.00	0.00
119.00	0.00	4.431	733.00	0.00
119.50	0.00	4.431	733.00	0.00
120.00	0.00	4.431	733.00	0.00
120.50	0.00	4.431	733.00	0.00
121.00	0.00	4.431	733.00	0.00
121.50	0.00	4.431	733.00	0.00
122.00	0.00	4.431	733.00	0.00
122.50	0.00	4.431	733.00	0.00
123.00	0.00	4.431	733.00	0.00
123.50	0.00	4.431	733.00	0.00
124.00	0.00	4.431	733.00	0.00
124.50	0.00	4.431	733.00	0.00
125.00	0.00	4.431	733.00	0.00
125.50	0.00	4.431	733.00	0.00
126.00	0.00	4.431	733.00	0.00
126.50	0.00	4.431	733.00	0.00
127.00	0.00	4.431	733.00	0.00
127.50	0.00	4.431	733.00	0.00
128.00	0.00	4.431	733.00	0.00
128.50	0.00	4.431	733.00	0.00
129.00	0.00	4.431	733.00	0.00
129.50	0.00	4.431	733.00	0.00

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	4.431	733.00	0.00
130.50	0.00	4.431	733.00	0.00
131.00	0.00	4.431	733.00	0.00
131.50	0.00	4.431	733.00	0.00
132.00	0.00	4.431	733.00	0.00
132.50	0.00	4.431	733.00	0.00
133.00	0.00	4.431	733.00	0.00
133.50	0.00	4.431	733.00	0.00
134.00	0.00	4.431	733.00	0.00
134.50	0.00	4.431	733.00	0.00
135.00	0.00	4.431	733.00	0.00
135.50	0.00	4.431	733.00	0.00
136.00	0.00	4.431	733.00	0.00
136.50	0.00	4.431	733.00	0.00
137.00	0.00	4.431	733.00	0.00
137.50	0.00	4.431	733.00	0.00
138.00	0.00	4.431	733.00	0.00
138.50	0.00	4.431	733.00	0.00
139.00	0.00	4.431	733.00	0.00
139.50	0.00	4.431	733.00	0.00
140.00	0.00	4.431	733.00	0.00
140.50	0.00	4.431	733.00	0.00
141.00	0.00	4.431	733.00	0.00
141.50	0.00	4.431	733.00	0.00
142.00	0.00	4.431	733.00	0.00
142.50	0.00	4.431	733.00	0.00
143.00	0.00	4.431	733.00	0.00
143.50	0.00	4.431	733.00	0.00
144.00	0.00	4.431	733.00	0.00
144.50	0.00	4.431	733.00	0.00
145.00	0.00	4.431	733.00	0.00
145.50	0.00	4.431	733.00	0.00
146.00	0.00	4.431	733.00	0.00
146.50	0.00	4.431	733.00	0.00
147.00	0.00	4.431	733.00	0.00
147.50	0.00	4.431	733.00	0.00
148.00	0.00	4.431	733.00	0.00
148.50	0.00	4.431	733.00	0.00
149.00	0.00	4.431	733.00	0.00
149.50	0.00	4.431	733.00	0.00
150.00	0.00	4.431	733.00	0.00
150.50	0.00	4.431	733.00	0.00
151.00	0.00	4.431	733.00	0.00
151.50	0.00	4.431	733.00	0.00
152.00	0.00	4.431	733.00	0.00
152.50	0.00	4.431	733.00	0.00
153.00	0.00	4.431	733.00	0.00
153.50	0.00	4.431	733.00	0.00
154.00	0.00	4.431	733.00	0.00
154.50	0.00	4.431	733.00	0.00
155.00	0.00	4.431	733.00	0.00
155.50	0.00	4.431	733.00	0.00

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	4.431	733.00	0.00
156.50	0.00	4.431	733.00	0.00
157.00	0.00	4.431	733.00	0.00
157.50	0.00	4.431	733.00	0.00
158.00	0.00	4.431	733.00	0.00
158.50	0.00	4.431	733.00	0.00
159.00	0.00	4.431	733.00	0.00
159.50	0.00	4.431	733.00	0.00
160.00	0.00	4.431	733.00	0.00
160.50	0.00	4.431	733.00	0.00
161.00	0.00	4.431	733.00	0.00
161.50	0.00	4.431	733.00	0.00
162.00	0.00	4.431	733.00	0.00
162.50	0.00	4.431	733.00	0.00
163.00	0.00	4.431	733.00	0.00
163.50	0.00	4.431	733.00	0.00
164.00	0.00	4.431	733.00	0.00
164.50	0.00	4.431	733.00	0.00
165.00	0.00	4.431	733.00	0.00
165.50	0.00	4.431	733.00	0.00
166.00	0.00	4.431	733.00	0.00
166.50	0.00	4.431	733.00	0.00
167.00	0.00	4.431	733.00	0.00
167.50	0.00	4.431	733.00	0.00
168.00	0.00	4.431	733.00	0.00
168.50	0.00	4.431	733.00	0.00
169.00	0.00	4.431	733.00	0.00
169.50	0.00	4.431	733.00	0.00
170.00	0.00	4.431	733.00	0.00
170.50	0.00	4.431	733.00	0.00
171.00	0.00	4.431	733.00	0.00
171.50	0.00	4.431	733.00	0.00
172.00	0.00	4.431	733.00	0.00
172.50	0.00	4.431	733.00	0.00
173.00	0.00	4.431	733.00	0.00
173.50	0.00	4.431	733.00	0.00
174.00	0.00	4.431	733.00	0.00
174.50	0.00	4.431	733.00	0.00
175.00	0.00	4.431	733.00	0.00
175.50	0.00	4.431	733.00	0.00
176.00	0.00	4.431	733.00	0.00
176.50	0.00	4.431	733.00	0.00
177.00	0.00	4.431	733.00	0.00
177.50	0.00	4.431	733.00	0.00
178.00	0.00	4.431	733.00	0.00
178.50	0.00	4.431	733.00	0.00
179.00	0.00	4.431	733.00	0.00
179.50	0.00	4.431	733.00	0.00
180.00	0.00	4.431	733.00	0.00
180.50	0.00	4.431	733.00	0.00
181.00	0.00	4.431	733.00	0.00
181.50	0.00	4.431	733.00	0.00

Hydrograph for Pond ST-01: ST-01 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	4.431	733.00	0.00
182.50	0.00	4.431	733.00	0.00
183.00	0.00	4.431	733.00	0.00
183.50	0.00	4.431	733.00	0.00
184.00	0.00	4.431	733.00	0.00
184.50	0.00	4.431	733.00	0.00
185.00	0.00	4.431	733.00	0.00
185.50	0.00	4.431	733.00	0.00
186.00	0.00	4.431	733.00	0.00
186.50	0.00	4.431	733.00	0.00
187.00	0.00	4.431	733.00	0.00
187.50	0.00	4.431	733.00	0.00
188.00	0.00	4.431	733.00	0.00
188.50	0.00	4.431	733.00	0.00
189.00	0.00	4.431	733.00	0.00
189.50	0.00	4.431	733.00	0.00
190.00	0.00	4.431	733.00	0.00
190.50	0.00	4.431	733.00	0.00
191.00	0.00	4.431	733.00	0.00
191.50	0.00	4.431	733.00	0.00
192.00	0.00	4.431	733.00	0.00
192.50	0.00	4.431	733.00	0.00
193.00	0.00	4.431	733.00	0.00
193.50	0.00	4.431	733.00	0.00
194.00	0.00	4.431	733.00	0.00
194.50	0.00	4.431	733.00	0.00
195.00	0.00	4.431	733.00	0.00
195.50	0.00	4.431	733.00	0.00
196.00	0.00	4.431	733.00	0.00
196.50	0.00	4.431	733.00	0.00
197.00	0.00	4.431	733.00	0.00
197.50	0.00	4.431	733.00	0.00
198.00	0.00	4.431	733.00	0.00
198.50	0.00	4.431	733.00	0.00
199.00	0.00	4.431	733.00	0.00
199.50	0.00	4.431	733.00	0.00
200.00	0.00	4.431	733.00	0.00

Summary for Pond ST-02: ST-02

Inflow Area = 77.055 ac, 1.65% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 31.72 cfs @ 17.39 hrs, Volume= 20.437 af
Outflow = 31.18 cfs @ 17.72 hrs, Volume= 15.837 af, Atten= 2%, Lag= 19.6 min
Primary = 31.18 cfs @ 17.72 hrs, Volume= 15.837 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 728.25' @ 17.72 hrs Surf.Area= 3.486 ac Storage= 5.485 af

Plug-Flow detention time= 214.5 min calculated for 15.837 af (77% of inflow)
Center-of-Mass det. time= 104.6 min (1,285.0 - 1,180.4)

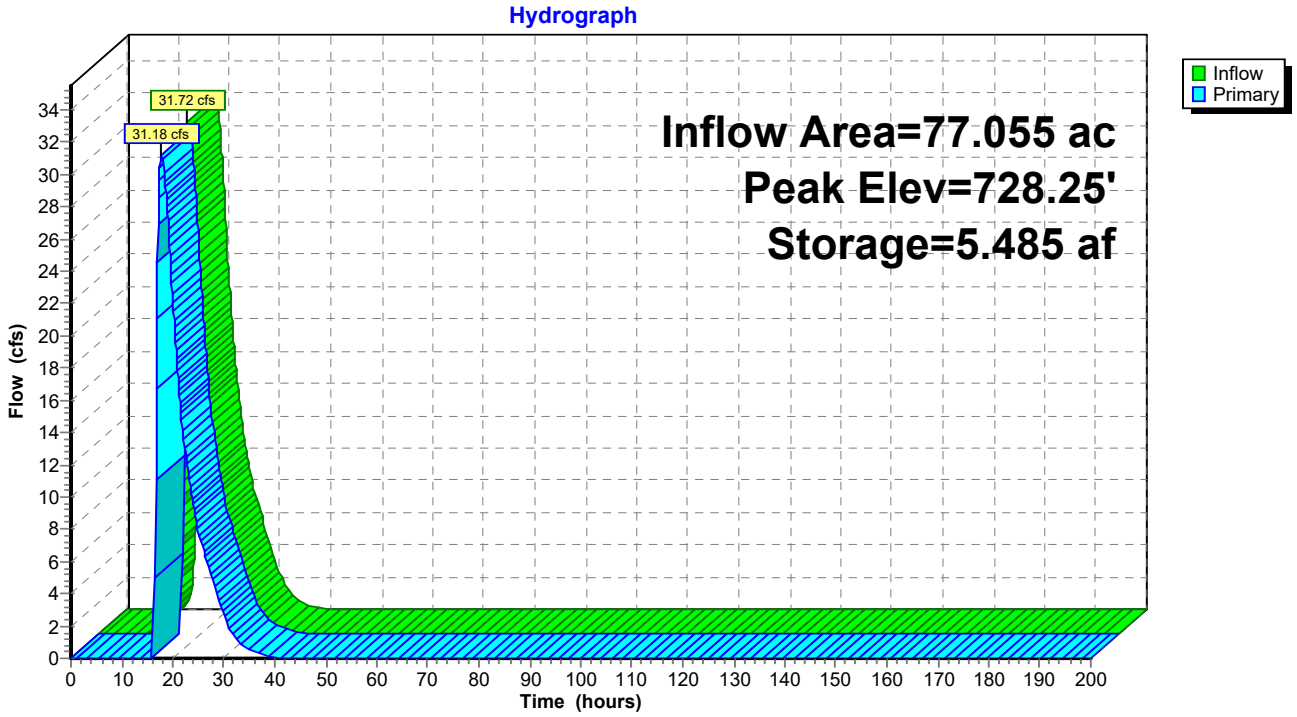
Volume	Invert	Avail.Storage	Storage Description
#1	726.50'	6.342 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
726.50	2.754	0.000	0.000
727.00	2.962	1.429	1.429
728.00	3.380	3.171	4.600
728.50	3.589	1.742	6.342

Device	Routing	Invert	Outlet Devices
#1	Primary	728.00'	**100.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=31.15 cfs @ 17.72 hrs HW=728.25' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 31.15 cfs @ 1.23 fps)

Pond ST-02: ST-02



Hydrograph for Pond ST-02: ST-02

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	726.50	0.00
0.50	0.00	0.000	726.50	0.00
1.00	0.00	0.000	726.50	0.00
1.50	0.00	0.000	726.50	0.00
2.00	0.00	0.000	726.50	0.00
2.50	0.00	0.000	726.50	0.00
3.00	0.00	0.000	726.50	0.00
3.50	0.00	0.000	726.50	0.00
4.00	0.00	0.000	726.50	0.00
4.50	0.00	0.000	726.50	0.00
5.00	0.00	0.000	726.50	0.00
5.50	0.00	0.000	726.50	0.00
6.00	0.00	0.000	726.50	0.00
6.50	0.00	0.000	726.50	0.00
7.00	0.00	0.000	726.50	0.00
7.50	0.00	0.000	726.50	0.00
8.00	0.00	0.000	726.50	0.00
8.50	0.00	0.000	726.50	0.00
9.00	0.00	0.000	726.50	0.00
9.50	0.01	0.000	726.50	0.00
10.00	0.03	0.001	726.50	0.00
10.50	0.08	0.004	726.50	0.00
11.00	0.15	0.008	726.50	0.00
11.50	0.27	0.017	726.51	0.00
12.00	0.50	0.032	726.51	0.00
12.50	0.89	0.060	726.52	0.00
13.00	2.17	0.122	726.54	0.00
13.50	4.64	0.260	726.59	0.00
14.00	7.96	0.517	726.68	0.00
14.50	12.35	0.932	726.83	0.00
15.00	17.74	1.550	727.04	0.00
15.50	23.10	2.397	727.31	0.00
16.00	27.33	3.444	727.64	0.00
16.50	30.15	4.634	728.01	0.33
17.00	**31.36**	5.359	728.22	24.51
17.50	**31.61**	**5.480**	**728.25**	**30.86**
18.00	30.47	**5.480**	**728.25**	**30.89**
18.50	28.81	5.456	728.25	29.57
19.00	26.52	5.419	728.24	27.60
19.50	23.59	5.368	728.22	24.98
20.00	20.65	5.309	728.20	22.06
20.50	18.28	5.254	728.19	19.53
21.00	16.28	5.206	728.17	17.41
21.50	14.57	5.162	728.16	15.56
22.00	13.15	5.124	728.15	14.02
22.50	11.87	5.090	728.14	12.66
23.00	10.70	5.058	728.13	11.45
23.50	9.71	5.028	728.12	10.36
24.00	8.85	5.003	728.12	9.45
24.50	8.10	4.979	728.11	8.64
25.00	7.41	4.958	728.10	7.91
25.50	6.83	4.939	728.10	7.28

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	6.24	4.920	728.09	6.70
26.50	5.72	4.902	728.09	6.14
27.00	5.20	4.885	728.08	5.61
27.50	4.67	4.867	728.08	5.11
28.00	4.15	4.848	728.07	4.60
28.50	3.63	4.830	728.07	4.09
29.00	3.14	4.811	728.06	3.58
29.50	2.68	4.792	728.06	3.14
30.00	2.27	4.774	728.05	2.71
30.50	1.90	4.756	728.04	2.31
31.00	1.58	4.740	728.04	1.94
31.50	1.32	4.725	728.04	1.67
32.00	1.10	4.711	728.03	1.42
32.50	0.91	4.699	728.03	1.19
33.00	0.75	4.688	728.03	1.00
33.50	0.62	4.678	728.02	0.83
34.00	0.50	4.670	728.02	0.68
34.50	0.39	4.662	728.02	0.60
35.00	0.31	4.653	728.02	0.52
35.50	0.26	4.645	728.01	0.44
36.00	0.21	4.638	728.01	0.37
36.50	0.17	4.632	728.01	0.31
37.00	0.14	4.626	728.01	0.26
37.50	0.11	4.622	728.01	0.21
38.00	0.09	4.618	728.01	0.18
38.50	0.08	4.615	728.00	0.15
39.00	0.06	4.612	728.00	0.12
39.50	0.05	4.610	728.00	0.10
40.00	0.04	4.608	728.00	0.08
40.50	0.03	4.607	728.00	0.07
41.00	0.03	4.606	728.00	0.05
41.50	0.02	4.605	728.00	0.04
42.00	0.02	4.604	728.00	0.04
42.50	0.01	4.603	728.00	0.03
43.00	0.01	4.602	728.00	0.02
43.50	0.01	4.602	728.00	0.02
44.00	0.01	4.601	728.00	0.01
44.50	0.00	4.601	728.00	0.01
45.00	0.00	4.601	728.00	0.01
45.50	0.00	4.601	728.00	0.01
46.00	0.00	4.600	728.00	0.00
46.50	0.00	4.600	728.00	0.00
47.00	0.00	4.600	728.00	0.00
47.50	0.00	4.600	728.00	0.00
48.00	0.00	4.600	728.00	0.00
48.50	0.00	4.600	728.00	0.00
49.00	0.00	4.600	728.00	0.00
49.50	0.00	4.600	728.00	0.00
50.00	0.00	4.600	728.00	0.00
50.50	0.00	4.600	728.00	0.00
51.00	0.00	4.600	728.00	0.00
51.50	0.00	4.600	728.00	0.00

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	4.600	728.00	0.00
52.50	0.00	4.600	728.00	0.00
53.00	0.00	4.600	728.00	0.00
53.50	0.00	4.600	728.00	0.00
54.00	0.00	4.600	728.00	0.00
54.50	0.00	4.600	728.00	0.00
55.00	0.00	4.600	728.00	0.00
55.50	0.00	4.600	728.00	0.00
56.00	0.00	4.600	728.00	0.00
56.50	0.00	4.600	728.00	0.00
57.00	0.00	4.600	728.00	0.00
57.50	0.00	4.600	728.00	0.00
58.00	0.00	4.600	728.00	0.00
58.50	0.00	4.600	728.00	0.00
59.00	0.00	4.600	728.00	0.00
59.50	0.00	4.600	728.00	0.00
60.00	0.00	4.600	728.00	0.00
60.50	0.00	4.600	728.00	0.00
61.00	0.00	4.600	728.00	0.00
61.50	0.00	4.600	728.00	0.00
62.00	0.00	4.600	728.00	0.00
62.50	0.00	4.600	728.00	0.00
63.00	0.00	4.600	728.00	0.00
63.50	0.00	4.600	728.00	0.00
64.00	0.00	4.600	728.00	0.00
64.50	0.00	4.600	728.00	0.00
65.00	0.00	4.600	728.00	0.00
65.50	0.00	4.600	728.00	0.00
66.00	0.00	4.600	728.00	0.00
66.50	0.00	4.600	728.00	0.00
67.00	0.00	4.600	728.00	0.00
67.50	0.00	4.600	728.00	0.00
68.00	0.00	4.600	728.00	0.00
68.50	0.00	4.600	728.00	0.00
69.00	0.00	4.600	728.00	0.00
69.50	0.00	4.600	728.00	0.00
70.00	0.00	4.600	728.00	0.00
70.50	0.00	4.600	728.00	0.00
71.00	0.00	4.600	728.00	0.00
71.50	0.00	4.600	728.00	0.00
72.00	0.00	4.600	728.00	0.00
72.50	0.00	4.600	728.00	0.00
73.00	0.00	4.600	728.00	0.00
73.50	0.00	4.600	728.00	0.00
74.00	0.00	4.600	728.00	0.00
74.50	0.00	4.600	728.00	0.00
75.00	0.00	4.600	728.00	0.00
75.50	0.00	4.600	728.00	0.00
76.00	0.00	4.600	728.00	0.00
76.50	0.00	4.600	728.00	0.00
77.00	0.00	4.600	728.00	0.00
77.50	0.00	4.600	728.00	0.00

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	4.600	728.00	0.00
78.50	0.00	4.600	728.00	0.00
79.00	0.00	4.600	728.00	0.00
79.50	0.00	4.600	728.00	0.00
80.00	0.00	4.600	728.00	0.00
80.50	0.00	4.600	728.00	0.00
81.00	0.00	4.600	728.00	0.00
81.50	0.00	4.600	728.00	0.00
82.00	0.00	4.600	728.00	0.00
82.50	0.00	4.600	728.00	0.00
83.00	0.00	4.600	728.00	0.00
83.50	0.00	4.600	728.00	0.00
84.00	0.00	4.600	728.00	0.00
84.50	0.00	4.600	728.00	0.00
85.00	0.00	4.600	728.00	0.00
85.50	0.00	4.600	728.00	0.00
86.00	0.00	4.600	728.00	0.00
86.50	0.00	4.600	728.00	0.00
87.00	0.00	4.600	728.00	0.00
87.50	0.00	4.600	728.00	0.00
88.00	0.00	4.600	728.00	0.00
88.50	0.00	4.600	728.00	0.00
89.00	0.00	4.600	728.00	0.00
89.50	0.00	4.600	728.00	0.00
90.00	0.00	4.600	728.00	0.00
90.50	0.00	4.600	728.00	0.00
91.00	0.00	4.600	728.00	0.00
91.50	0.00	4.600	728.00	0.00
92.00	0.00	4.600	728.00	0.00
92.50	0.00	4.600	728.00	0.00
93.00	0.00	4.600	728.00	0.00
93.50	0.00	4.600	728.00	0.00
94.00	0.00	4.600	728.00	0.00
94.50	0.00	4.600	728.00	0.00
95.00	0.00	4.600	728.00	0.00
95.50	0.00	4.600	728.00	0.00
96.00	0.00	4.600	728.00	0.00
96.50	0.00	4.600	728.00	0.00
97.00	0.00	4.600	728.00	0.00
97.50	0.00	4.600	728.00	0.00
98.00	0.00	4.600	728.00	0.00
98.50	0.00	4.600	728.00	0.00
99.00	0.00	4.600	728.00	0.00
99.50	0.00	4.600	728.00	0.00
100.00	0.00	4.600	728.00	0.00
100.50	0.00	4.600	728.00	0.00
101.00	0.00	4.600	728.00	0.00
101.50	0.00	4.600	728.00	0.00
102.00	0.00	4.600	728.00	0.00
102.50	0.00	4.600	728.00	0.00
103.00	0.00	4.600	728.00	0.00
103.50	0.00	4.600	728.00	0.00

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	4.600	728.00	0.00
104.50	0.00	4.600	728.00	0.00
105.00	0.00	4.600	728.00	0.00
105.50	0.00	4.600	728.00	0.00
106.00	0.00	4.600	728.00	0.00
106.50	0.00	4.600	728.00	0.00
107.00	0.00	4.600	728.00	0.00
107.50	0.00	4.600	728.00	0.00
108.00	0.00	4.600	728.00	0.00
108.50	0.00	4.600	728.00	0.00
109.00	0.00	4.600	728.00	0.00
109.50	0.00	4.600	728.00	0.00
110.00	0.00	4.600	728.00	0.00
110.50	0.00	4.600	728.00	0.00
111.00	0.00	4.600	728.00	0.00
111.50	0.00	4.600	728.00	0.00
112.00	0.00	4.600	728.00	0.00
112.50	0.00	4.600	728.00	0.00
113.00	0.00	4.600	728.00	0.00
113.50	0.00	4.600	728.00	0.00
114.00	0.00	4.600	728.00	0.00
114.50	0.00	4.600	728.00	0.00
115.00	0.00	4.600	728.00	0.00
115.50	0.00	4.600	728.00	0.00
116.00	0.00	4.600	728.00	0.00
116.50	0.00	4.600	728.00	0.00
117.00	0.00	4.600	728.00	0.00
117.50	0.00	4.600	728.00	0.00
118.00	0.00	4.600	728.00	0.00
118.50	0.00	4.600	728.00	0.00
119.00	0.00	4.600	728.00	0.00
119.50	0.00	4.600	728.00	0.00
120.00	0.00	4.600	728.00	0.00
120.50	0.00	4.600	728.00	0.00
121.00	0.00	4.600	728.00	0.00
121.50	0.00	4.600	728.00	0.00
122.00	0.00	4.600	728.00	0.00
122.50	0.00	4.600	728.00	0.00
123.00	0.00	4.600	728.00	0.00
123.50	0.00	4.600	728.00	0.00
124.00	0.00	4.600	728.00	0.00
124.50	0.00	4.600	728.00	0.00
125.00	0.00	4.600	728.00	0.00
125.50	0.00	4.600	728.00	0.00
126.00	0.00	4.600	728.00	0.00
126.50	0.00	4.600	728.00	0.00
127.00	0.00	4.600	728.00	0.00
127.50	0.00	4.600	728.00	0.00
128.00	0.00	4.600	728.00	0.00
128.50	0.00	4.600	728.00	0.00
129.00	0.00	4.600	728.00	0.00
129.50	0.00	4.600	728.00	0.00

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	4.600	728.00	0.00
130.50	0.00	4.600	728.00	0.00
131.00	0.00	4.600	728.00	0.00
131.50	0.00	4.600	728.00	0.00
132.00	0.00	4.600	728.00	0.00
132.50	0.00	4.600	728.00	0.00
133.00	0.00	4.600	728.00	0.00
133.50	0.00	4.600	728.00	0.00
134.00	0.00	4.600	728.00	0.00
134.50	0.00	4.600	728.00	0.00
135.00	0.00	4.600	728.00	0.00
135.50	0.00	4.600	728.00	0.00
136.00	0.00	4.600	728.00	0.00
136.50	0.00	4.600	728.00	0.00
137.00	0.00	4.600	728.00	0.00
137.50	0.00	4.600	728.00	0.00
138.00	0.00	4.600	728.00	0.00
138.50	0.00	4.600	728.00	0.00
139.00	0.00	4.600	728.00	0.00
139.50	0.00	4.600	728.00	0.00
140.00	0.00	4.600	728.00	0.00
140.50	0.00	4.600	728.00	0.00
141.00	0.00	4.600	728.00	0.00
141.50	0.00	4.600	728.00	0.00
142.00	0.00	4.600	728.00	0.00
142.50	0.00	4.600	728.00	0.00
143.00	0.00	4.600	728.00	0.00
143.50	0.00	4.600	728.00	0.00
144.00	0.00	4.600	728.00	0.00
144.50	0.00	4.600	728.00	0.00
145.00	0.00	4.600	728.00	0.00
145.50	0.00	4.600	728.00	0.00
146.00	0.00	4.600	728.00	0.00
146.50	0.00	4.600	728.00	0.00
147.00	0.00	4.600	728.00	0.00
147.50	0.00	4.600	728.00	0.00
148.00	0.00	4.600	728.00	0.00
148.50	0.00	4.600	728.00	0.00
149.00	0.00	4.600	728.00	0.00
149.50	0.00	4.600	728.00	0.00
150.00	0.00	4.600	728.00	0.00
150.50	0.00	4.600	728.00	0.00
151.00	0.00	4.600	728.00	0.00
151.50	0.00	4.600	728.00	0.00
152.00	0.00	4.600	728.00	0.00
152.50	0.00	4.600	728.00	0.00
153.00	0.00	4.600	728.00	0.00
153.50	0.00	4.600	728.00	0.00
154.00	0.00	4.600	728.00	0.00
154.50	0.00	4.600	728.00	0.00
155.00	0.00	4.600	728.00	0.00
155.50	0.00	4.600	728.00	0.00

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	4.600	728.00	0.00
156.50	0.00	4.600	728.00	0.00
157.00	0.00	4.600	728.00	0.00
157.50	0.00	4.600	728.00	0.00
158.00	0.00	4.600	728.00	0.00
158.50	0.00	4.600	728.00	0.00
159.00	0.00	4.600	728.00	0.00
159.50	0.00	4.600	728.00	0.00
160.00	0.00	4.600	728.00	0.00
160.50	0.00	4.600	728.00	0.00
161.00	0.00	4.600	728.00	0.00
161.50	0.00	4.600	728.00	0.00
162.00	0.00	4.600	728.00	0.00
162.50	0.00	4.600	728.00	0.00
163.00	0.00	4.600	728.00	0.00
163.50	0.00	4.600	728.00	0.00
164.00	0.00	4.600	728.00	0.00
164.50	0.00	4.600	728.00	0.00
165.00	0.00	4.600	728.00	0.00
165.50	0.00	4.600	728.00	0.00
166.00	0.00	4.600	728.00	0.00
166.50	0.00	4.600	728.00	0.00
167.00	0.00	4.600	728.00	0.00
167.50	0.00	4.600	728.00	0.00
168.00	0.00	4.600	728.00	0.00
168.50	0.00	4.600	728.00	0.00
169.00	0.00	4.600	728.00	0.00
169.50	0.00	4.600	728.00	0.00
170.00	0.00	4.600	728.00	0.00
170.50	0.00	4.600	728.00	0.00
171.00	0.00	4.600	728.00	0.00
171.50	0.00	4.600	728.00	0.00
172.00	0.00	4.600	728.00	0.00
172.50	0.00	4.600	728.00	0.00
173.00	0.00	4.600	728.00	0.00
173.50	0.00	4.600	728.00	0.00
174.00	0.00	4.600	728.00	0.00
174.50	0.00	4.600	728.00	0.00
175.00	0.00	4.600	728.00	0.00
175.50	0.00	4.600	728.00	0.00
176.00	0.00	4.600	728.00	0.00
176.50	0.00	4.600	728.00	0.00
177.00	0.00	4.600	728.00	0.00
177.50	0.00	4.600	728.00	0.00
178.00	0.00	4.600	728.00	0.00
178.50	0.00	4.600	728.00	0.00
179.00	0.00	4.600	728.00	0.00
179.50	0.00	4.600	728.00	0.00
180.00	0.00	4.600	728.00	0.00
180.50	0.00	4.600	728.00	0.00
181.00	0.00	4.600	728.00	0.00
181.50	0.00	4.600	728.00	0.00

Hydrograph for Pond ST-02: ST-02 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	4.600	728.00	0.00
182.50	0.00	4.600	728.00	0.00
183.00	0.00	4.600	728.00	0.00
183.50	0.00	4.600	728.00	0.00
184.00	0.00	4.600	728.00	0.00
184.50	0.00	4.600	728.00	0.00
185.00	0.00	4.600	728.00	0.00
185.50	0.00	4.600	728.00	0.00
186.00	0.00	4.600	728.00	0.00
186.50	0.00	4.600	728.00	0.00
187.00	0.00	4.600	728.00	0.00
187.50	0.00	4.600	728.00	0.00
188.00	0.00	4.600	728.00	0.00
188.50	0.00	4.600	728.00	0.00
189.00	0.00	4.600	728.00	0.00
189.50	0.00	4.600	728.00	0.00
190.00	0.00	4.600	728.00	0.00
190.50	0.00	4.600	728.00	0.00
191.00	0.00	4.600	728.00	0.00
191.50	0.00	4.600	728.00	0.00
192.00	0.00	4.600	728.00	0.00
192.50	0.00	4.600	728.00	0.00
193.00	0.00	4.600	728.00	0.00
193.50	0.00	4.600	728.00	0.00
194.00	0.00	4.600	728.00	0.00
194.50	0.00	4.600	728.00	0.00
195.00	0.00	4.600	728.00	0.00
195.50	0.00	4.600	728.00	0.00
196.00	0.00	4.600	728.00	0.00
196.50	0.00	4.600	728.00	0.00
197.00	0.00	4.600	728.00	0.00
197.50	0.00	4.600	728.00	0.00
198.00	0.00	4.600	728.00	0.00
198.50	0.00	4.600	728.00	0.00
199.00	0.00	4.600	728.00	0.00
199.50	0.00	4.600	728.00	0.00
200.00	0.00	4.600	728.00	0.00

Summary for Pond ST-03-A: ST-03-A

Inflow Area = 82.616 ac, 2.34% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 49.65 cfs @ 15.38 hrs, Volume= 21.912 af
Outflow = 48.68 cfs @ 15.64 hrs, Volume= 16.833 af, Atten= 2%, Lag= 15.4 min
Primary = 48.68 cfs @ 15.64 hrs, Volume= 16.833 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 724.65' @ 15.64 hrs Surf.Area= 3.569 ac Storage= 5.972 af

Plug-Flow detention time= 174.8 min calculated for 16.833 af (77% of inflow)
Center-of-Mass det. time= 79.9 min (1,121.9 - 1,042.0)

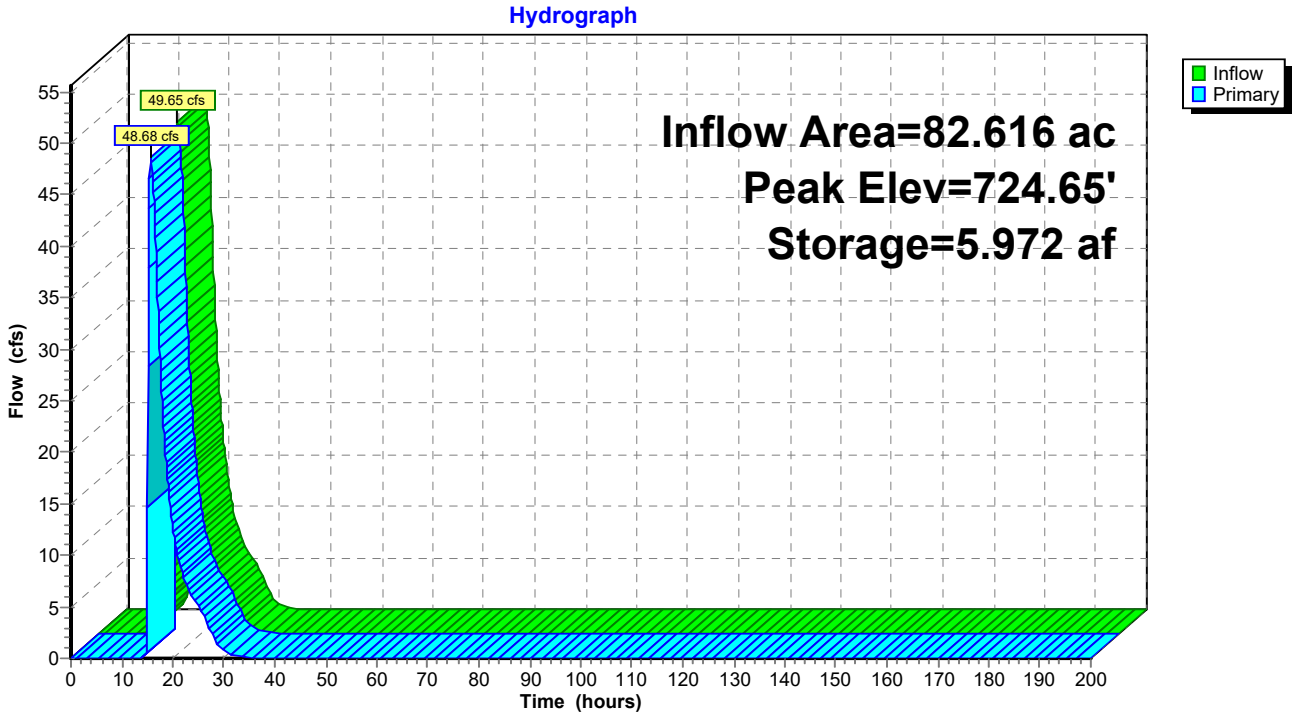
Volume	Invert	Avail.Storage	Storage Description
#1	722.90'	6.864 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
722.90	3.250	0.000	0.000
723.40	3.340	1.648	1.648
724.40	3.523	3.432	5.079
724.90	3.615	1.785	6.864

Device	Routing	Invert	Outlet Devices
#1	Primary	724.40'	**160.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=48.58 cfs @ 15.64 hrs HW=724.65' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 48.58 cfs @ 1.21 fps)

Pond ST-03-A: ST-03-A



Hydrograph for Pond ST-03-A: ST-03-A

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	722.90	0.00
0.50	0.00	0.000	722.90	0.00
1.00	0.00	0.000	722.90	0.00
1.50	0.00	0.000	722.90	0.00
2.00	0.00	0.000	722.90	0.00
2.50	0.00	0.000	722.90	0.00
3.00	0.00	0.000	722.90	0.00
3.50	0.00	0.000	722.90	0.00
4.00	0.00	0.000	722.90	0.00
4.50	0.00	0.000	722.90	0.00
5.00	0.00	0.000	722.90	0.00
5.50	0.00	0.000	722.90	0.00
6.00	0.00	0.000	722.90	0.00
6.50	0.00	0.000	722.90	0.00
7.00	0.00	0.000	722.90	0.00
7.50	0.00	0.000	722.90	0.00
8.00	0.00	0.000	722.90	0.00
8.50	0.00	0.000	722.90	0.00
9.00	0.02	0.001	722.90	0.00
9.50	0.06	0.002	722.90	0.00
10.00	0.16	0.007	722.90	0.00
10.50	0.33	0.016	722.90	0.00
11.00	0.60	0.035	722.91	0.00
11.50	1.03	0.068	722.92	0.00
12.00	1.80	0.125	722.94	0.00
12.50	3.85	0.233	722.97	0.00
13.00	9.47	0.493	723.05	0.00
13.50	18.77	1.064	723.22	0.00
14.00	31.61	2.097	723.53	0.00
14.50	42.66	3.647	723.98	0.00
15.00	**48.48**	5.483	724.51	14.65
15.50	**49.36**	**5.965**	**724.65**	**48.13**
16.00	45.99	**5.952**	**724.64**	**47.01**
16.50	40.16	5.891	724.63	42.00
17.00	32.86	5.802	724.60	35.09
17.50	27.01	5.715	724.58	28.92
18.00	22.50	5.642	724.56	24.10
18.50	19.04	5.583	724.54	20.36
19.00	16.14	5.530	724.53	17.31
19.50	13.86	5.486	724.51	14.85
20.00	12.01	5.449	724.50	12.83
20.50	10.52	5.417	724.49	11.24
21.00	9.30	5.389	724.49	9.90
21.50	8.32	5.367	724.48	8.81
22.00	7.52	5.347	724.48	7.96
22.50	6.85	5.330	724.47	7.24
23.00	6.29	5.316	724.47	6.62
23.50	5.83	5.304	724.46	6.10
24.00	5.44	5.294	724.46	5.67
24.50	5.11	5.284	724.46	5.33
25.00	4.77	5.275	724.45	5.00
25.50	4.38	5.265	724.45	4.64

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	3.89	5.253	724.45	4.21
26.50	3.30	5.239	724.44	3.68
27.00	2.71	5.223	724.44	3.10
27.50	2.14	5.205	724.44	2.60
28.00	1.63	5.186	724.43	2.08
28.50	1.22	5.169	724.43	1.60
29.00	0.90	5.155	724.42	1.20
29.50	0.67	5.143	724.42	0.97
30.00	0.50	5.130	724.41	0.78
30.50	0.37	5.119	724.41	0.62
31.00	0.28	5.110	724.41	0.48
31.50	0.20	5.103	724.41	0.36
32.00	0.15	5.097	724.41	0.27
32.50	0.11	5.093	724.40	0.21
33.00	0.08	5.089	724.40	0.15
33.50	0.06	5.086	724.40	0.11
34.00	0.04	5.085	724.40	0.08
34.50	0.03	5.083	724.40	0.06
35.00	0.02	5.082	724.40	0.04
35.50	0.01	5.081	724.40	0.03
36.00	0.01	5.080	724.40	0.02
36.50	0.01	5.080	724.40	0.02
37.00	0.00	5.080	724.40	0.01
37.50	0.00	5.079	724.40	0.01
38.00	0.00	5.079	724.40	0.00
38.50	0.00	5.079	724.40	0.00
39.00	0.00	5.079	724.40	0.00
39.50	0.00	5.079	724.40	0.00
40.00	0.00	5.079	724.40	0.00
40.50	0.00	5.079	724.40	0.00
41.00	0.00	5.079	724.40	0.00
41.50	0.00	5.079	724.40	0.00
42.00	0.00	5.079	724.40	0.00
42.50	0.00	5.079	724.40	0.00
43.00	0.00	5.079	724.40	0.00
43.50	0.00	5.079	724.40	0.00
44.00	0.00	5.079	724.40	0.00
44.50	0.00	5.079	724.40	0.00
45.00	0.00	5.079	724.40	0.00
45.50	0.00	5.079	724.40	0.00
46.00	0.00	5.079	724.40	0.00
46.50	0.00	5.079	724.40	0.00
47.00	0.00	5.079	724.40	0.00
47.50	0.00	5.079	724.40	0.00
48.00	0.00	5.079	724.40	0.00
48.50	0.00	5.079	724.40	0.00
49.00	0.00	5.079	724.40	0.00
49.50	0.00	5.079	724.40	0.00
50.00	0.00	5.079	724.40	0.00
50.50	0.00	5.079	724.40	0.00
51.00	0.00	5.079	724.40	0.00
51.50	0.00	5.079	724.40	0.00

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	5.079	724.40	0.00
52.50	0.00	5.079	724.40	0.00
53.00	0.00	5.079	724.40	0.00
53.50	0.00	5.079	724.40	0.00
54.00	0.00	5.079	724.40	0.00
54.50	0.00	5.079	724.40	0.00
55.00	0.00	5.079	724.40	0.00
55.50	0.00	5.079	724.40	0.00
56.00	0.00	5.079	724.40	0.00
56.50	0.00	5.079	724.40	0.00
57.00	0.00	5.079	724.40	0.00
57.50	0.00	5.079	724.40	0.00
58.00	0.00	5.079	724.40	0.00
58.50	0.00	5.079	724.40	0.00
59.00	0.00	5.079	724.40	0.00
59.50	0.00	5.079	724.40	0.00
60.00	0.00	5.079	724.40	0.00
60.50	0.00	5.079	724.40	0.00
61.00	0.00	5.079	724.40	0.00
61.50	0.00	5.079	724.40	0.00
62.00	0.00	5.079	724.40	0.00
62.50	0.00	5.079	724.40	0.00
63.00	0.00	5.079	724.40	0.00
63.50	0.00	5.079	724.40	0.00
64.00	0.00	5.079	724.40	0.00
64.50	0.00	5.079	724.40	0.00
65.00	0.00	5.079	724.40	0.00
65.50	0.00	5.079	724.40	0.00
66.00	0.00	5.079	724.40	0.00
66.50	0.00	5.079	724.40	0.00
67.00	0.00	5.079	724.40	0.00
67.50	0.00	5.079	724.40	0.00
68.00	0.00	5.079	724.40	0.00
68.50	0.00	5.079	724.40	0.00
69.00	0.00	5.079	724.40	0.00
69.50	0.00	5.079	724.40	0.00
70.00	0.00	5.079	724.40	0.00
70.50	0.00	5.079	724.40	0.00
71.00	0.00	5.079	724.40	0.00
71.50	0.00	5.079	724.40	0.00
72.00	0.00	5.079	724.40	0.00
72.50	0.00	5.079	724.40	0.00
73.00	0.00	5.079	724.40	0.00
73.50	0.00	5.079	724.40	0.00
74.00	0.00	5.079	724.40	0.00
74.50	0.00	5.079	724.40	0.00
75.00	0.00	5.079	724.40	0.00
75.50	0.00	5.079	724.40	0.00
76.00	0.00	5.079	724.40	0.00
76.50	0.00	5.079	724.40	0.00
77.00	0.00	5.079	724.40	0.00
77.50	0.00	5.079	724.40	0.00

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	5.079	724.40	0.00
78.50	0.00	5.079	724.40	0.00
79.00	0.00	5.079	724.40	0.00
79.50	0.00	5.079	724.40	0.00
80.00	0.00	5.079	724.40	0.00
80.50	0.00	5.079	724.40	0.00
81.00	0.00	5.079	724.40	0.00
81.50	0.00	5.079	724.40	0.00
82.00	0.00	5.079	724.40	0.00
82.50	0.00	5.079	724.40	0.00
83.00	0.00	5.079	724.40	0.00
83.50	0.00	5.079	724.40	0.00
84.00	0.00	5.079	724.40	0.00
84.50	0.00	5.079	724.40	0.00
85.00	0.00	5.079	724.40	0.00
85.50	0.00	5.079	724.40	0.00
86.00	0.00	5.079	724.40	0.00
86.50	0.00	5.079	724.40	0.00
87.00	0.00	5.079	724.40	0.00
87.50	0.00	5.079	724.40	0.00
88.00	0.00	5.079	724.40	0.00
88.50	0.00	5.079	724.40	0.00
89.00	0.00	5.079	724.40	0.00
89.50	0.00	5.079	724.40	0.00
90.00	0.00	5.079	724.40	0.00
90.50	0.00	5.079	724.40	0.00
91.00	0.00	5.079	724.40	0.00
91.50	0.00	5.079	724.40	0.00
92.00	0.00	5.079	724.40	0.00
92.50	0.00	5.079	724.40	0.00
93.00	0.00	5.079	724.40	0.00
93.50	0.00	5.079	724.40	0.00
94.00	0.00	5.079	724.40	0.00
94.50	0.00	5.079	724.40	0.00
95.00	0.00	5.079	724.40	0.00
95.50	0.00	5.079	724.40	0.00
96.00	0.00	5.079	724.40	0.00
96.50	0.00	5.079	724.40	0.00
97.00	0.00	5.079	724.40	0.00
97.50	0.00	5.079	724.40	0.00
98.00	0.00	5.079	724.40	0.00
98.50	0.00	5.079	724.40	0.00
99.00	0.00	5.079	724.40	0.00
99.50	0.00	5.079	724.40	0.00
100.00	0.00	5.079	724.40	0.00
100.50	0.00	5.079	724.40	0.00
101.00	0.00	5.079	724.40	0.00
101.50	0.00	5.079	724.40	0.00
102.00	0.00	5.079	724.40	0.00
102.50	0.00	5.079	724.40	0.00
103.00	0.00	5.079	724.40	0.00
103.50	0.00	5.079	724.40	0.00

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	5.079	724.40	0.00
104.50	0.00	5.079	724.40	0.00
105.00	0.00	5.079	724.40	0.00
105.50	0.00	5.079	724.40	0.00
106.00	0.00	5.079	724.40	0.00
106.50	0.00	5.079	724.40	0.00
107.00	0.00	5.079	724.40	0.00
107.50	0.00	5.079	724.40	0.00
108.00	0.00	5.079	724.40	0.00
108.50	0.00	5.079	724.40	0.00
109.00	0.00	5.079	724.40	0.00
109.50	0.00	5.079	724.40	0.00
110.00	0.00	5.079	724.40	0.00
110.50	0.00	5.079	724.40	0.00
111.00	0.00	5.079	724.40	0.00
111.50	0.00	5.079	724.40	0.00
112.00	0.00	5.079	724.40	0.00
112.50	0.00	5.079	724.40	0.00
113.00	0.00	5.079	724.40	0.00
113.50	0.00	5.079	724.40	0.00
114.00	0.00	5.079	724.40	0.00
114.50	0.00	5.079	724.40	0.00
115.00	0.00	5.079	724.40	0.00
115.50	0.00	5.079	724.40	0.00
116.00	0.00	5.079	724.40	0.00
116.50	0.00	5.079	724.40	0.00
117.00	0.00	5.079	724.40	0.00
117.50	0.00	5.079	724.40	0.00
118.00	0.00	5.079	724.40	0.00
118.50	0.00	5.079	724.40	0.00
119.00	0.00	5.079	724.40	0.00
119.50	0.00	5.079	724.40	0.00
120.00	0.00	5.079	724.40	0.00
120.50	0.00	5.079	724.40	0.00
121.00	0.00	5.079	724.40	0.00
121.50	0.00	5.079	724.40	0.00
122.00	0.00	5.079	724.40	0.00
122.50	0.00	5.079	724.40	0.00
123.00	0.00	5.079	724.40	0.00
123.50	0.00	5.079	724.40	0.00
124.00	0.00	5.079	724.40	0.00
124.50	0.00	5.079	724.40	0.00
125.00	0.00	5.079	724.40	0.00
125.50	0.00	5.079	724.40	0.00
126.00	0.00	5.079	724.40	0.00
126.50	0.00	5.079	724.40	0.00
127.00	0.00	5.079	724.40	0.00
127.50	0.00	5.079	724.40	0.00
128.00	0.00	5.079	724.40	0.00
128.50	0.00	5.079	724.40	0.00
129.00	0.00	5.079	724.40	0.00
129.50	0.00	5.079	724.40	0.00

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	5.079	724.40	0.00
130.50	0.00	5.079	724.40	0.00
131.00	0.00	5.079	724.40	0.00
131.50	0.00	5.079	724.40	0.00
132.00	0.00	5.079	724.40	0.00
132.50	0.00	5.079	724.40	0.00
133.00	0.00	5.079	724.40	0.00
133.50	0.00	5.079	724.40	0.00
134.00	0.00	5.079	724.40	0.00
134.50	0.00	5.079	724.40	0.00
135.00	0.00	5.079	724.40	0.00
135.50	0.00	5.079	724.40	0.00
136.00	0.00	5.079	724.40	0.00
136.50	0.00	5.079	724.40	0.00
137.00	0.00	5.079	724.40	0.00
137.50	0.00	5.079	724.40	0.00
138.00	0.00	5.079	724.40	0.00
138.50	0.00	5.079	724.40	0.00
139.00	0.00	5.079	724.40	0.00
139.50	0.00	5.079	724.40	0.00
140.00	0.00	5.079	724.40	0.00
140.50	0.00	5.079	724.40	0.00
141.00	0.00	5.079	724.40	0.00
141.50	0.00	5.079	724.40	0.00
142.00	0.00	5.079	724.40	0.00
142.50	0.00	5.079	724.40	0.00
143.00	0.00	5.079	724.40	0.00
143.50	0.00	5.079	724.40	0.00
144.00	0.00	5.079	724.40	0.00
144.50	0.00	5.079	724.40	0.00
145.00	0.00	5.079	724.40	0.00
145.50	0.00	5.079	724.40	0.00
146.00	0.00	5.079	724.40	0.00
146.50	0.00	5.079	724.40	0.00
147.00	0.00	5.079	724.40	0.00
147.50	0.00	5.079	724.40	0.00
148.00	0.00	5.079	724.40	0.00
148.50	0.00	5.079	724.40	0.00
149.00	0.00	5.079	724.40	0.00
149.50	0.00	5.079	724.40	0.00
150.00	0.00	5.079	724.40	0.00
150.50	0.00	5.079	724.40	0.00
151.00	0.00	5.079	724.40	0.00
151.50	0.00	5.079	724.40	0.00
152.00	0.00	5.079	724.40	0.00
152.50	0.00	5.079	724.40	0.00
153.00	0.00	5.079	724.40	0.00
153.50	0.00	5.079	724.40	0.00
154.00	0.00	5.079	724.40	0.00
154.50	0.00	5.079	724.40	0.00
155.00	0.00	5.079	724.40	0.00
155.50	0.00	5.079	724.40	0.00

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	5.079	724.40	0.00
156.50	0.00	5.079	724.40	0.00
157.00	0.00	5.079	724.40	0.00
157.50	0.00	5.079	724.40	0.00
158.00	0.00	5.079	724.40	0.00
158.50	0.00	5.079	724.40	0.00
159.00	0.00	5.079	724.40	0.00
159.50	0.00	5.079	724.40	0.00
160.00	0.00	5.079	724.40	0.00
160.50	0.00	5.079	724.40	0.00
161.00	0.00	5.079	724.40	0.00
161.50	0.00	5.079	724.40	0.00
162.00	0.00	5.079	724.40	0.00
162.50	0.00	5.079	724.40	0.00
163.00	0.00	5.079	724.40	0.00
163.50	0.00	5.079	724.40	0.00
164.00	0.00	5.079	724.40	0.00
164.50	0.00	5.079	724.40	0.00
165.00	0.00	5.079	724.40	0.00
165.50	0.00	5.079	724.40	0.00
166.00	0.00	5.079	724.40	0.00
166.50	0.00	5.079	724.40	0.00
167.00	0.00	5.079	724.40	0.00
167.50	0.00	5.079	724.40	0.00
168.00	0.00	5.079	724.40	0.00
168.50	0.00	5.079	724.40	0.00
169.00	0.00	5.079	724.40	0.00
169.50	0.00	5.079	724.40	0.00
170.00	0.00	5.079	724.40	0.00
170.50	0.00	5.079	724.40	0.00
171.00	0.00	5.079	724.40	0.00
171.50	0.00	5.079	724.40	0.00
172.00	0.00	5.079	724.40	0.00
172.50	0.00	5.079	724.40	0.00
173.00	0.00	5.079	724.40	0.00
173.50	0.00	5.079	724.40	0.00
174.00	0.00	5.079	724.40	0.00
174.50	0.00	5.079	724.40	0.00
175.00	0.00	5.079	724.40	0.00
175.50	0.00	5.079	724.40	0.00
176.00	0.00	5.079	724.40	0.00
176.50	0.00	5.079	724.40	0.00
177.00	0.00	5.079	724.40	0.00
177.50	0.00	5.079	724.40	0.00
178.00	0.00	5.079	724.40	0.00
178.50	0.00	5.079	724.40	0.00
179.00	0.00	5.079	724.40	0.00
179.50	0.00	5.079	724.40	0.00
180.00	0.00	5.079	724.40	0.00
180.50	0.00	5.079	724.40	0.00
181.00	0.00	5.079	724.40	0.00
181.50	0.00	5.079	724.40	0.00

Hydrograph for Pond ST-03-A: ST-03-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	5.079	724.40	0.00
182.50	0.00	5.079	724.40	0.00
183.00	0.00	5.079	724.40	0.00
183.50	0.00	5.079	724.40	0.00
184.00	0.00	5.079	724.40	0.00
184.50	0.00	5.079	724.40	0.00
185.00	0.00	5.079	724.40	0.00
185.50	0.00	5.079	724.40	0.00
186.00	0.00	5.079	724.40	0.00
186.50	0.00	5.079	724.40	0.00
187.00	0.00	5.079	724.40	0.00
187.50	0.00	5.079	724.40	0.00
188.00	0.00	5.079	724.40	0.00
188.50	0.00	5.079	724.40	0.00
189.00	0.00	5.079	724.40	0.00
189.50	0.00	5.079	724.40	0.00
190.00	0.00	5.079	724.40	0.00
190.50	0.00	5.079	724.40	0.00
191.00	0.00	5.079	724.40	0.00
191.50	0.00	5.079	724.40	0.00
192.00	0.00	5.079	724.40	0.00
192.50	0.00	5.079	724.40	0.00
193.00	0.00	5.079	724.40	0.00
193.50	0.00	5.079	724.40	0.00
194.00	0.00	5.079	724.40	0.00
194.50	0.00	5.079	724.40	0.00
195.00	0.00	5.079	724.40	0.00
195.50	0.00	5.079	724.40	0.00
196.00	0.00	5.079	724.40	0.00
196.50	0.00	5.079	724.40	0.00
197.00	0.00	5.079	724.40	0.00
197.50	0.00	5.079	724.40	0.00
198.00	0.00	5.079	724.40	0.00
198.50	0.00	5.079	724.40	0.00
199.00	0.00	5.079	724.40	0.00
199.50	0.00	5.079	724.40	0.00
200.00	0.00	5.079	724.40	0.00

Summary for Pond ST-03-B: ST-03-B

Inflow Area = 18.952 ac, 0.00% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 15.56 cfs @ 14.16 hrs, Volume= 5.026 af
Outflow = 15.03 cfs @ 14.51 hrs, Volume= 3.811 af, Atten= 3%, Lag= 20.7 min
Primary = 15.03 cfs @ 14.51 hrs, Volume= 3.811 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 727.25' @ 14.51 hrs Surf.Area= 0.895 ac Storage= 1.438 af

Plug-Flow detention time= 160.4 min calculated for 3.811 af (76% of inflow)
Center-of-Mass det. time= 70.1 min (1,033.5 - 963.3)

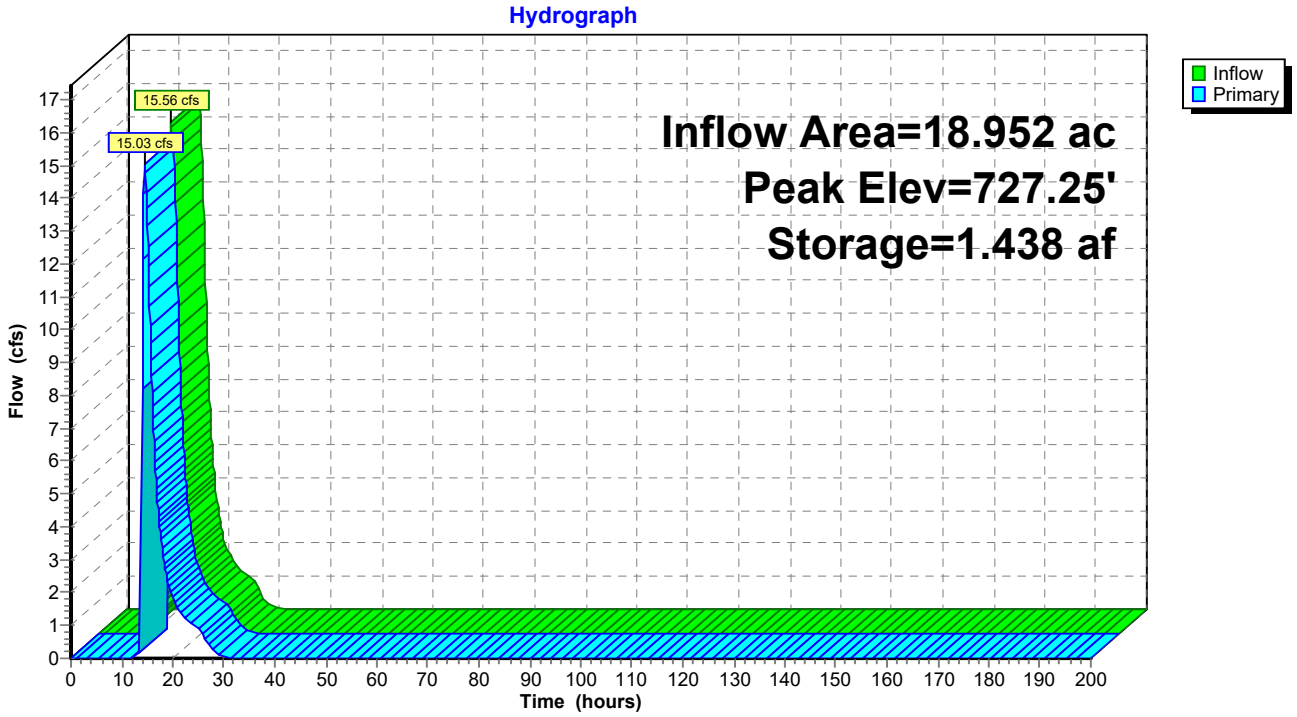
Volume	Invert	Avail.Storage	Storage Description
#1	725.50'	1.663 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
725.50	0.747	0.000	0.000
726.00	0.789	0.384	0.384
727.00	0.874	0.831	1.215
727.50	0.917	0.448	1.663

Device	Routing	Invert	Outlet Devices
#1	Primary	727.00'	**50.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=15.01 cfs @ 14.51 hrs HW=727.25' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 15.01 cfs @ 1.21 fps)

Pond ST-03-B: ST-03-B



Hydrograph for Pond ST-03-B: ST-03-B

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	725.50	0.00
0.50	0.00	0.000	725.50	0.00
1.00	0.00	0.000	725.50	0.00
1.50	0.00	0.000	725.50	0.00
2.00	0.00	0.000	725.50	0.00
2.50	0.00	0.000	725.50	0.00
3.00	0.00	0.000	725.50	0.00
3.50	0.00	0.000	725.50	0.00
4.00	0.00	0.000	725.50	0.00
4.50	0.00	0.000	725.50	0.00
5.00	0.00	0.000	725.50	0.00
5.50	0.00	0.000	725.50	0.00
6.00	0.00	0.000	725.50	0.00
6.50	0.00	0.000	725.50	0.00
7.00	0.00	0.000	725.50	0.00
7.50	0.00	0.000	725.50	0.00
8.00	0.00	0.000	725.50	0.00
8.50	0.00	0.000	725.50	0.00
9.00	0.02	0.000	725.50	0.00
9.50	0.05	0.002	725.50	0.00
10.00	0.11	0.005	725.51	0.00
10.50	0.19	0.011	725.51	0.00
11.00	0.33	0.021	725.53	0.00
11.50	0.52	0.039	725.55	0.00
12.00	0.90	0.067	725.59	0.00
12.50	2.57	0.131	725.67	0.00
13.00	6.71	0.314	725.91	0.00
13.50	12.26	0.709	726.39	0.00
14.00	**15.31**	1.281	727.07	2.39
14.50	**15.02**	**1.438**	**727.25**	**15.03**
15.00	12.45	1.420	727.23	13.17
15.50	9.35	1.388	727.19	10.13
16.00	7.09	1.359	727.16	7.69
16.50	5.51	1.337	727.14	5.99
17.00	4.36	1.319	727.12	4.74
17.50	3.53	1.305	727.10	3.82
18.00	2.92	1.294	727.09	3.16
18.50	2.48	1.286	727.08	2.66
19.00	2.15	1.279	727.07	2.30
19.50	1.90	1.274	727.07	2.01
20.00	1.71	1.270	727.06	1.79
20.50	1.55	1.266	727.06	1.63
21.00	1.42	1.263	727.05	1.49
21.50	1.31	1.260	727.05	1.37
22.00	1.22	1.258	727.05	1.27
22.50	1.16	1.257	727.05	1.19
23.00	1.10	1.255	727.04	1.13
23.50	1.05	1.254	727.04	1.08
24.00	1.01	1.253	727.04	1.03
24.50	0.96	1.252	727.04	0.98
25.00	0.89	1.251	727.04	0.93
25.50	0.76	1.248	727.04	0.84

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	0.59	1.244	727.03	0.70
26.50	0.41	1.239	727.03	0.53
27.00	0.27	1.234	727.02	0.37
27.50	0.17	1.230	727.02	0.28
28.00	0.11	1.226	727.01	0.20
28.50	0.07	1.223	727.01	0.14
29.00	0.05	1.220	727.01	0.09
29.50	0.03	1.219	727.00	0.06
30.00	0.02	1.218	727.00	0.04
30.50	0.01	1.217	727.00	0.03
31.00	0.01	1.216	727.00	0.02
31.50	0.00	1.216	727.00	0.01
32.00	0.00	1.216	727.00	0.01
32.50	0.00	1.216	727.00	0.00
33.00	0.00	1.216	727.00	0.00
33.50	0.00	1.216	727.00	0.00
34.00	0.00	1.216	727.00	0.00
34.50	0.00	1.216	727.00	0.00
35.00	0.00	1.216	727.00	0.00
35.50	0.00	1.216	727.00	0.00
36.00	0.00	1.216	727.00	0.00
36.50	0.00	1.216	727.00	0.00
37.00	0.00	1.216	727.00	0.00
37.50	0.00	1.216	727.00	0.00
38.00	0.00	1.216	727.00	0.00
38.50	0.00	1.216	727.00	0.00
39.00	0.00	1.216	727.00	0.00
39.50	0.00	1.216	727.00	0.00
40.00	0.00	1.216	727.00	0.00
40.50	0.00	1.216	727.00	0.00
41.00	0.00	1.216	727.00	0.00
41.50	0.00	1.216	727.00	0.00
42.00	0.00	1.216	727.00	0.00
42.50	0.00	1.216	727.00	0.00
43.00	0.00	1.216	727.00	0.00
43.50	0.00	1.216	727.00	0.00
44.00	0.00	1.216	727.00	0.00
44.50	0.00	1.216	727.00	0.00
45.00	0.00	1.216	727.00	0.00
45.50	0.00	1.216	727.00	0.00
46.00	0.00	1.216	727.00	0.00
46.50	0.00	1.216	727.00	0.00
47.00	0.00	1.216	727.00	0.00
47.50	0.00	1.216	727.00	0.00
48.00	0.00	1.216	727.00	0.00
48.50	0.00	1.216	727.00	0.00
49.00	0.00	1.216	727.00	0.00
49.50	0.00	1.216	727.00	0.00
50.00	0.00	1.216	727.00	0.00
50.50	0.00	1.216	727.00	0.00
51.00	0.00	1.216	727.00	0.00
51.50	0.00	1.216	727.00	0.00

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	1.216	727.00	0.00
52.50	0.00	1.216	727.00	0.00
53.00	0.00	1.216	727.00	0.00
53.50	0.00	1.216	727.00	0.00
54.00	0.00	1.216	727.00	0.00
54.50	0.00	1.216	727.00	0.00
55.00	0.00	1.216	727.00	0.00
55.50	0.00	1.216	727.00	0.00
56.00	0.00	1.216	727.00	0.00
56.50	0.00	1.216	727.00	0.00
57.00	0.00	1.216	727.00	0.00
57.50	0.00	1.216	727.00	0.00
58.00	0.00	1.216	727.00	0.00
58.50	0.00	1.216	727.00	0.00
59.00	0.00	1.216	727.00	0.00
59.50	0.00	1.216	727.00	0.00
60.00	0.00	1.216	727.00	0.00
60.50	0.00	1.216	727.00	0.00
61.00	0.00	1.216	727.00	0.00
61.50	0.00	1.216	727.00	0.00
62.00	0.00	1.216	727.00	0.00
62.50	0.00	1.216	727.00	0.00
63.00	0.00	1.216	727.00	0.00
63.50	0.00	1.216	727.00	0.00
64.00	0.00	1.216	727.00	0.00
64.50	0.00	1.216	727.00	0.00
65.00	0.00	1.216	727.00	0.00
65.50	0.00	1.216	727.00	0.00
66.00	0.00	1.216	727.00	0.00
66.50	0.00	1.216	727.00	0.00
67.00	0.00	1.216	727.00	0.00
67.50	0.00	1.216	727.00	0.00
68.00	0.00	1.216	727.00	0.00
68.50	0.00	1.216	727.00	0.00
69.00	0.00	1.216	727.00	0.00
69.50	0.00	1.216	727.00	0.00
70.00	0.00	1.216	727.00	0.00
70.50	0.00	1.216	727.00	0.00
71.00	0.00	1.216	727.00	0.00
71.50	0.00	1.216	727.00	0.00
72.00	0.00	1.216	727.00	0.00
72.50	0.00	1.216	727.00	0.00
73.00	0.00	1.216	727.00	0.00
73.50	0.00	1.216	727.00	0.00
74.00	0.00	1.216	727.00	0.00
74.50	0.00	1.216	727.00	0.00
75.00	0.00	1.216	727.00	0.00
75.50	0.00	1.216	727.00	0.00
76.00	0.00	1.216	727.00	0.00
76.50	0.00	1.216	727.00	0.00
77.00	0.00	1.216	727.00	0.00
77.50	0.00	1.216	727.00	0.00

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	1.216	727.00	0.00
78.50	0.00	1.216	727.00	0.00
79.00	0.00	1.216	727.00	0.00
79.50	0.00	1.216	727.00	0.00
80.00	0.00	1.216	727.00	0.00
80.50	0.00	1.216	727.00	0.00
81.00	0.00	1.216	727.00	0.00
81.50	0.00	1.216	727.00	0.00
82.00	0.00	1.216	727.00	0.00
82.50	0.00	1.216	727.00	0.00
83.00	0.00	1.216	727.00	0.00
83.50	0.00	1.216	727.00	0.00
84.00	0.00	1.216	727.00	0.00
84.50	0.00	1.216	727.00	0.00
85.00	0.00	1.216	727.00	0.00
85.50	0.00	1.216	727.00	0.00
86.00	0.00	1.216	727.00	0.00
86.50	0.00	1.216	727.00	0.00
87.00	0.00	1.216	727.00	0.00
87.50	0.00	1.216	727.00	0.00
88.00	0.00	1.216	727.00	0.00
88.50	0.00	1.216	727.00	0.00
89.00	0.00	1.216	727.00	0.00
89.50	0.00	1.216	727.00	0.00
90.00	0.00	1.216	727.00	0.00
90.50	0.00	1.216	727.00	0.00
91.00	0.00	1.216	727.00	0.00
91.50	0.00	1.216	727.00	0.00
92.00	0.00	1.216	727.00	0.00
92.50	0.00	1.216	727.00	0.00
93.00	0.00	1.216	727.00	0.00
93.50	0.00	1.216	727.00	0.00
94.00	0.00	1.216	727.00	0.00
94.50	0.00	1.216	727.00	0.00
95.00	0.00	1.216	727.00	0.00
95.50	0.00	1.216	727.00	0.00
96.00	0.00	1.216	727.00	0.00
96.50	0.00	1.216	727.00	0.00
97.00	0.00	1.216	727.00	0.00
97.50	0.00	1.216	727.00	0.00
98.00	0.00	1.216	727.00	0.00
98.50	0.00	1.216	727.00	0.00
99.00	0.00	1.216	727.00	0.00
99.50	0.00	1.216	727.00	0.00
100.00	0.00	1.216	727.00	0.00
100.50	0.00	1.216	727.00	0.00
101.00	0.00	1.216	727.00	0.00
101.50	0.00	1.216	727.00	0.00
102.00	0.00	1.216	727.00	0.00
102.50	0.00	1.216	727.00	0.00
103.00	0.00	1.216	727.00	0.00
103.50	0.00	1.216	727.00	0.00

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1.216	727.00	0.00
104.50	0.00	1.216	727.00	0.00
105.00	0.00	1.216	727.00	0.00
105.50	0.00	1.216	727.00	0.00
106.00	0.00	1.216	727.00	0.00
106.50	0.00	1.216	727.00	0.00
107.00	0.00	1.216	727.00	0.00
107.50	0.00	1.216	727.00	0.00
108.00	0.00	1.216	727.00	0.00
108.50	0.00	1.216	727.00	0.00
109.00	0.00	1.216	727.00	0.00
109.50	0.00	1.216	727.00	0.00
110.00	0.00	1.216	727.00	0.00
110.50	0.00	1.216	727.00	0.00
111.00	0.00	1.216	727.00	0.00
111.50	0.00	1.216	727.00	0.00
112.00	0.00	1.216	727.00	0.00
112.50	0.00	1.216	727.00	0.00
113.00	0.00	1.216	727.00	0.00
113.50	0.00	1.216	727.00	0.00
114.00	0.00	1.216	727.00	0.00
114.50	0.00	1.216	727.00	0.00
115.00	0.00	1.216	727.00	0.00
115.50	0.00	1.216	727.00	0.00
116.00	0.00	1.216	727.00	0.00
116.50	0.00	1.216	727.00	0.00
117.00	0.00	1.216	727.00	0.00
117.50	0.00	1.216	727.00	0.00
118.00	0.00	1.216	727.00	0.00
118.50	0.00	1.216	727.00	0.00
119.00	0.00	1.216	727.00	0.00
119.50	0.00	1.216	727.00	0.00
120.00	0.00	1.216	727.00	0.00
120.50	0.00	1.216	727.00	0.00
121.00	0.00	1.216	727.00	0.00
121.50	0.00	1.216	727.00	0.00
122.00	0.00	1.216	727.00	0.00
122.50	0.00	1.216	727.00	0.00
123.00	0.00	1.216	727.00	0.00
123.50	0.00	1.216	727.00	0.00
124.00	0.00	1.216	727.00	0.00
124.50	0.00	1.216	727.00	0.00
125.00	0.00	1.216	727.00	0.00
125.50	0.00	1.216	727.00	0.00
126.00	0.00	1.216	727.00	0.00
126.50	0.00	1.216	727.00	0.00
127.00	0.00	1.216	727.00	0.00
127.50	0.00	1.216	727.00	0.00
128.00	0.00	1.216	727.00	0.00
128.50	0.00	1.216	727.00	0.00
129.00	0.00	1.216	727.00	0.00
129.50	0.00	1.216	727.00	0.00

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	1.216	727.00	0.00
130.50	0.00	1.216	727.00	0.00
131.00	0.00	1.216	727.00	0.00
131.50	0.00	1.216	727.00	0.00
132.00	0.00	1.216	727.00	0.00
132.50	0.00	1.216	727.00	0.00
133.00	0.00	1.216	727.00	0.00
133.50	0.00	1.216	727.00	0.00
134.00	0.00	1.216	727.00	0.00
134.50	0.00	1.216	727.00	0.00
135.00	0.00	1.216	727.00	0.00
135.50	0.00	1.216	727.00	0.00
136.00	0.00	1.216	727.00	0.00
136.50	0.00	1.216	727.00	0.00
137.00	0.00	1.216	727.00	0.00
137.50	0.00	1.216	727.00	0.00
138.00	0.00	1.216	727.00	0.00
138.50	0.00	1.216	727.00	0.00
139.00	0.00	1.216	727.00	0.00
139.50	0.00	1.216	727.00	0.00
140.00	0.00	1.216	727.00	0.00
140.50	0.00	1.216	727.00	0.00
141.00	0.00	1.216	727.00	0.00
141.50	0.00	1.216	727.00	0.00
142.00	0.00	1.216	727.00	0.00
142.50	0.00	1.216	727.00	0.00
143.00	0.00	1.216	727.00	0.00
143.50	0.00	1.216	727.00	0.00
144.00	0.00	1.216	727.00	0.00
144.50	0.00	1.216	727.00	0.00
145.00	0.00	1.216	727.00	0.00
145.50	0.00	1.216	727.00	0.00
146.00	0.00	1.216	727.00	0.00
146.50	0.00	1.216	727.00	0.00
147.00	0.00	1.216	727.00	0.00
147.50	0.00	1.216	727.00	0.00
148.00	0.00	1.216	727.00	0.00
148.50	0.00	1.216	727.00	0.00
149.00	0.00	1.216	727.00	0.00
149.50	0.00	1.216	727.00	0.00
150.00	0.00	1.216	727.00	0.00
150.50	0.00	1.216	727.00	0.00
151.00	0.00	1.216	727.00	0.00
151.50	0.00	1.216	727.00	0.00
152.00	0.00	1.216	727.00	0.00
152.50	0.00	1.216	727.00	0.00
153.00	0.00	1.216	727.00	0.00
153.50	0.00	1.216	727.00	0.00
154.00	0.00	1.216	727.00	0.00
154.50	0.00	1.216	727.00	0.00
155.00	0.00	1.216	727.00	0.00
155.50	0.00	1.216	727.00	0.00

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	1.216	727.00	0.00
156.50	0.00	1.216	727.00	0.00
157.00	0.00	1.216	727.00	0.00
157.50	0.00	1.216	727.00	0.00
158.00	0.00	1.216	727.00	0.00
158.50	0.00	1.216	727.00	0.00
159.00	0.00	1.216	727.00	0.00
159.50	0.00	1.216	727.00	0.00
160.00	0.00	1.216	727.00	0.00
160.50	0.00	1.216	727.00	0.00
161.00	0.00	1.216	727.00	0.00
161.50	0.00	1.216	727.00	0.00
162.00	0.00	1.216	727.00	0.00
162.50	0.00	1.216	727.00	0.00
163.00	0.00	1.216	727.00	0.00
163.50	0.00	1.216	727.00	0.00
164.00	0.00	1.216	727.00	0.00
164.50	0.00	1.216	727.00	0.00
165.00	0.00	1.216	727.00	0.00
165.50	0.00	1.216	727.00	0.00
166.00	0.00	1.216	727.00	0.00
166.50	0.00	1.216	727.00	0.00
167.00	0.00	1.216	727.00	0.00
167.50	0.00	1.216	727.00	0.00
168.00	0.00	1.216	727.00	0.00
168.50	0.00	1.216	727.00	0.00
169.00	0.00	1.216	727.00	0.00
169.50	0.00	1.216	727.00	0.00
170.00	0.00	1.216	727.00	0.00
170.50	0.00	1.216	727.00	0.00
171.00	0.00	1.216	727.00	0.00
171.50	0.00	1.216	727.00	0.00
172.00	0.00	1.216	727.00	0.00
172.50	0.00	1.216	727.00	0.00
173.00	0.00	1.216	727.00	0.00
173.50	0.00	1.216	727.00	0.00
174.00	0.00	1.216	727.00	0.00
174.50	0.00	1.216	727.00	0.00
175.00	0.00	1.216	727.00	0.00
175.50	0.00	1.216	727.00	0.00
176.00	0.00	1.216	727.00	0.00
176.50	0.00	1.216	727.00	0.00
177.00	0.00	1.216	727.00	0.00
177.50	0.00	1.216	727.00	0.00
178.00	0.00	1.216	727.00	0.00
178.50	0.00	1.216	727.00	0.00
179.00	0.00	1.216	727.00	0.00
179.50	0.00	1.216	727.00	0.00
180.00	0.00	1.216	727.00	0.00
180.50	0.00	1.216	727.00	0.00
181.00	0.00	1.216	727.00	0.00
181.50	0.00	1.216	727.00	0.00

Hydrograph for Pond ST-03-B: ST-03-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	1.216	727.00	0.00
182.50	0.00	1.216	727.00	0.00
183.00	0.00	1.216	727.00	0.00
183.50	0.00	1.216	727.00	0.00
184.00	0.00	1.216	727.00	0.00
184.50	0.00	1.216	727.00	0.00
185.00	0.00	1.216	727.00	0.00
185.50	0.00	1.216	727.00	0.00
186.00	0.00	1.216	727.00	0.00
186.50	0.00	1.216	727.00	0.00
187.00	0.00	1.216	727.00	0.00
187.50	0.00	1.216	727.00	0.00
188.00	0.00	1.216	727.00	0.00
188.50	0.00	1.216	727.00	0.00
189.00	0.00	1.216	727.00	0.00
189.50	0.00	1.216	727.00	0.00
190.00	0.00	1.216	727.00	0.00
190.50	0.00	1.216	727.00	0.00
191.00	0.00	1.216	727.00	0.00
191.50	0.00	1.216	727.00	0.00
192.00	0.00	1.216	727.00	0.00
192.50	0.00	1.216	727.00	0.00
193.00	0.00	1.216	727.00	0.00
193.50	0.00	1.216	727.00	0.00
194.00	0.00	1.216	727.00	0.00
194.50	0.00	1.216	727.00	0.00
195.00	0.00	1.216	727.00	0.00
195.50	0.00	1.216	727.00	0.00
196.00	0.00	1.216	727.00	0.00
196.50	0.00	1.216	727.00	0.00
197.00	0.00	1.216	727.00	0.00
197.50	0.00	1.216	727.00	0.00
198.00	0.00	1.216	727.00	0.00
198.50	0.00	1.216	727.00	0.00
199.00	0.00	1.216	727.00	0.00
199.50	0.00	1.216	727.00	0.00
200.00	0.00	1.216	727.00	0.00

Summary for Pond ST-04-A: ST-04-A

Inflow Area = 44.352 ac, 2.23% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 36.52 cfs @ 14.20 hrs, Volume= 11.763 af
Outflow = 35.87 cfs @ 14.40 hrs, Volume= 9.195 af, Atten= 2%, Lag= 12.3 min
Primary = 35.87 cfs @ 14.40 hrs, Volume= 9.195 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 726.25' @ 14.40 hrs Surf.Area= 1.840 ac Storage= 3.023 af

Plug-Flow detention time= 147.4 min calculated for 9.195 af (78% of inflow)
Center-of-Mass det. time= 62.3 min (1,026.5 - 964.2)

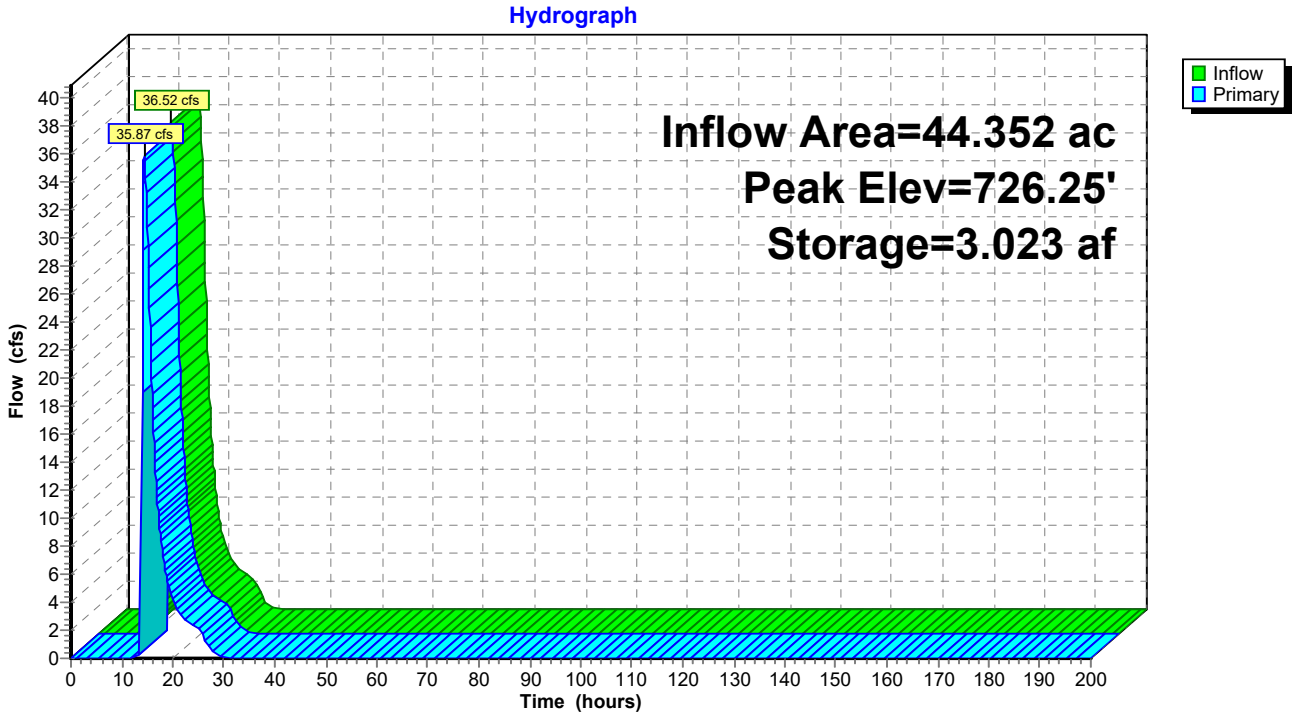
Volume	Invert	Avail.Storage	Storage Description
#1	724.50'	3.488 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
724.50	1.617	0.000	0.000
725.00	1.680	0.824	0.824
726.00	1.808	1.744	2.568
726.50	1.872	0.920	3.488

Device	Routing	Invert	Outlet Devices
#1	Primary	726.00'	**120.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=35.83 cfs @ 14.40 hrs HW=726.25' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 35.83 cfs @ 1.21 fps)

Pond ST-04-A: ST-04-A



Hydrograph for Pond ST-04-A: ST-04-A

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	724.50	0.00
0.50	0.00	0.000	724.50	0.00
1.00	0.00	0.000	724.50	0.00
1.50	0.00	0.000	724.50	0.00
2.00	0.00	0.000	724.50	0.00
2.50	0.00	0.000	724.50	0.00
3.00	0.00	0.000	724.50	0.00
3.50	0.00	0.000	724.50	0.00
4.00	0.00	0.000	724.50	0.00
4.50	0.00	0.000	724.50	0.00
5.00	0.00	0.000	724.50	0.00
5.50	0.00	0.000	724.50	0.00
6.00	0.00	0.000	724.50	0.00
6.50	0.00	0.000	724.50	0.00
7.00	0.00	0.000	724.50	0.00
7.50	0.00	0.000	724.50	0.00
8.00	0.00	0.000	724.50	0.00
8.50	0.01	0.000	724.50	0.00
9.00	0.04	0.001	724.50	0.00
9.50	0.11	0.004	724.50	0.00
10.00	0.24	0.011	724.51	0.00
10.50	0.45	0.025	724.52	0.00
11.00	0.76	0.050	724.53	0.00
11.50	1.21	0.090	724.55	0.00
12.00	2.10	0.155	724.59	0.00
12.50	5.78	0.300	724.68	0.00
13.00	15.32	0.715	724.93	0.00
13.50	28.41	1.623	725.46	0.00
14.00	**35.78**	**2.869**	**726.16**	**19.04**
14.50	**35.16**	**3.021**	**726.25**	**35.60**
15.00	29.43	2.981	726.22	30.83
15.50	22.01	2.915	726.19	23.62
16.00	16.70	2.857	726.16	17.90
16.50	12.97	2.812	726.13	13.95
17.00	10.27	2.777	726.11	11.04
17.50	8.32	2.749	726.10	8.90
18.00	6.89	2.727	726.09	7.35
18.50	5.84	2.711	726.08	6.21
19.00	5.06	2.697	726.07	5.36
19.50	4.47	2.686	726.06	4.69
20.00	4.01	2.678	726.06	4.19
20.50	3.65	2.671	726.06	3.81
21.00	3.34	2.664	726.05	3.48
21.50	3.07	2.659	726.05	3.19
22.00	2.86	2.654	726.05	2.96
22.50	2.71	2.651	726.04	2.78
23.00	2.58	2.648	726.04	2.64
23.50	2.46	2.646	726.04	2.51
24.00	2.36	2.644	726.04	2.40
24.50	2.25	2.642	726.04	2.30
25.00	2.08	2.639	726.04	2.18
25.50	1.79	2.633	726.04	1.96

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	1.39	2.625	726.03	1.62
26.50	0.97	2.615	726.03	1.21
27.00	0.64	2.606	726.02	0.84
27.50	0.41	2.597	726.02	0.63
28.00	0.27	2.588	726.01	0.45
28.50	0.17	2.582	726.01	0.30
29.00	0.11	2.577	726.00	0.20
29.50	0.07	2.574	726.00	0.13
30.00	0.04	2.572	726.00	0.09
30.50	0.03	2.571	726.00	0.06
31.00	0.02	2.570	726.00	0.04
31.50	0.01	2.569	726.00	0.02
32.00	0.01	2.569	726.00	0.01
32.50	0.00	2.569	726.00	0.01
33.00	0.00	2.568	726.00	0.00
33.50	0.00	2.568	726.00	0.00
34.00	0.00	2.568	726.00	0.00
34.50	0.00	2.568	726.00	0.00
35.00	0.00	2.568	726.00	0.00
35.50	0.00	2.568	726.00	0.00
36.00	0.00	2.568	726.00	0.00
36.50	0.00	2.568	726.00	0.00
37.00	0.00	2.568	726.00	0.00
37.50	0.00	2.568	726.00	0.00
38.00	0.00	2.568	726.00	0.00
38.50	0.00	2.568	726.00	0.00
39.00	0.00	2.568	726.00	0.00
39.50	0.00	2.568	726.00	0.00
40.00	0.00	2.568	726.00	0.00
40.50	0.00	2.568	726.00	0.00
41.00	0.00	2.568	726.00	0.00
41.50	0.00	2.568	726.00	0.00
42.00	0.00	2.568	726.00	0.00
42.50	0.00	2.568	726.00	0.00
43.00	0.00	2.568	726.00	0.00
43.50	0.00	2.568	726.00	0.00
44.00	0.00	2.568	726.00	0.00
44.50	0.00	2.568	726.00	0.00
45.00	0.00	2.568	726.00	0.00
45.50	0.00	2.568	726.00	0.00
46.00	0.00	2.568	726.00	0.00
46.50	0.00	2.568	726.00	0.00
47.00	0.00	2.568	726.00	0.00
47.50	0.00	2.568	726.00	0.00
48.00	0.00	2.568	726.00	0.00
48.50	0.00	2.568	726.00	0.00
49.00	0.00	2.568	726.00	0.00
49.50	0.00	2.568	726.00	0.00
50.00	0.00	2.568	726.00	0.00
50.50	0.00	2.568	726.00	0.00
51.00	0.00	2.568	726.00	0.00
51.50	0.00	2.568	726.00	0.00

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2.568	726.00	0.00
52.50	0.00	2.568	726.00	0.00
53.00	0.00	2.568	726.00	0.00
53.50	0.00	2.568	726.00	0.00
54.00	0.00	2.568	726.00	0.00
54.50	0.00	2.568	726.00	0.00
55.00	0.00	2.568	726.00	0.00
55.50	0.00	2.568	726.00	0.00
56.00	0.00	2.568	726.00	0.00
56.50	0.00	2.568	726.00	0.00
57.00	0.00	2.568	726.00	0.00
57.50	0.00	2.568	726.00	0.00
58.00	0.00	2.568	726.00	0.00
58.50	0.00	2.568	726.00	0.00
59.00	0.00	2.568	726.00	0.00
59.50	0.00	2.568	726.00	0.00
60.00	0.00	2.568	726.00	0.00
60.50	0.00	2.568	726.00	0.00
61.00	0.00	2.568	726.00	0.00
61.50	0.00	2.568	726.00	0.00
62.00	0.00	2.568	726.00	0.00
62.50	0.00	2.568	726.00	0.00
63.00	0.00	2.568	726.00	0.00
63.50	0.00	2.568	726.00	0.00
64.00	0.00	2.568	726.00	0.00
64.50	0.00	2.568	726.00	0.00
65.00	0.00	2.568	726.00	0.00
65.50	0.00	2.568	726.00	0.00
66.00	0.00	2.568	726.00	0.00
66.50	0.00	2.568	726.00	0.00
67.00	0.00	2.568	726.00	0.00
67.50	0.00	2.568	726.00	0.00
68.00	0.00	2.568	726.00	0.00
68.50	0.00	2.568	726.00	0.00
69.00	0.00	2.568	726.00	0.00
69.50	0.00	2.568	726.00	0.00
70.00	0.00	2.568	726.00	0.00
70.50	0.00	2.568	726.00	0.00
71.00	0.00	2.568	726.00	0.00
71.50	0.00	2.568	726.00	0.00
72.00	0.00	2.568	726.00	0.00
72.50	0.00	2.568	726.00	0.00
73.00	0.00	2.568	726.00	0.00
73.50	0.00	2.568	726.00	0.00
74.00	0.00	2.568	726.00	0.00
74.50	0.00	2.568	726.00	0.00
75.00	0.00	2.568	726.00	0.00
75.50	0.00	2.568	726.00	0.00
76.00	0.00	2.568	726.00	0.00
76.50	0.00	2.568	726.00	0.00
77.00	0.00	2.568	726.00	0.00
77.50	0.00	2.568	726.00	0.00

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	2.568	726.00	0.00
78.50	0.00	2.568	726.00	0.00
79.00	0.00	2.568	726.00	0.00
79.50	0.00	2.568	726.00	0.00
80.00	0.00	2.568	726.00	0.00
80.50	0.00	2.568	726.00	0.00
81.00	0.00	2.568	726.00	0.00
81.50	0.00	2.568	726.00	0.00
82.00	0.00	2.568	726.00	0.00
82.50	0.00	2.568	726.00	0.00
83.00	0.00	2.568	726.00	0.00
83.50	0.00	2.568	726.00	0.00
84.00	0.00	2.568	726.00	0.00
84.50	0.00	2.568	726.00	0.00
85.00	0.00	2.568	726.00	0.00
85.50	0.00	2.568	726.00	0.00
86.00	0.00	2.568	726.00	0.00
86.50	0.00	2.568	726.00	0.00
87.00	0.00	2.568	726.00	0.00
87.50	0.00	2.568	726.00	0.00
88.00	0.00	2.568	726.00	0.00
88.50	0.00	2.568	726.00	0.00
89.00	0.00	2.568	726.00	0.00
89.50	0.00	2.568	726.00	0.00
90.00	0.00	2.568	726.00	0.00
90.50	0.00	2.568	726.00	0.00
91.00	0.00	2.568	726.00	0.00
91.50	0.00	2.568	726.00	0.00
92.00	0.00	2.568	726.00	0.00
92.50	0.00	2.568	726.00	0.00
93.00	0.00	2.568	726.00	0.00
93.50	0.00	2.568	726.00	0.00
94.00	0.00	2.568	726.00	0.00
94.50	0.00	2.568	726.00	0.00
95.00	0.00	2.568	726.00	0.00
95.50	0.00	2.568	726.00	0.00
96.00	0.00	2.568	726.00	0.00
96.50	0.00	2.568	726.00	0.00
97.00	0.00	2.568	726.00	0.00
97.50	0.00	2.568	726.00	0.00
98.00	0.00	2.568	726.00	0.00
98.50	0.00	2.568	726.00	0.00
99.00	0.00	2.568	726.00	0.00
99.50	0.00	2.568	726.00	0.00
100.00	0.00	2.568	726.00	0.00
100.50	0.00	2.568	726.00	0.00
101.00	0.00	2.568	726.00	0.00
101.50	0.00	2.568	726.00	0.00
102.00	0.00	2.568	726.00	0.00
102.50	0.00	2.568	726.00	0.00
103.00	0.00	2.568	726.00	0.00
103.50	0.00	2.568	726.00	0.00

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	2.568	726.00	0.00
104.50	0.00	2.568	726.00	0.00
105.00	0.00	2.568	726.00	0.00
105.50	0.00	2.568	726.00	0.00
106.00	0.00	2.568	726.00	0.00
106.50	0.00	2.568	726.00	0.00
107.00	0.00	2.568	726.00	0.00
107.50	0.00	2.568	726.00	0.00
108.00	0.00	2.568	726.00	0.00
108.50	0.00	2.568	726.00	0.00
109.00	0.00	2.568	726.00	0.00
109.50	0.00	2.568	726.00	0.00
110.00	0.00	2.568	726.00	0.00
110.50	0.00	2.568	726.00	0.00
111.00	0.00	2.568	726.00	0.00
111.50	0.00	2.568	726.00	0.00
112.00	0.00	2.568	726.00	0.00
112.50	0.00	2.568	726.00	0.00
113.00	0.00	2.568	726.00	0.00
113.50	0.00	2.568	726.00	0.00
114.00	0.00	2.568	726.00	0.00
114.50	0.00	2.568	726.00	0.00
115.00	0.00	2.568	726.00	0.00
115.50	0.00	2.568	726.00	0.00
116.00	0.00	2.568	726.00	0.00
116.50	0.00	2.568	726.00	0.00
117.00	0.00	2.568	726.00	0.00
117.50	0.00	2.568	726.00	0.00
118.00	0.00	2.568	726.00	0.00
118.50	0.00	2.568	726.00	0.00
119.00	0.00	2.568	726.00	0.00
119.50	0.00	2.568	726.00	0.00
120.00	0.00	2.568	726.00	0.00
120.50	0.00	2.568	726.00	0.00
121.00	0.00	2.568	726.00	0.00
121.50	0.00	2.568	726.00	0.00
122.00	0.00	2.568	726.00	0.00
122.50	0.00	2.568	726.00	0.00
123.00	0.00	2.568	726.00	0.00
123.50	0.00	2.568	726.00	0.00
124.00	0.00	2.568	726.00	0.00
124.50	0.00	2.568	726.00	0.00
125.00	0.00	2.568	726.00	0.00
125.50	0.00	2.568	726.00	0.00
126.00	0.00	2.568	726.00	0.00
126.50	0.00	2.568	726.00	0.00
127.00	0.00	2.568	726.00	0.00
127.50	0.00	2.568	726.00	0.00
128.00	0.00	2.568	726.00	0.00
128.50	0.00	2.568	726.00	0.00
129.00	0.00	2.568	726.00	0.00
129.50	0.00	2.568	726.00	0.00

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	2.568	726.00	0.00
130.50	0.00	2.568	726.00	0.00
131.00	0.00	2.568	726.00	0.00
131.50	0.00	2.568	726.00	0.00
132.00	0.00	2.568	726.00	0.00
132.50	0.00	2.568	726.00	0.00
133.00	0.00	2.568	726.00	0.00
133.50	0.00	2.568	726.00	0.00
134.00	0.00	2.568	726.00	0.00
134.50	0.00	2.568	726.00	0.00
135.00	0.00	2.568	726.00	0.00
135.50	0.00	2.568	726.00	0.00
136.00	0.00	2.568	726.00	0.00
136.50	0.00	2.568	726.00	0.00
137.00	0.00	2.568	726.00	0.00
137.50	0.00	2.568	726.00	0.00
138.00	0.00	2.568	726.00	0.00
138.50	0.00	2.568	726.00	0.00
139.00	0.00	2.568	726.00	0.00
139.50	0.00	2.568	726.00	0.00
140.00	0.00	2.568	726.00	0.00
140.50	0.00	2.568	726.00	0.00
141.00	0.00	2.568	726.00	0.00
141.50	0.00	2.568	726.00	0.00
142.00	0.00	2.568	726.00	0.00
142.50	0.00	2.568	726.00	0.00
143.00	0.00	2.568	726.00	0.00
143.50	0.00	2.568	726.00	0.00
144.00	0.00	2.568	726.00	0.00
144.50	0.00	2.568	726.00	0.00
145.00	0.00	2.568	726.00	0.00
145.50	0.00	2.568	726.00	0.00
146.00	0.00	2.568	726.00	0.00
146.50	0.00	2.568	726.00	0.00
147.00	0.00	2.568	726.00	0.00
147.50	0.00	2.568	726.00	0.00
148.00	0.00	2.568	726.00	0.00
148.50	0.00	2.568	726.00	0.00
149.00	0.00	2.568	726.00	0.00
149.50	0.00	2.568	726.00	0.00
150.00	0.00	2.568	726.00	0.00
150.50	0.00	2.568	726.00	0.00
151.00	0.00	2.568	726.00	0.00
151.50	0.00	2.568	726.00	0.00
152.00	0.00	2.568	726.00	0.00
152.50	0.00	2.568	726.00	0.00
153.00	0.00	2.568	726.00	0.00
153.50	0.00	2.568	726.00	0.00
154.00	0.00	2.568	726.00	0.00
154.50	0.00	2.568	726.00	0.00
155.00	0.00	2.568	726.00	0.00
155.50	0.00	2.568	726.00	0.00

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	2.568	726.00	0.00
156.50	0.00	2.568	726.00	0.00
157.00	0.00	2.568	726.00	0.00
157.50	0.00	2.568	726.00	0.00
158.00	0.00	2.568	726.00	0.00
158.50	0.00	2.568	726.00	0.00
159.00	0.00	2.568	726.00	0.00
159.50	0.00	2.568	726.00	0.00
160.00	0.00	2.568	726.00	0.00
160.50	0.00	2.568	726.00	0.00
161.00	0.00	2.568	726.00	0.00
161.50	0.00	2.568	726.00	0.00
162.00	0.00	2.568	726.00	0.00
162.50	0.00	2.568	726.00	0.00
163.00	0.00	2.568	726.00	0.00
163.50	0.00	2.568	726.00	0.00
164.00	0.00	2.568	726.00	0.00
164.50	0.00	2.568	726.00	0.00
165.00	0.00	2.568	726.00	0.00
165.50	0.00	2.568	726.00	0.00
166.00	0.00	2.568	726.00	0.00
166.50	0.00	2.568	726.00	0.00
167.00	0.00	2.568	726.00	0.00
167.50	0.00	2.568	726.00	0.00
168.00	0.00	2.568	726.00	0.00
168.50	0.00	2.568	726.00	0.00
169.00	0.00	2.568	726.00	0.00
169.50	0.00	2.568	726.00	0.00
170.00	0.00	2.568	726.00	0.00
170.50	0.00	2.568	726.00	0.00
171.00	0.00	2.568	726.00	0.00
171.50	0.00	2.568	726.00	0.00
172.00	0.00	2.568	726.00	0.00
172.50	0.00	2.568	726.00	0.00
173.00	0.00	2.568	726.00	0.00
173.50	0.00	2.568	726.00	0.00
174.00	0.00	2.568	726.00	0.00
174.50	0.00	2.568	726.00	0.00
175.00	0.00	2.568	726.00	0.00
175.50	0.00	2.568	726.00	0.00
176.00	0.00	2.568	726.00	0.00
176.50	0.00	2.568	726.00	0.00
177.00	0.00	2.568	726.00	0.00
177.50	0.00	2.568	726.00	0.00
178.00	0.00	2.568	726.00	0.00
178.50	0.00	2.568	726.00	0.00
179.00	0.00	2.568	726.00	0.00
179.50	0.00	2.568	726.00	0.00
180.00	0.00	2.568	726.00	0.00
180.50	0.00	2.568	726.00	0.00
181.00	0.00	2.568	726.00	0.00
181.50	0.00	2.568	726.00	0.00

Hydrograph for Pond ST-04-A: ST-04-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	2.568	726.00	0.00
182.50	0.00	2.568	726.00	0.00
183.00	0.00	2.568	726.00	0.00
183.50	0.00	2.568	726.00	0.00
184.00	0.00	2.568	726.00	0.00
184.50	0.00	2.568	726.00	0.00
185.00	0.00	2.568	726.00	0.00
185.50	0.00	2.568	726.00	0.00
186.00	0.00	2.568	726.00	0.00
186.50	0.00	2.568	726.00	0.00
187.00	0.00	2.568	726.00	0.00
187.50	0.00	2.568	726.00	0.00
188.00	0.00	2.568	726.00	0.00
188.50	0.00	2.568	726.00	0.00
189.00	0.00	2.568	726.00	0.00
189.50	0.00	2.568	726.00	0.00
190.00	0.00	2.568	726.00	0.00
190.50	0.00	2.568	726.00	0.00
191.00	0.00	2.568	726.00	0.00
191.50	0.00	2.568	726.00	0.00
192.00	0.00	2.568	726.00	0.00
192.50	0.00	2.568	726.00	0.00
193.00	0.00	2.568	726.00	0.00
193.50	0.00	2.568	726.00	0.00
194.00	0.00	2.568	726.00	0.00
194.50	0.00	2.568	726.00	0.00
195.00	0.00	2.568	726.00	0.00
195.50	0.00	2.568	726.00	0.00
196.00	0.00	2.568	726.00	0.00
196.50	0.00	2.568	726.00	0.00
197.00	0.00	2.568	726.00	0.00
197.50	0.00	2.568	726.00	0.00
198.00	0.00	2.568	726.00	0.00
198.50	0.00	2.568	726.00	0.00
199.00	0.00	2.568	726.00	0.00
199.50	0.00	2.568	726.00	0.00
200.00	0.00	2.568	726.00	0.00

Summary for Pond ST-04-B: ST-04-B

Inflow Area = 19.640 ac, 0.44% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 21.34 cfs @ 13.58 hrs, Volume= 5.209 af
Outflow = 21.07 cfs @ 13.71 hrs, Volume= 4.088 af, Atten= 1%, Lag= 8.1 min
Primary = 21.07 cfs @ 13.71 hrs, Volume= 4.088 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 725.25' @ 13.71 hrs Surf.Area= 0.804 ac Storage= 1.321 af

Plug-Flow detention time= 136.1 min calculated for 4.088 af (78% of inflow)
Center-of-Mass det. time= 53.4 min (971.0 - 917.6)

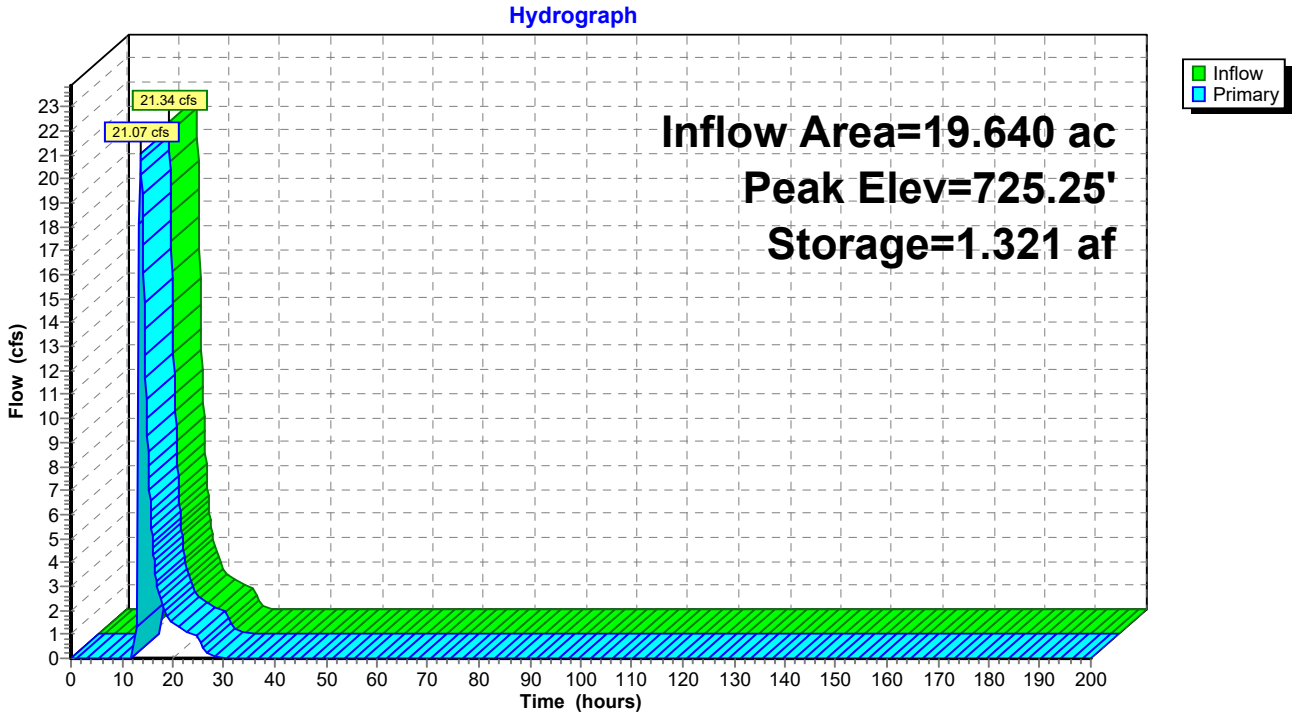
Volume	Invert	Avail.Storage	Storage Description
#1	723.50'	1.523 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
723.50	0.705	0.000	0.000
724.00	0.733	0.359	0.359
725.00	0.790	0.762	1.121
725.50	0.819	0.402	1.523

Device	Routing	Invert	Outlet Devices
#1	Primary	725.00'	**70.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=21.02 cfs @ 13.71 hrs HW=725.25' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 21.02 cfs @ 1.21 fps)

Pond ST-04-B: ST-04-B



Hydrograph for Pond ST-04-B: ST-04-B

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	723.50	0.00
0.50	0.00	0.000	723.50	0.00
1.00	0.00	0.000	723.50	0.00
1.50	0.00	0.000	723.50	0.00
2.00	0.00	0.000	723.50	0.00
2.50	0.00	0.000	723.50	0.00
3.00	0.00	0.000	723.50	0.00
3.50	0.00	0.000	723.50	0.00
4.00	0.00	0.000	723.50	0.00
4.50	0.00	0.000	723.50	0.00
5.00	0.00	0.000	723.50	0.00
5.50	0.00	0.000	723.50	0.00
6.00	0.00	0.000	723.50	0.00
6.50	0.00	0.000	723.50	0.00
7.00	0.00	0.000	723.50	0.00
7.50	0.00	0.000	723.50	0.00
8.00	0.00	0.000	723.50	0.00
8.50	0.01	0.000	723.50	0.00
9.00	0.05	0.001	723.50	0.00
9.50	0.11	0.004	723.51	0.00
10.00	0.22	0.011	723.52	0.00
10.50	0.36	0.023	723.53	0.00
11.00	0.57	0.042	723.56	0.00
11.50	0.90	0.072	723.60	0.00
12.00	1.67	0.122	723.67	0.00
12.50	5.70	0.253	723.85	0.00
13.00	15.35	0.677	724.42	0.00
13.50	**21.21**	**1.303**	**725.23**	**18.14**
14.00	**18.69**	**1.311**	**725.24**	**19.39**
14.50	12.73	1.272	725.19	13.72
15.00	8.61	1.238	725.15	9.29
15.50	6.08	1.214	725.12	6.57
16.00	4.50	1.197	725.09	4.85
16.50	3.50	1.185	725.08	3.73
17.00	2.84	1.176	725.07	3.02
17.50	2.40	1.170	725.06	2.52
18.00	2.09	1.165	725.06	2.19
18.50	1.85	1.162	725.05	1.93
19.00	1.66	1.159	725.05	1.72
19.50	1.54	1.157	725.04	1.58
20.00	1.44	1.155	725.04	1.47
20.50	1.35	1.154	725.04	1.38
21.00	1.27	1.152	725.04	1.30
21.50	1.21	1.151	725.04	1.24
22.00	1.15	1.150	725.04	1.18
22.50	1.10	1.149	725.03	1.12
23.00	1.05	1.148	725.03	1.07
23.50	1.01	1.147	725.03	1.03
24.00	0.97	1.147	725.03	0.99
24.50	0.92	1.146	725.03	0.95
25.00	0.79	1.144	725.03	0.85
25.50	0.54	1.140	725.02	0.65

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	0.31	1.136	725.02	0.43
26.50	0.17	1.131	725.01	0.28
27.00	0.09	1.127	725.01	0.16
27.50	0.05	1.124	725.00	0.09
28.00	0.03	1.123	725.00	0.05
28.50	0.01	1.122	725.00	0.03
29.00	0.01	1.121	725.00	0.01
29.50	0.00	1.121	725.00	0.01
30.00	0.00	1.121	725.00	0.00
30.50	0.00	1.121	725.00	0.00
31.00	0.00	1.121	725.00	0.00
31.50	0.00	1.121	725.00	0.00
32.00	0.00	1.121	725.00	0.00
32.50	0.00	1.121	725.00	0.00
33.00	0.00	1.121	725.00	0.00
33.50	0.00	1.121	725.00	0.00
34.00	0.00	1.121	725.00	0.00
34.50	0.00	1.121	725.00	0.00
35.00	0.00	1.121	725.00	0.00
35.50	0.00	1.121	725.00	0.00
36.00	0.00	1.121	725.00	0.00
36.50	0.00	1.121	725.00	0.00
37.00	0.00	1.121	725.00	0.00
37.50	0.00	1.121	725.00	0.00
38.00	0.00	1.121	725.00	0.00
38.50	0.00	1.121	725.00	0.00
39.00	0.00	1.121	725.00	0.00
39.50	0.00	1.121	725.00	0.00
40.00	0.00	1.121	725.00	0.00
40.50	0.00	1.121	725.00	0.00
41.00	0.00	1.121	725.00	0.00
41.50	0.00	1.121	725.00	0.00
42.00	0.00	1.121	725.00	0.00
42.50	0.00	1.121	725.00	0.00
43.00	0.00	1.121	725.00	0.00
43.50	0.00	1.121	725.00	0.00
44.00	0.00	1.121	725.00	0.00
44.50	0.00	1.121	725.00	0.00
45.00	0.00	1.121	725.00	0.00
45.50	0.00	1.121	725.00	0.00
46.00	0.00	1.121	725.00	0.00
46.50	0.00	1.121	725.00	0.00
47.00	0.00	1.121	725.00	0.00
47.50	0.00	1.121	725.00	0.00
48.00	0.00	1.121	725.00	0.00
48.50	0.00	1.121	725.00	0.00
49.00	0.00	1.121	725.00	0.00
49.50	0.00	1.121	725.00	0.00
50.00	0.00	1.121	725.00	0.00
50.50	0.00	1.121	725.00	0.00
51.00	0.00	1.121	725.00	0.00
51.50	0.00	1.121	725.00	0.00

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	1.121	725.00	0.00
52.50	0.00	1.121	725.00	0.00
53.00	0.00	1.121	725.00	0.00
53.50	0.00	1.121	725.00	0.00
54.00	0.00	1.121	725.00	0.00
54.50	0.00	1.121	725.00	0.00
55.00	0.00	1.121	725.00	0.00
55.50	0.00	1.121	725.00	0.00
56.00	0.00	1.121	725.00	0.00
56.50	0.00	1.121	725.00	0.00
57.00	0.00	1.121	725.00	0.00
57.50	0.00	1.121	725.00	0.00
58.00	0.00	1.121	725.00	0.00
58.50	0.00	1.121	725.00	0.00
59.00	0.00	1.121	725.00	0.00
59.50	0.00	1.121	725.00	0.00
60.00	0.00	1.121	725.00	0.00
60.50	0.00	1.121	725.00	0.00
61.00	0.00	1.121	725.00	0.00
61.50	0.00	1.121	725.00	0.00
62.00	0.00	1.121	725.00	0.00
62.50	0.00	1.121	725.00	0.00
63.00	0.00	1.121	725.00	0.00
63.50	0.00	1.121	725.00	0.00
64.00	0.00	1.121	725.00	0.00
64.50	0.00	1.121	725.00	0.00
65.00	0.00	1.121	725.00	0.00
65.50	0.00	1.121	725.00	0.00
66.00	0.00	1.121	725.00	0.00
66.50	0.00	1.121	725.00	0.00
67.00	0.00	1.121	725.00	0.00
67.50	0.00	1.121	725.00	0.00
68.00	0.00	1.121	725.00	0.00
68.50	0.00	1.121	725.00	0.00
69.00	0.00	1.121	725.00	0.00
69.50	0.00	1.121	725.00	0.00
70.00	0.00	1.121	725.00	0.00
70.50	0.00	1.121	725.00	0.00
71.00	0.00	1.121	725.00	0.00
71.50	0.00	1.121	725.00	0.00
72.00	0.00	1.121	725.00	0.00
72.50	0.00	1.121	725.00	0.00
73.00	0.00	1.121	725.00	0.00
73.50	0.00	1.121	725.00	0.00
74.00	0.00	1.121	725.00	0.00
74.50	0.00	1.121	725.00	0.00
75.00	0.00	1.121	725.00	0.00
75.50	0.00	1.121	725.00	0.00
76.00	0.00	1.121	725.00	0.00
76.50	0.00	1.121	725.00	0.00
77.00	0.00	1.121	725.00	0.00
77.50	0.00	1.121	725.00	0.00

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	1.121	725.00	0.00
78.50	0.00	1.121	725.00	0.00
79.00	0.00	1.121	725.00	0.00
79.50	0.00	1.121	725.00	0.00
80.00	0.00	1.121	725.00	0.00
80.50	0.00	1.121	725.00	0.00
81.00	0.00	1.121	725.00	0.00
81.50	0.00	1.121	725.00	0.00
82.00	0.00	1.121	725.00	0.00
82.50	0.00	1.121	725.00	0.00
83.00	0.00	1.121	725.00	0.00
83.50	0.00	1.121	725.00	0.00
84.00	0.00	1.121	725.00	0.00
84.50	0.00	1.121	725.00	0.00
85.00	0.00	1.121	725.00	0.00
85.50	0.00	1.121	725.00	0.00
86.00	0.00	1.121	725.00	0.00
86.50	0.00	1.121	725.00	0.00
87.00	0.00	1.121	725.00	0.00
87.50	0.00	1.121	725.00	0.00
88.00	0.00	1.121	725.00	0.00
88.50	0.00	1.121	725.00	0.00
89.00	0.00	1.121	725.00	0.00
89.50	0.00	1.121	725.00	0.00
90.00	0.00	1.121	725.00	0.00
90.50	0.00	1.121	725.00	0.00
91.00	0.00	1.121	725.00	0.00
91.50	0.00	1.121	725.00	0.00
92.00	0.00	1.121	725.00	0.00
92.50	0.00	1.121	725.00	0.00
93.00	0.00	1.121	725.00	0.00
93.50	0.00	1.121	725.00	0.00
94.00	0.00	1.121	725.00	0.00
94.50	0.00	1.121	725.00	0.00
95.00	0.00	1.121	725.00	0.00
95.50	0.00	1.121	725.00	0.00
96.00	0.00	1.121	725.00	0.00
96.50	0.00	1.121	725.00	0.00
97.00	0.00	1.121	725.00	0.00
97.50	0.00	1.121	725.00	0.00
98.00	0.00	1.121	725.00	0.00
98.50	0.00	1.121	725.00	0.00
99.00	0.00	1.121	725.00	0.00
99.50	0.00	1.121	725.00	0.00
100.00	0.00	1.121	725.00	0.00
100.50	0.00	1.121	725.00	0.00
101.00	0.00	1.121	725.00	0.00
101.50	0.00	1.121	725.00	0.00
102.00	0.00	1.121	725.00	0.00
102.50	0.00	1.121	725.00	0.00
103.00	0.00	1.121	725.00	0.00
103.50	0.00	1.121	725.00	0.00

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1.121	725.00	0.00
104.50	0.00	1.121	725.00	0.00
105.00	0.00	1.121	725.00	0.00
105.50	0.00	1.121	725.00	0.00
106.00	0.00	1.121	725.00	0.00
106.50	0.00	1.121	725.00	0.00
107.00	0.00	1.121	725.00	0.00
107.50	0.00	1.121	725.00	0.00
108.00	0.00	1.121	725.00	0.00
108.50	0.00	1.121	725.00	0.00
109.00	0.00	1.121	725.00	0.00
109.50	0.00	1.121	725.00	0.00
110.00	0.00	1.121	725.00	0.00
110.50	0.00	1.121	725.00	0.00
111.00	0.00	1.121	725.00	0.00
111.50	0.00	1.121	725.00	0.00
112.00	0.00	1.121	725.00	0.00
112.50	0.00	1.121	725.00	0.00
113.00	0.00	1.121	725.00	0.00
113.50	0.00	1.121	725.00	0.00
114.00	0.00	1.121	725.00	0.00
114.50	0.00	1.121	725.00	0.00
115.00	0.00	1.121	725.00	0.00
115.50	0.00	1.121	725.00	0.00
116.00	0.00	1.121	725.00	0.00
116.50	0.00	1.121	725.00	0.00
117.00	0.00	1.121	725.00	0.00
117.50	0.00	1.121	725.00	0.00
118.00	0.00	1.121	725.00	0.00
118.50	0.00	1.121	725.00	0.00
119.00	0.00	1.121	725.00	0.00
119.50	0.00	1.121	725.00	0.00
120.00	0.00	1.121	725.00	0.00
120.50	0.00	1.121	725.00	0.00
121.00	0.00	1.121	725.00	0.00
121.50	0.00	1.121	725.00	0.00
122.00	0.00	1.121	725.00	0.00
122.50	0.00	1.121	725.00	0.00
123.00	0.00	1.121	725.00	0.00
123.50	0.00	1.121	725.00	0.00
124.00	0.00	1.121	725.00	0.00
124.50	0.00	1.121	725.00	0.00
125.00	0.00	1.121	725.00	0.00
125.50	0.00	1.121	725.00	0.00
126.00	0.00	1.121	725.00	0.00
126.50	0.00	1.121	725.00	0.00
127.00	0.00	1.121	725.00	0.00
127.50	0.00	1.121	725.00	0.00
128.00	0.00	1.121	725.00	0.00
128.50	0.00	1.121	725.00	0.00
129.00	0.00	1.121	725.00	0.00
129.50	0.00	1.121	725.00	0.00

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	1.121	725.00	0.00
130.50	0.00	1.121	725.00	0.00
131.00	0.00	1.121	725.00	0.00
131.50	0.00	1.121	725.00	0.00
132.00	0.00	1.121	725.00	0.00
132.50	0.00	1.121	725.00	0.00
133.00	0.00	1.121	725.00	0.00
133.50	0.00	1.121	725.00	0.00
134.00	0.00	1.121	725.00	0.00
134.50	0.00	1.121	725.00	0.00
135.00	0.00	1.121	725.00	0.00
135.50	0.00	1.121	725.00	0.00
136.00	0.00	1.121	725.00	0.00
136.50	0.00	1.121	725.00	0.00
137.00	0.00	1.121	725.00	0.00
137.50	0.00	1.121	725.00	0.00
138.00	0.00	1.121	725.00	0.00
138.50	0.00	1.121	725.00	0.00
139.00	0.00	1.121	725.00	0.00
139.50	0.00	1.121	725.00	0.00
140.00	0.00	1.121	725.00	0.00
140.50	0.00	1.121	725.00	0.00
141.00	0.00	1.121	725.00	0.00
141.50	0.00	1.121	725.00	0.00
142.00	0.00	1.121	725.00	0.00
142.50	0.00	1.121	725.00	0.00
143.00	0.00	1.121	725.00	0.00
143.50	0.00	1.121	725.00	0.00
144.00	0.00	1.121	725.00	0.00
144.50	0.00	1.121	725.00	0.00
145.00	0.00	1.121	725.00	0.00
145.50	0.00	1.121	725.00	0.00
146.00	0.00	1.121	725.00	0.00
146.50	0.00	1.121	725.00	0.00
147.00	0.00	1.121	725.00	0.00
147.50	0.00	1.121	725.00	0.00
148.00	0.00	1.121	725.00	0.00
148.50	0.00	1.121	725.00	0.00
149.00	0.00	1.121	725.00	0.00
149.50	0.00	1.121	725.00	0.00
150.00	0.00	1.121	725.00	0.00
150.50	0.00	1.121	725.00	0.00
151.00	0.00	1.121	725.00	0.00
151.50	0.00	1.121	725.00	0.00
152.00	0.00	1.121	725.00	0.00
152.50	0.00	1.121	725.00	0.00
153.00	0.00	1.121	725.00	0.00
153.50	0.00	1.121	725.00	0.00
154.00	0.00	1.121	725.00	0.00
154.50	0.00	1.121	725.00	0.00
155.00	0.00	1.121	725.00	0.00
155.50	0.00	1.121	725.00	0.00

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	1.121	725.00	0.00
156.50	0.00	1.121	725.00	0.00
157.00	0.00	1.121	725.00	0.00
157.50	0.00	1.121	725.00	0.00
158.00	0.00	1.121	725.00	0.00
158.50	0.00	1.121	725.00	0.00
159.00	0.00	1.121	725.00	0.00
159.50	0.00	1.121	725.00	0.00
160.00	0.00	1.121	725.00	0.00
160.50	0.00	1.121	725.00	0.00
161.00	0.00	1.121	725.00	0.00
161.50	0.00	1.121	725.00	0.00
162.00	0.00	1.121	725.00	0.00
162.50	0.00	1.121	725.00	0.00
163.00	0.00	1.121	725.00	0.00
163.50	0.00	1.121	725.00	0.00
164.00	0.00	1.121	725.00	0.00
164.50	0.00	1.121	725.00	0.00
165.00	0.00	1.121	725.00	0.00
165.50	0.00	1.121	725.00	0.00
166.00	0.00	1.121	725.00	0.00
166.50	0.00	1.121	725.00	0.00
167.00	0.00	1.121	725.00	0.00
167.50	0.00	1.121	725.00	0.00
168.00	0.00	1.121	725.00	0.00
168.50	0.00	1.121	725.00	0.00
169.00	0.00	1.121	725.00	0.00
169.50	0.00	1.121	725.00	0.00
170.00	0.00	1.121	725.00	0.00
170.50	0.00	1.121	725.00	0.00
171.00	0.00	1.121	725.00	0.00
171.50	0.00	1.121	725.00	0.00
172.00	0.00	1.121	725.00	0.00
172.50	0.00	1.121	725.00	0.00
173.00	0.00	1.121	725.00	0.00
173.50	0.00	1.121	725.00	0.00
174.00	0.00	1.121	725.00	0.00
174.50	0.00	1.121	725.00	0.00
175.00	0.00	1.121	725.00	0.00
175.50	0.00	1.121	725.00	0.00
176.00	0.00	1.121	725.00	0.00
176.50	0.00	1.121	725.00	0.00
177.00	0.00	1.121	725.00	0.00
177.50	0.00	1.121	725.00	0.00
178.00	0.00	1.121	725.00	0.00
178.50	0.00	1.121	725.00	0.00
179.00	0.00	1.121	725.00	0.00
179.50	0.00	1.121	725.00	0.00
180.00	0.00	1.121	725.00	0.00
180.50	0.00	1.121	725.00	0.00
181.00	0.00	1.121	725.00	0.00
181.50	0.00	1.121	725.00	0.00

Hydrograph for Pond ST-04-B: ST-04-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	1.121	725.00	0.00
182.50	0.00	1.121	725.00	0.00
183.00	0.00	1.121	725.00	0.00
183.50	0.00	1.121	725.00	0.00
184.00	0.00	1.121	725.00	0.00
184.50	0.00	1.121	725.00	0.00
185.00	0.00	1.121	725.00	0.00
185.50	0.00	1.121	725.00	0.00
186.00	0.00	1.121	725.00	0.00
186.50	0.00	1.121	725.00	0.00
187.00	0.00	1.121	725.00	0.00
187.50	0.00	1.121	725.00	0.00
188.00	0.00	1.121	725.00	0.00
188.50	0.00	1.121	725.00	0.00
189.00	0.00	1.121	725.00	0.00
189.50	0.00	1.121	725.00	0.00
190.00	0.00	1.121	725.00	0.00
190.50	0.00	1.121	725.00	0.00
191.00	0.00	1.121	725.00	0.00
191.50	0.00	1.121	725.00	0.00
192.00	0.00	1.121	725.00	0.00
192.50	0.00	1.121	725.00	0.00
193.00	0.00	1.121	725.00	0.00
193.50	0.00	1.121	725.00	0.00
194.00	0.00	1.121	725.00	0.00
194.50	0.00	1.121	725.00	0.00
195.00	0.00	1.121	725.00	0.00
195.50	0.00	1.121	725.00	0.00
196.00	0.00	1.121	725.00	0.00
196.50	0.00	1.121	725.00	0.00
197.00	0.00	1.121	725.00	0.00
197.50	0.00	1.121	725.00	0.00
198.00	0.00	1.121	725.00	0.00
198.50	0.00	1.121	725.00	0.00
199.00	0.00	1.121	725.00	0.00
199.50	0.00	1.121	725.00	0.00
200.00	0.00	1.121	725.00	0.00

Summary for Pond ST-05-A: ST-05-A

Inflow Area = 57.911 ac, 1.80% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 29.86 cfs @ 15.82 hrs, Volume= 15.359 af
Outflow = 28.97 cfs @ 16.40 hrs, Volume= 11.576 af, Atten= 3%, Lag= 34.7 min
Primary = 28.97 cfs @ 16.40 hrs, Volume= 11.576 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 728.24' @ 16.40 hrs Surf.Area= 2.737 ac Storage= 4.447 af

Plug-Flow detention time= 199.6 min calculated for 11.576 af (75% of inflow)
Center-of-Mass det. time= 94.8 min (1,180.1 - 1,085.3)

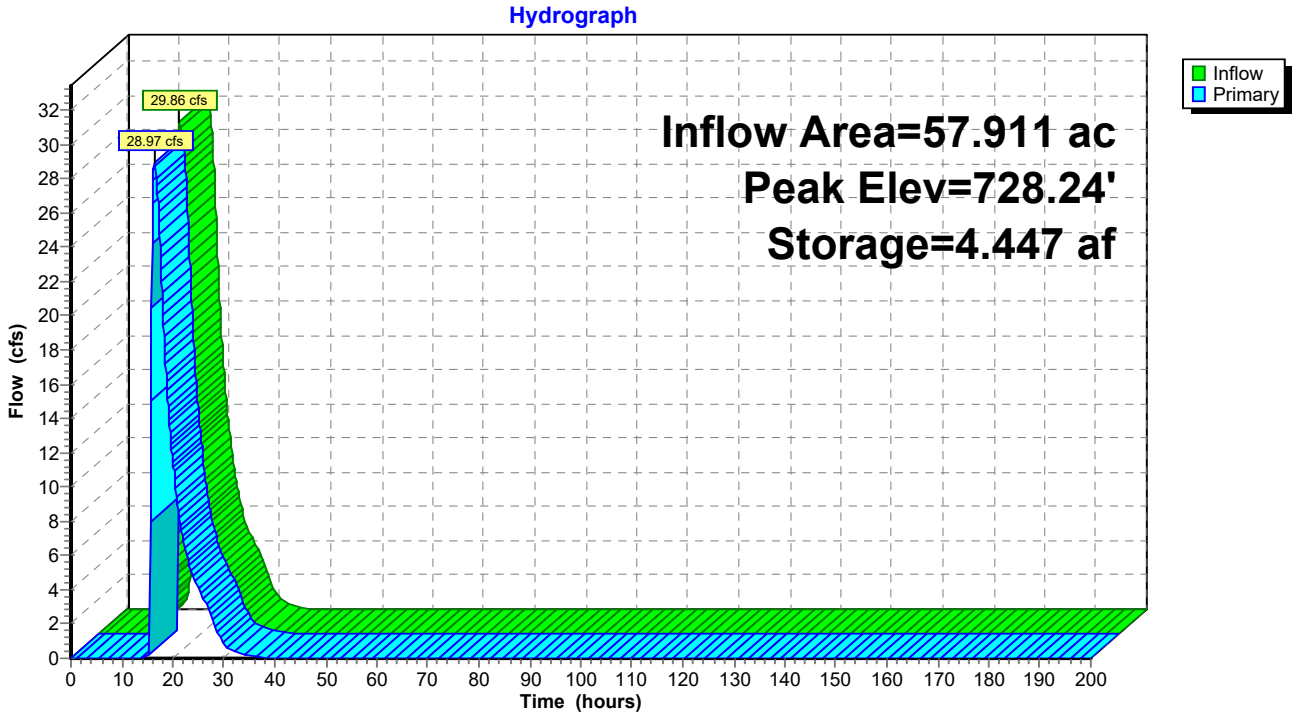
Volume	Invert	Avail.Storage	Storage Description
#1	726.50'	5.152 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
726.50	2.360	0.000	0.000
727.00	2.468	1.207	1.207
728.00	2.684	2.576	3.783
728.50	2.793	1.369	5.152

Device	Routing	Invert	Outlet Devices
#1	Primary	728.00'	**100.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=28.96 cfs @ 16.40 hrs HW=728.24' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 28.96 cfs @ 1.19 fps)

Pond ST-05-A: ST-05-A



Hydrograph for Pond ST-05-A: ST-05-A

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	726.50	0.00
0.50	0.00	0.000	726.50	0.00
1.00	0.00	0.000	726.50	0.00
1.50	0.00	0.000	726.50	0.00
2.00	0.00	0.000	726.50	0.00
2.50	0.00	0.000	726.50	0.00
3.00	0.00	0.000	726.50	0.00
3.50	0.00	0.000	726.50	0.00
4.00	0.00	0.000	726.50	0.00
4.50	0.00	0.000	726.50	0.00
5.00	0.00	0.000	726.50	0.00
5.50	0.00	0.000	726.50	0.00
6.00	0.00	0.000	726.50	0.00
6.50	0.00	0.000	726.50	0.00
7.00	0.00	0.000	726.50	0.00
7.50	0.00	0.000	726.50	0.00
8.00	0.00	0.000	726.50	0.00
8.50	0.00	0.000	726.50	0.00
9.00	0.01	0.000	726.50	0.00
9.50	0.03	0.001	726.50	0.00
10.00	0.06	0.003	726.50	0.00
10.50	0.14	0.007	726.50	0.00
11.00	0.26	0.015	726.51	0.00
11.50	0.46	0.029	726.51	0.00
12.00	0.79	0.055	726.52	0.00
12.50	1.94	0.106	726.54	0.00
13.00	4.52	0.235	726.60	0.00
13.50	8.74	0.503	726.71	0.00
14.00	14.78	0.984	726.91	0.00
14.50	21.19	1.729	727.20	0.00
15.00	26.27	2.716	727.59	0.00
15.50	**29.08**	3.863	728.03	1.24
16.00	**29.68**	**4.411**	**728.23**	**26.57**
16.50	28.64	**4.446**	**728.24**	**28.90**
17.00	26.20	4.419	728.23	27.13
17.50	22.77	4.373	728.22	24.08
18.00	19.36	4.317	728.20	20.70
18.50	16.44	4.264	728.18	17.67
19.00	14.17	4.218	728.16	15.18
19.50	12.29	4.178	728.14	13.18
20.00	10.71	4.144	728.13	11.50
20.50	9.38	4.113	728.12	10.06
21.00	8.28	4.087	728.11	8.89
21.50	7.35	4.063	728.10	7.87
22.00	6.58	4.043	728.10	7.06
22.50	5.94	4.025	728.09	6.34
23.00	5.39	4.010	728.08	5.73
23.50	4.92	3.996	728.08	5.24
24.00	4.54	3.984	728.07	4.82
24.50	4.21	3.974	728.07	4.45
25.00	3.90	3.964	728.07	4.12
25.50	3.60	3.956	728.06	3.82

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	3.29	3.947	728.06	3.51
26.50	2.95	3.937	728.06	3.22
27.00	2.57	3.925	728.05	2.87
27.50	2.17	3.912	728.05	2.49
28.00	1.78	3.899	728.04	2.10
28.50	1.41	3.885	728.04	1.75
29.00	1.10	3.871	728.03	1.43
29.50	0.84	3.858	728.03	1.14
30.00	0.65	3.847	728.02	0.89
30.50	0.51	3.838	728.02	0.69
31.00	0.40	3.831	728.02	0.59
31.50	0.31	3.823	728.01	0.49
32.00	0.24	3.816	728.01	0.40
32.50	0.19	3.809	728.01	0.33
33.00	0.15	3.804	728.01	0.26
33.50	0.11	3.800	728.01	0.21
34.00	0.09	3.796	728.00	0.16
34.50	0.07	3.793	728.00	0.13
35.00	0.05	3.791	728.00	0.10
35.50	0.04	3.789	728.00	0.08
36.00	0.03	3.788	728.00	0.06
36.50	0.02	3.787	728.00	0.05
37.00	0.02	3.786	728.00	0.04
37.50	0.01	3.785	728.00	0.03
38.00	0.01	3.785	728.00	0.02
38.50	0.01	3.784	728.00	0.02
39.00	0.00	3.784	728.00	0.01
39.50	0.00	3.784	728.00	0.01
40.00	0.00	3.783	728.00	0.01
40.50	0.00	3.783	728.00	0.00
41.00	0.00	3.783	728.00	0.00
41.50	0.00	3.783	728.00	0.00
42.00	0.00	3.783	728.00	0.00
42.50	0.00	3.783	728.00	0.00
43.00	0.00	3.783	728.00	0.00
43.50	0.00	3.783	728.00	0.00
44.00	0.00	3.783	728.00	0.00
44.50	0.00	3.783	728.00	0.00
45.00	0.00	3.783	728.00	0.00
45.50	0.00	3.783	728.00	0.00
46.00	0.00	3.783	728.00	0.00
46.50	0.00	3.783	728.00	0.00
47.00	0.00	3.783	728.00	0.00
47.50	0.00	3.783	728.00	0.00
48.00	0.00	3.783	728.00	0.00
48.50	0.00	3.783	728.00	0.00
49.00	0.00	3.783	728.00	0.00
49.50	0.00	3.783	728.00	0.00
50.00	0.00	3.783	728.00	0.00
50.50	0.00	3.783	728.00	0.00
51.00	0.00	3.783	728.00	0.00
51.50	0.00	3.783	728.00	0.00

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	3.783	728.00	0.00
52.50	0.00	3.783	728.00	0.00
53.00	0.00	3.783	728.00	0.00
53.50	0.00	3.783	728.00	0.00
54.00	0.00	3.783	728.00	0.00
54.50	0.00	3.783	728.00	0.00
55.00	0.00	3.783	728.00	0.00
55.50	0.00	3.783	728.00	0.00
56.00	0.00	3.783	728.00	0.00
56.50	0.00	3.783	728.00	0.00
57.00	0.00	3.783	728.00	0.00
57.50	0.00	3.783	728.00	0.00
58.00	0.00	3.783	728.00	0.00
58.50	0.00	3.783	728.00	0.00
59.00	0.00	3.783	728.00	0.00
59.50	0.00	3.783	728.00	0.00
60.00	0.00	3.783	728.00	0.00
60.50	0.00	3.783	728.00	0.00
61.00	0.00	3.783	728.00	0.00
61.50	0.00	3.783	728.00	0.00
62.00	0.00	3.783	728.00	0.00
62.50	0.00	3.783	728.00	0.00
63.00	0.00	3.783	728.00	0.00
63.50	0.00	3.783	728.00	0.00
64.00	0.00	3.783	728.00	0.00
64.50	0.00	3.783	728.00	0.00
65.00	0.00	3.783	728.00	0.00
65.50	0.00	3.783	728.00	0.00
66.00	0.00	3.783	728.00	0.00
66.50	0.00	3.783	728.00	0.00
67.00	0.00	3.783	728.00	0.00
67.50	0.00	3.783	728.00	0.00
68.00	0.00	3.783	728.00	0.00
68.50	0.00	3.783	728.00	0.00
69.00	0.00	3.783	728.00	0.00
69.50	0.00	3.783	728.00	0.00
70.00	0.00	3.783	728.00	0.00
70.50	0.00	3.783	728.00	0.00
71.00	0.00	3.783	728.00	0.00
71.50	0.00	3.783	728.00	0.00
72.00	0.00	3.783	728.00	0.00
72.50	0.00	3.783	728.00	0.00
73.00	0.00	3.783	728.00	0.00
73.50	0.00	3.783	728.00	0.00
74.00	0.00	3.783	728.00	0.00
74.50	0.00	3.783	728.00	0.00
75.00	0.00	3.783	728.00	0.00
75.50	0.00	3.783	728.00	0.00
76.00	0.00	3.783	728.00	0.00
76.50	0.00	3.783	728.00	0.00
77.00	0.00	3.783	728.00	0.00
77.50	0.00	3.783	728.00	0.00

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	3.783	728.00	0.00
78.50	0.00	3.783	728.00	0.00
79.00	0.00	3.783	728.00	0.00
79.50	0.00	3.783	728.00	0.00
80.00	0.00	3.783	728.00	0.00
80.50	0.00	3.783	728.00	0.00
81.00	0.00	3.783	728.00	0.00
81.50	0.00	3.783	728.00	0.00
82.00	0.00	3.783	728.00	0.00
82.50	0.00	3.783	728.00	0.00
83.00	0.00	3.783	728.00	0.00
83.50	0.00	3.783	728.00	0.00
84.00	0.00	3.783	728.00	0.00
84.50	0.00	3.783	728.00	0.00
85.00	0.00	3.783	728.00	0.00
85.50	0.00	3.783	728.00	0.00
86.00	0.00	3.783	728.00	0.00
86.50	0.00	3.783	728.00	0.00
87.00	0.00	3.783	728.00	0.00
87.50	0.00	3.783	728.00	0.00
88.00	0.00	3.783	728.00	0.00
88.50	0.00	3.783	728.00	0.00
89.00	0.00	3.783	728.00	0.00
89.50	0.00	3.783	728.00	0.00
90.00	0.00	3.783	728.00	0.00
90.50	0.00	3.783	728.00	0.00
91.00	0.00	3.783	728.00	0.00
91.50	0.00	3.783	728.00	0.00
92.00	0.00	3.783	728.00	0.00
92.50	0.00	3.783	728.00	0.00
93.00	0.00	3.783	728.00	0.00
93.50	0.00	3.783	728.00	0.00
94.00	0.00	3.783	728.00	0.00
94.50	0.00	3.783	728.00	0.00
95.00	0.00	3.783	728.00	0.00
95.50	0.00	3.783	728.00	0.00
96.00	0.00	3.783	728.00	0.00
96.50	0.00	3.783	728.00	0.00
97.00	0.00	3.783	728.00	0.00
97.50	0.00	3.783	728.00	0.00
98.00	0.00	3.783	728.00	0.00
98.50	0.00	3.783	728.00	0.00
99.00	0.00	3.783	728.00	0.00
99.50	0.00	3.783	728.00	0.00
100.00	0.00	3.783	728.00	0.00
100.50	0.00	3.783	728.00	0.00
101.00	0.00	3.783	728.00	0.00
101.50	0.00	3.783	728.00	0.00
102.00	0.00	3.783	728.00	0.00
102.50	0.00	3.783	728.00	0.00
103.00	0.00	3.783	728.00	0.00
103.50	0.00	3.783	728.00	0.00

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	3.783	728.00	0.00
104.50	0.00	3.783	728.00	0.00
105.00	0.00	3.783	728.00	0.00
105.50	0.00	3.783	728.00	0.00
106.00	0.00	3.783	728.00	0.00
106.50	0.00	3.783	728.00	0.00
107.00	0.00	3.783	728.00	0.00
107.50	0.00	3.783	728.00	0.00
108.00	0.00	3.783	728.00	0.00
108.50	0.00	3.783	728.00	0.00
109.00	0.00	3.783	728.00	0.00
109.50	0.00	3.783	728.00	0.00
110.00	0.00	3.783	728.00	0.00
110.50	0.00	3.783	728.00	0.00
111.00	0.00	3.783	728.00	0.00
111.50	0.00	3.783	728.00	0.00
112.00	0.00	3.783	728.00	0.00
112.50	0.00	3.783	728.00	0.00
113.00	0.00	3.783	728.00	0.00
113.50	0.00	3.783	728.00	0.00
114.00	0.00	3.783	728.00	0.00
114.50	0.00	3.783	728.00	0.00
115.00	0.00	3.783	728.00	0.00
115.50	0.00	3.783	728.00	0.00
116.00	0.00	3.783	728.00	0.00
116.50	0.00	3.783	728.00	0.00
117.00	0.00	3.783	728.00	0.00
117.50	0.00	3.783	728.00	0.00
118.00	0.00	3.783	728.00	0.00
118.50	0.00	3.783	728.00	0.00
119.00	0.00	3.783	728.00	0.00
119.50	0.00	3.783	728.00	0.00
120.00	0.00	3.783	728.00	0.00
120.50	0.00	3.783	728.00	0.00
121.00	0.00	3.783	728.00	0.00
121.50	0.00	3.783	728.00	0.00
122.00	0.00	3.783	728.00	0.00
122.50	0.00	3.783	728.00	0.00
123.00	0.00	3.783	728.00	0.00
123.50	0.00	3.783	728.00	0.00
124.00	0.00	3.783	728.00	0.00
124.50	0.00	3.783	728.00	0.00
125.00	0.00	3.783	728.00	0.00
125.50	0.00	3.783	728.00	0.00
126.00	0.00	3.783	728.00	0.00
126.50	0.00	3.783	728.00	0.00
127.00	0.00	3.783	728.00	0.00
127.50	0.00	3.783	728.00	0.00
128.00	0.00	3.783	728.00	0.00
128.50	0.00	3.783	728.00	0.00
129.00	0.00	3.783	728.00	0.00
129.50	0.00	3.783	728.00	0.00

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	3.783	728.00	0.00
130.50	0.00	3.783	728.00	0.00
131.00	0.00	3.783	728.00	0.00
131.50	0.00	3.783	728.00	0.00
132.00	0.00	3.783	728.00	0.00
132.50	0.00	3.783	728.00	0.00
133.00	0.00	3.783	728.00	0.00
133.50	0.00	3.783	728.00	0.00
134.00	0.00	3.783	728.00	0.00
134.50	0.00	3.783	728.00	0.00
135.00	0.00	3.783	728.00	0.00
135.50	0.00	3.783	728.00	0.00
136.00	0.00	3.783	728.00	0.00
136.50	0.00	3.783	728.00	0.00
137.00	0.00	3.783	728.00	0.00
137.50	0.00	3.783	728.00	0.00
138.00	0.00	3.783	728.00	0.00
138.50	0.00	3.783	728.00	0.00
139.00	0.00	3.783	728.00	0.00
139.50	0.00	3.783	728.00	0.00
140.00	0.00	3.783	728.00	0.00
140.50	0.00	3.783	728.00	0.00
141.00	0.00	3.783	728.00	0.00
141.50	0.00	3.783	728.00	0.00
142.00	0.00	3.783	728.00	0.00
142.50	0.00	3.783	728.00	0.00
143.00	0.00	3.783	728.00	0.00
143.50	0.00	3.783	728.00	0.00
144.00	0.00	3.783	728.00	0.00
144.50	0.00	3.783	728.00	0.00
145.00	0.00	3.783	728.00	0.00
145.50	0.00	3.783	728.00	0.00
146.00	0.00	3.783	728.00	0.00
146.50	0.00	3.783	728.00	0.00
147.00	0.00	3.783	728.00	0.00
147.50	0.00	3.783	728.00	0.00
148.00	0.00	3.783	728.00	0.00
148.50	0.00	3.783	728.00	0.00
149.00	0.00	3.783	728.00	0.00
149.50	0.00	3.783	728.00	0.00
150.00	0.00	3.783	728.00	0.00
150.50	0.00	3.783	728.00	0.00
151.00	0.00	3.783	728.00	0.00
151.50	0.00	3.783	728.00	0.00
152.00	0.00	3.783	728.00	0.00
152.50	0.00	3.783	728.00	0.00
153.00	0.00	3.783	728.00	0.00
153.50	0.00	3.783	728.00	0.00
154.00	0.00	3.783	728.00	0.00
154.50	0.00	3.783	728.00	0.00
155.00	0.00	3.783	728.00	0.00
155.50	0.00	3.783	728.00	0.00

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	3.783	728.00	0.00
156.50	0.00	3.783	728.00	0.00
157.00	0.00	3.783	728.00	0.00
157.50	0.00	3.783	728.00	0.00
158.00	0.00	3.783	728.00	0.00
158.50	0.00	3.783	728.00	0.00
159.00	0.00	3.783	728.00	0.00
159.50	0.00	3.783	728.00	0.00
160.00	0.00	3.783	728.00	0.00
160.50	0.00	3.783	728.00	0.00
161.00	0.00	3.783	728.00	0.00
161.50	0.00	3.783	728.00	0.00
162.00	0.00	3.783	728.00	0.00
162.50	0.00	3.783	728.00	0.00
163.00	0.00	3.783	728.00	0.00
163.50	0.00	3.783	728.00	0.00
164.00	0.00	3.783	728.00	0.00
164.50	0.00	3.783	728.00	0.00
165.00	0.00	3.783	728.00	0.00
165.50	0.00	3.783	728.00	0.00
166.00	0.00	3.783	728.00	0.00
166.50	0.00	3.783	728.00	0.00
167.00	0.00	3.783	728.00	0.00
167.50	0.00	3.783	728.00	0.00
168.00	0.00	3.783	728.00	0.00
168.50	0.00	3.783	728.00	0.00
169.00	0.00	3.783	728.00	0.00
169.50	0.00	3.783	728.00	0.00
170.00	0.00	3.783	728.00	0.00
170.50	0.00	3.783	728.00	0.00
171.00	0.00	3.783	728.00	0.00
171.50	0.00	3.783	728.00	0.00
172.00	0.00	3.783	728.00	0.00
172.50	0.00	3.783	728.00	0.00
173.00	0.00	3.783	728.00	0.00
173.50	0.00	3.783	728.00	0.00
174.00	0.00	3.783	728.00	0.00
174.50	0.00	3.783	728.00	0.00
175.00	0.00	3.783	728.00	0.00
175.50	0.00	3.783	728.00	0.00
176.00	0.00	3.783	728.00	0.00
176.50	0.00	3.783	728.00	0.00
177.00	0.00	3.783	728.00	0.00
177.50	0.00	3.783	728.00	0.00
178.00	0.00	3.783	728.00	0.00
178.50	0.00	3.783	728.00	0.00
179.00	0.00	3.783	728.00	0.00
179.50	0.00	3.783	728.00	0.00
180.00	0.00	3.783	728.00	0.00
180.50	0.00	3.783	728.00	0.00
181.00	0.00	3.783	728.00	0.00
181.50	0.00	3.783	728.00	0.00

Hydrograph for Pond ST-05-A: ST-05-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	3.783	728.00	0.00
182.50	0.00	3.783	728.00	0.00
183.00	0.00	3.783	728.00	0.00
183.50	0.00	3.783	728.00	0.00
184.00	0.00	3.783	728.00	0.00
184.50	0.00	3.783	728.00	0.00
185.00	0.00	3.783	728.00	0.00
185.50	0.00	3.783	728.00	0.00
186.00	0.00	3.783	728.00	0.00
186.50	0.00	3.783	728.00	0.00
187.00	0.00	3.783	728.00	0.00
187.50	0.00	3.783	728.00	0.00
188.00	0.00	3.783	728.00	0.00
188.50	0.00	3.783	728.00	0.00
189.00	0.00	3.783	728.00	0.00
189.50	0.00	3.783	728.00	0.00
190.00	0.00	3.783	728.00	0.00
190.50	0.00	3.783	728.00	0.00
191.00	0.00	3.783	728.00	0.00
191.50	0.00	3.783	728.00	0.00
192.00	0.00	3.783	728.00	0.00
192.50	0.00	3.783	728.00	0.00
193.00	0.00	3.783	728.00	0.00
193.50	0.00	3.783	728.00	0.00
194.00	0.00	3.783	728.00	0.00
194.50	0.00	3.783	728.00	0.00
195.00	0.00	3.783	728.00	0.00
195.50	0.00	3.783	728.00	0.00
196.00	0.00	3.783	728.00	0.00
196.50	0.00	3.783	728.00	0.00
197.00	0.00	3.783	728.00	0.00
197.50	0.00	3.783	728.00	0.00
198.00	0.00	3.783	728.00	0.00
198.50	0.00	3.783	728.00	0.00
199.00	0.00	3.783	728.00	0.00
199.50	0.00	3.783	728.00	0.00
200.00	0.00	3.783	728.00	0.00

Summary for Pond ST-05-B: ST-05-B

Inflow Area = 26.018 ac, 1.45% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 17.44 cfs @ 14.90 hrs, Volume= 6.901 af
Outflow = 17.14 cfs @ 15.14 hrs, Volume= 5.336 af, Atten= 2%, Lag= 14.0 min
Primary = 17.14 cfs @ 15.14 hrs, Volume= 5.336 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 727.24' @ 15.14 hrs Surf.Area= 1.103 ac Storage= 1.830 af

Plug-Flow detention time= 163.2 min calculated for 5.336 af (77% of inflow)
Center-of-Mass det. time= 72.2 min (1,083.6 - 1,011.4)

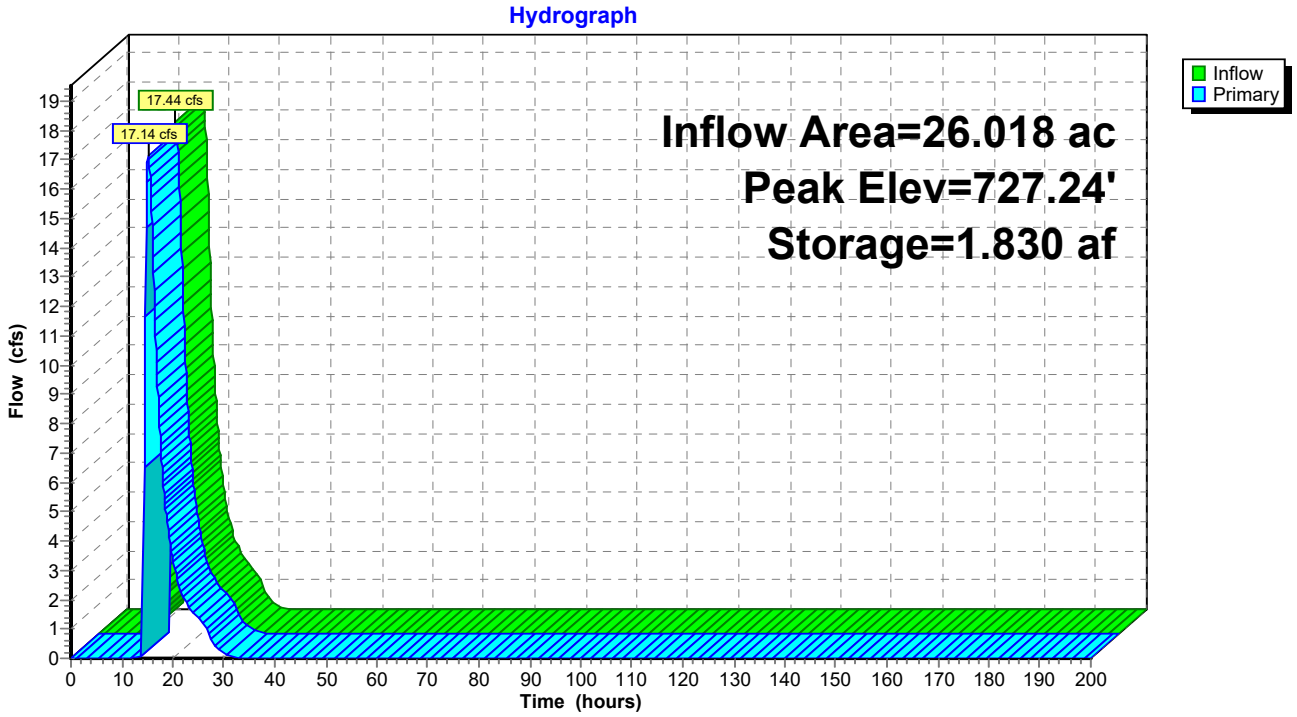
Volume	Invert	Avail.Storage	Storage Description
#1	725.50'	2.117 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
725.50	0.999	0.000	0.000
726.00	1.028	0.507	0.507
727.00	1.088	1.058	1.565
727.50	1.119	0.552	2.117

Device	Routing	Invert	Outlet Devices
#1	Primary	727.00'	**60.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=17.11 cfs @ 15.14 hrs HW=727.24' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 17.11 cfs @ 1.19 fps)

Pond ST-05-B: ST-05-B



Hydrograph for Pond ST-05-B: ST-05-B

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	725.50	0.00
0.50	0.00	0.000	725.50	0.00
1.00	0.00	0.000	725.50	0.00
1.50	0.00	0.000	725.50	0.00
2.00	0.00	0.000	725.50	0.00
2.50	0.00	0.000	725.50	0.00
3.00	0.00	0.000	725.50	0.00
3.50	0.00	0.000	725.50	0.00
4.00	0.00	0.000	725.50	0.00
4.50	0.00	0.000	725.50	0.00
5.00	0.00	0.000	725.50	0.00
5.50	0.00	0.000	725.50	0.00
6.00	0.00	0.000	725.50	0.00
6.50	0.00	0.000	725.50	0.00
7.00	0.00	0.000	725.50	0.00
7.50	0.00	0.000	725.50	0.00
8.00	0.00	0.000	725.50	0.00
8.50	0.00	0.000	725.50	0.00
9.00	0.01	0.000	725.50	0.00
9.50	0.03	0.001	725.50	0.00
10.00	0.07	0.003	725.50	0.00
10.50	0.15	0.008	725.51	0.00
11.00	0.26	0.016	725.52	0.00
11.50	0.44	0.030	725.53	0.00
12.00	0.76	0.054	725.55	0.00
12.50	1.72	0.101	725.60	0.00
13.00	4.37	0.222	725.72	0.00
13.50	8.76	0.489	725.98	0.00
14.00	13.76	0.958	726.43	0.00
14.50	**16.77**	1.594	727.03	0.65
15.00	**17.37**	**1.828**	**727.24**	**16.92**
15.50	16.04	**1.823**	**727.23**	**16.43**
16.00	13.57	1.800	727.21	14.27
16.50	10.77	1.769	727.19	11.50
17.00	8.66	1.742	727.16	9.25
17.50	7.10	1.720	727.14	7.57
18.00	5.87	1.701	727.12	6.27
18.50	4.91	1.686	727.11	5.25
19.00	4.17	1.673	727.10	4.44
19.50	3.58	1.663	727.09	3.82
20.00	3.12	1.654	727.08	3.31
20.50	2.76	1.647	727.07	2.93
21.00	2.47	1.640	727.07	2.61
21.50	2.24	1.635	727.06	2.35
22.00	2.05	1.631	727.06	2.14
22.50	1.89	1.628	727.06	1.98
23.00	1.76	1.625	727.05	1.83
23.50	1.64	1.622	727.05	1.71
24.00	1.54	1.619	727.05	1.60
24.50	1.44	1.617	727.05	1.50
25.00	1.36	1.615	727.05	1.41
25.50	1.24	1.612	727.04	1.31

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	1.08	1.609	727.04	1.17
26.50	0.88	1.605	727.04	1.01
27.00	0.68	1.599	727.03	0.82
27.50	0.50	1.593	727.03	0.63
28.00	0.35	1.588	727.02	0.46
28.50	0.25	1.584	727.02	0.36
29.00	0.18	1.580	727.01	0.28
29.50	0.13	1.576	727.01	0.21
30.00	0.09	1.573	727.01	0.15
30.50	0.06	1.571	727.01	0.11
31.00	0.05	1.569	727.00	0.08
31.50	0.03	1.568	727.00	0.06
32.00	0.02	1.567	727.00	0.04
32.50	0.02	1.566	727.00	0.03
33.00	0.01	1.566	727.00	0.02
33.50	0.01	1.566	727.00	0.01
34.00	0.00	1.565	727.00	0.01
34.50	0.00	1.565	727.00	0.01
35.00	0.00	1.565	727.00	0.00
35.50	0.00	1.565	727.00	0.00
36.00	0.00	1.565	727.00	0.00
36.50	0.00	1.565	727.00	0.00
37.00	0.00	1.565	727.00	0.00
37.50	0.00	1.565	727.00	0.00
38.00	0.00	1.565	727.00	0.00
38.50	0.00	1.565	727.00	0.00
39.00	0.00	1.565	727.00	0.00
39.50	0.00	1.565	727.00	0.00
40.00	0.00	1.565	727.00	0.00
40.50	0.00	1.565	727.00	0.00
41.00	0.00	1.565	727.00	0.00
41.50	0.00	1.565	727.00	0.00
42.00	0.00	1.565	727.00	0.00
42.50	0.00	1.565	727.00	0.00
43.00	0.00	1.565	727.00	0.00
43.50	0.00	1.565	727.00	0.00
44.00	0.00	1.565	727.00	0.00
44.50	0.00	1.565	727.00	0.00
45.00	0.00	1.565	727.00	0.00
45.50	0.00	1.565	727.00	0.00
46.00	0.00	1.565	727.00	0.00
46.50	0.00	1.565	727.00	0.00
47.00	0.00	1.565	727.00	0.00
47.50	0.00	1.565	727.00	0.00
48.00	0.00	1.565	727.00	0.00
48.50	0.00	1.565	727.00	0.00
49.00	0.00	1.565	727.00	0.00
49.50	0.00	1.565	727.00	0.00
50.00	0.00	1.565	727.00	0.00
50.50	0.00	1.565	727.00	0.00
51.00	0.00	1.565	727.00	0.00
51.50	0.00	1.565	727.00	0.00

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	1.565	727.00	0.00
52.50	0.00	1.565	727.00	0.00
53.00	0.00	1.565	727.00	0.00
53.50	0.00	1.565	727.00	0.00
54.00	0.00	1.565	727.00	0.00
54.50	0.00	1.565	727.00	0.00
55.00	0.00	1.565	727.00	0.00
55.50	0.00	1.565	727.00	0.00
56.00	0.00	1.565	727.00	0.00
56.50	0.00	1.565	727.00	0.00
57.00	0.00	1.565	727.00	0.00
57.50	0.00	1.565	727.00	0.00
58.00	0.00	1.565	727.00	0.00
58.50	0.00	1.565	727.00	0.00
59.00	0.00	1.565	727.00	0.00
59.50	0.00	1.565	727.00	0.00
60.00	0.00	1.565	727.00	0.00
60.50	0.00	1.565	727.00	0.00
61.00	0.00	1.565	727.00	0.00
61.50	0.00	1.565	727.00	0.00
62.00	0.00	1.565	727.00	0.00
62.50	0.00	1.565	727.00	0.00
63.00	0.00	1.565	727.00	0.00
63.50	0.00	1.565	727.00	0.00
64.00	0.00	1.565	727.00	0.00
64.50	0.00	1.565	727.00	0.00
65.00	0.00	1.565	727.00	0.00
65.50	0.00	1.565	727.00	0.00
66.00	0.00	1.565	727.00	0.00
66.50	0.00	1.565	727.00	0.00
67.00	0.00	1.565	727.00	0.00
67.50	0.00	1.565	727.00	0.00
68.00	0.00	1.565	727.00	0.00
68.50	0.00	1.565	727.00	0.00
69.00	0.00	1.565	727.00	0.00
69.50	0.00	1.565	727.00	0.00
70.00	0.00	1.565	727.00	0.00
70.50	0.00	1.565	727.00	0.00
71.00	0.00	1.565	727.00	0.00
71.50	0.00	1.565	727.00	0.00
72.00	0.00	1.565	727.00	0.00
72.50	0.00	1.565	727.00	0.00
73.00	0.00	1.565	727.00	0.00
73.50	0.00	1.565	727.00	0.00
74.00	0.00	1.565	727.00	0.00
74.50	0.00	1.565	727.00	0.00
75.00	0.00	1.565	727.00	0.00
75.50	0.00	1.565	727.00	0.00
76.00	0.00	1.565	727.00	0.00
76.50	0.00	1.565	727.00	0.00
77.00	0.00	1.565	727.00	0.00
77.50	0.00	1.565	727.00	0.00

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	1.565	727.00	0.00
78.50	0.00	1.565	727.00	0.00
79.00	0.00	1.565	727.00	0.00
79.50	0.00	1.565	727.00	0.00
80.00	0.00	1.565	727.00	0.00
80.50	0.00	1.565	727.00	0.00
81.00	0.00	1.565	727.00	0.00
81.50	0.00	1.565	727.00	0.00
82.00	0.00	1.565	727.00	0.00
82.50	0.00	1.565	727.00	0.00
83.00	0.00	1.565	727.00	0.00
83.50	0.00	1.565	727.00	0.00
84.00	0.00	1.565	727.00	0.00
84.50	0.00	1.565	727.00	0.00
85.00	0.00	1.565	727.00	0.00
85.50	0.00	1.565	727.00	0.00
86.00	0.00	1.565	727.00	0.00
86.50	0.00	1.565	727.00	0.00
87.00	0.00	1.565	727.00	0.00
87.50	0.00	1.565	727.00	0.00
88.00	0.00	1.565	727.00	0.00
88.50	0.00	1.565	727.00	0.00
89.00	0.00	1.565	727.00	0.00
89.50	0.00	1.565	727.00	0.00
90.00	0.00	1.565	727.00	0.00
90.50	0.00	1.565	727.00	0.00
91.00	0.00	1.565	727.00	0.00
91.50	0.00	1.565	727.00	0.00
92.00	0.00	1.565	727.00	0.00
92.50	0.00	1.565	727.00	0.00
93.00	0.00	1.565	727.00	0.00
93.50	0.00	1.565	727.00	0.00
94.00	0.00	1.565	727.00	0.00
94.50	0.00	1.565	727.00	0.00
95.00	0.00	1.565	727.00	0.00
95.50	0.00	1.565	727.00	0.00
96.00	0.00	1.565	727.00	0.00
96.50	0.00	1.565	727.00	0.00
97.00	0.00	1.565	727.00	0.00
97.50	0.00	1.565	727.00	0.00
98.00	0.00	1.565	727.00	0.00
98.50	0.00	1.565	727.00	0.00
99.00	0.00	1.565	727.00	0.00
99.50	0.00	1.565	727.00	0.00
100.00	0.00	1.565	727.00	0.00
100.50	0.00	1.565	727.00	0.00
101.00	0.00	1.565	727.00	0.00
101.50	0.00	1.565	727.00	0.00
102.00	0.00	1.565	727.00	0.00
102.50	0.00	1.565	727.00	0.00
103.00	0.00	1.565	727.00	0.00
103.50	0.00	1.565	727.00	0.00

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1.565	727.00	0.00
104.50	0.00	1.565	727.00	0.00
105.00	0.00	1.565	727.00	0.00
105.50	0.00	1.565	727.00	0.00
106.00	0.00	1.565	727.00	0.00
106.50	0.00	1.565	727.00	0.00
107.00	0.00	1.565	727.00	0.00
107.50	0.00	1.565	727.00	0.00
108.00	0.00	1.565	727.00	0.00
108.50	0.00	1.565	727.00	0.00
109.00	0.00	1.565	727.00	0.00
109.50	0.00	1.565	727.00	0.00
110.00	0.00	1.565	727.00	0.00
110.50	0.00	1.565	727.00	0.00
111.00	0.00	1.565	727.00	0.00
111.50	0.00	1.565	727.00	0.00
112.00	0.00	1.565	727.00	0.00
112.50	0.00	1.565	727.00	0.00
113.00	0.00	1.565	727.00	0.00
113.50	0.00	1.565	727.00	0.00
114.00	0.00	1.565	727.00	0.00
114.50	0.00	1.565	727.00	0.00
115.00	0.00	1.565	727.00	0.00
115.50	0.00	1.565	727.00	0.00
116.00	0.00	1.565	727.00	0.00
116.50	0.00	1.565	727.00	0.00
117.00	0.00	1.565	727.00	0.00
117.50	0.00	1.565	727.00	0.00
118.00	0.00	1.565	727.00	0.00
118.50	0.00	1.565	727.00	0.00
119.00	0.00	1.565	727.00	0.00
119.50	0.00	1.565	727.00	0.00
120.00	0.00	1.565	727.00	0.00
120.50	0.00	1.565	727.00	0.00
121.00	0.00	1.565	727.00	0.00
121.50	0.00	1.565	727.00	0.00
122.00	0.00	1.565	727.00	0.00
122.50	0.00	1.565	727.00	0.00
123.00	0.00	1.565	727.00	0.00
123.50	0.00	1.565	727.00	0.00
124.00	0.00	1.565	727.00	0.00
124.50	0.00	1.565	727.00	0.00
125.00	0.00	1.565	727.00	0.00
125.50	0.00	1.565	727.00	0.00
126.00	0.00	1.565	727.00	0.00
126.50	0.00	1.565	727.00	0.00
127.00	0.00	1.565	727.00	0.00
127.50	0.00	1.565	727.00	0.00
128.00	0.00	1.565	727.00	0.00
128.50	0.00	1.565	727.00	0.00
129.00	0.00	1.565	727.00	0.00
129.50	0.00	1.565	727.00	0.00

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	1.565	727.00	0.00
130.50	0.00	1.565	727.00	0.00
131.00	0.00	1.565	727.00	0.00
131.50	0.00	1.565	727.00	0.00
132.00	0.00	1.565	727.00	0.00
132.50	0.00	1.565	727.00	0.00
133.00	0.00	1.565	727.00	0.00
133.50	0.00	1.565	727.00	0.00
134.00	0.00	1.565	727.00	0.00
134.50	0.00	1.565	727.00	0.00
135.00	0.00	1.565	727.00	0.00
135.50	0.00	1.565	727.00	0.00
136.00	0.00	1.565	727.00	0.00
136.50	0.00	1.565	727.00	0.00
137.00	0.00	1.565	727.00	0.00
137.50	0.00	1.565	727.00	0.00
138.00	0.00	1.565	727.00	0.00
138.50	0.00	1.565	727.00	0.00
139.00	0.00	1.565	727.00	0.00
139.50	0.00	1.565	727.00	0.00
140.00	0.00	1.565	727.00	0.00
140.50	0.00	1.565	727.00	0.00
141.00	0.00	1.565	727.00	0.00
141.50	0.00	1.565	727.00	0.00
142.00	0.00	1.565	727.00	0.00
142.50	0.00	1.565	727.00	0.00
143.00	0.00	1.565	727.00	0.00
143.50	0.00	1.565	727.00	0.00
144.00	0.00	1.565	727.00	0.00
144.50	0.00	1.565	727.00	0.00
145.00	0.00	1.565	727.00	0.00
145.50	0.00	1.565	727.00	0.00
146.00	0.00	1.565	727.00	0.00
146.50	0.00	1.565	727.00	0.00
147.00	0.00	1.565	727.00	0.00
147.50	0.00	1.565	727.00	0.00
148.00	0.00	1.565	727.00	0.00
148.50	0.00	1.565	727.00	0.00
149.00	0.00	1.565	727.00	0.00
149.50	0.00	1.565	727.00	0.00
150.00	0.00	1.565	727.00	0.00
150.50	0.00	1.565	727.00	0.00
151.00	0.00	1.565	727.00	0.00
151.50	0.00	1.565	727.00	0.00
152.00	0.00	1.565	727.00	0.00
152.50	0.00	1.565	727.00	0.00
153.00	0.00	1.565	727.00	0.00
153.50	0.00	1.565	727.00	0.00
154.00	0.00	1.565	727.00	0.00
154.50	0.00	1.565	727.00	0.00
155.00	0.00	1.565	727.00	0.00
155.50	0.00	1.565	727.00	0.00

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	1.565	727.00	0.00
156.50	0.00	1.565	727.00	0.00
157.00	0.00	1.565	727.00	0.00
157.50	0.00	1.565	727.00	0.00
158.00	0.00	1.565	727.00	0.00
158.50	0.00	1.565	727.00	0.00
159.00	0.00	1.565	727.00	0.00
159.50	0.00	1.565	727.00	0.00
160.00	0.00	1.565	727.00	0.00
160.50	0.00	1.565	727.00	0.00
161.00	0.00	1.565	727.00	0.00
161.50	0.00	1.565	727.00	0.00
162.00	0.00	1.565	727.00	0.00
162.50	0.00	1.565	727.00	0.00
163.00	0.00	1.565	727.00	0.00
163.50	0.00	1.565	727.00	0.00
164.00	0.00	1.565	727.00	0.00
164.50	0.00	1.565	727.00	0.00
165.00	0.00	1.565	727.00	0.00
165.50	0.00	1.565	727.00	0.00
166.00	0.00	1.565	727.00	0.00
166.50	0.00	1.565	727.00	0.00
167.00	0.00	1.565	727.00	0.00
167.50	0.00	1.565	727.00	0.00
168.00	0.00	1.565	727.00	0.00
168.50	0.00	1.565	727.00	0.00
169.00	0.00	1.565	727.00	0.00
169.50	0.00	1.565	727.00	0.00
170.00	0.00	1.565	727.00	0.00
170.50	0.00	1.565	727.00	0.00
171.00	0.00	1.565	727.00	0.00
171.50	0.00	1.565	727.00	0.00
172.00	0.00	1.565	727.00	0.00
172.50	0.00	1.565	727.00	0.00
173.00	0.00	1.565	727.00	0.00
173.50	0.00	1.565	727.00	0.00
174.00	0.00	1.565	727.00	0.00
174.50	0.00	1.565	727.00	0.00
175.00	0.00	1.565	727.00	0.00
175.50	0.00	1.565	727.00	0.00
176.00	0.00	1.565	727.00	0.00
176.50	0.00	1.565	727.00	0.00
177.00	0.00	1.565	727.00	0.00
177.50	0.00	1.565	727.00	0.00
178.00	0.00	1.565	727.00	0.00
178.50	0.00	1.565	727.00	0.00
179.00	0.00	1.565	727.00	0.00
179.50	0.00	1.565	727.00	0.00
180.00	0.00	1.565	727.00	0.00
180.50	0.00	1.565	727.00	0.00
181.00	0.00	1.565	727.00	0.00
181.50	0.00	1.565	727.00	0.00

Hydrograph for Pond ST-05-B: ST-05-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	1.565	727.00	0.00
182.50	0.00	1.565	727.00	0.00
183.00	0.00	1.565	727.00	0.00
183.50	0.00	1.565	727.00	0.00
184.00	0.00	1.565	727.00	0.00
184.50	0.00	1.565	727.00	0.00
185.00	0.00	1.565	727.00	0.00
185.50	0.00	1.565	727.00	0.00
186.00	0.00	1.565	727.00	0.00
186.50	0.00	1.565	727.00	0.00
187.00	0.00	1.565	727.00	0.00
187.50	0.00	1.565	727.00	0.00
188.00	0.00	1.565	727.00	0.00
188.50	0.00	1.565	727.00	0.00
189.00	0.00	1.565	727.00	0.00
189.50	0.00	1.565	727.00	0.00
190.00	0.00	1.565	727.00	0.00
190.50	0.00	1.565	727.00	0.00
191.00	0.00	1.565	727.00	0.00
191.50	0.00	1.565	727.00	0.00
192.00	0.00	1.565	727.00	0.00
192.50	0.00	1.565	727.00	0.00
193.00	0.00	1.565	727.00	0.00
193.50	0.00	1.565	727.00	0.00
194.00	0.00	1.565	727.00	0.00
194.50	0.00	1.565	727.00	0.00
195.00	0.00	1.565	727.00	0.00
195.50	0.00	1.565	727.00	0.00
196.00	0.00	1.565	727.00	0.00
196.50	0.00	1.565	727.00	0.00
197.00	0.00	1.565	727.00	0.00
197.50	0.00	1.565	727.00	0.00
198.00	0.00	1.565	727.00	0.00
198.50	0.00	1.565	727.00	0.00
199.00	0.00	1.565	727.00	0.00
199.50	0.00	1.565	727.00	0.00
200.00	0.00	1.565	727.00	0.00

Summary for Pond ST-06: ST-06

Inflow Area = 142.235 ac, 1.58% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 83.39 cfs @ 15.24 hrs, Volume= 37.724 af
Outflow = 81.79 cfs @ 15.65 hrs, Volume= 29.082 af, Atten= 2%, Lag= 24.4 min
Primary = 81.79 cfs @ 15.65 hrs, Volume= 29.082 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 727.75' @ 15.65 hrs Surf.Area= 5.905 ac Storage= 10.115 af

Plug-Flow detention time= 174.9 min calculated for 29.082 af (77% of inflow)
Center-of-Mass det. time= 79.7 min (1,124.6 - 1,044.9)

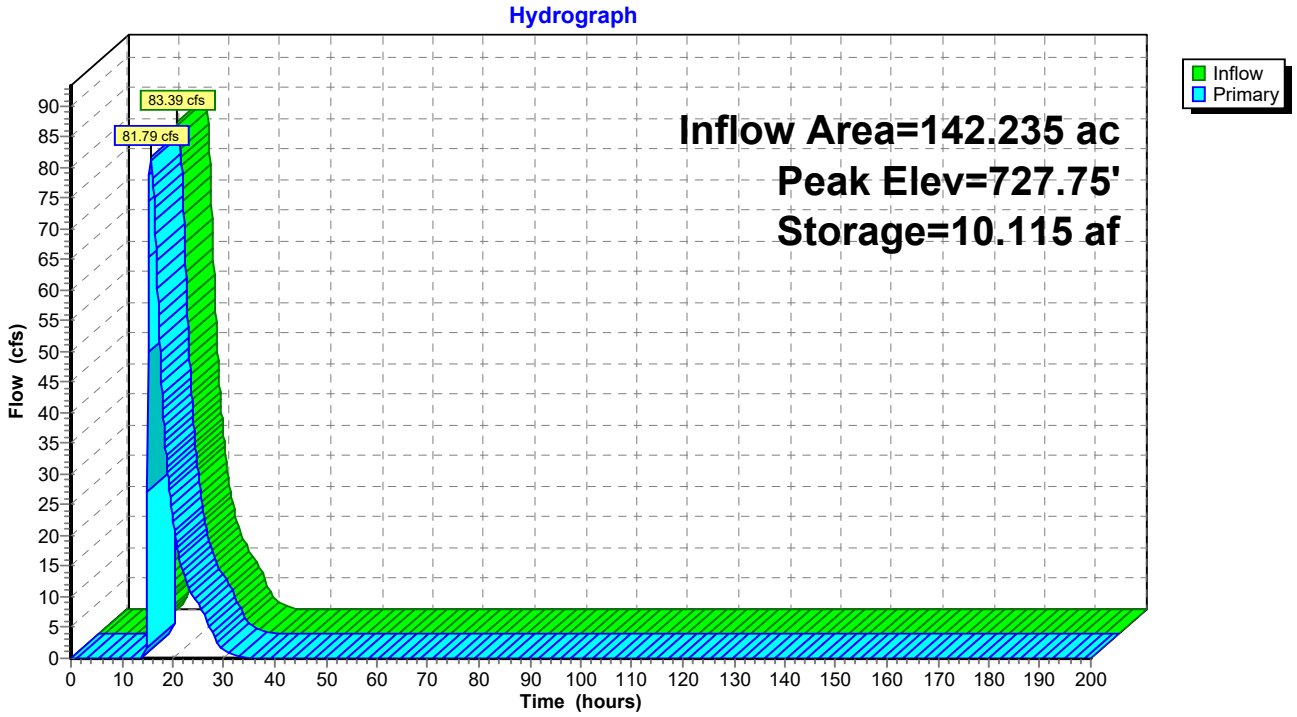
Volume	Invert	Avail.Storage	Storage Description
#1	726.00'	11.594 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
726.00	5.654	0.000	0.000
726.50	5.725	2.845	2.845
727.50	5.869	5.797	8.642
728.00	5.941	2.952	11.594

Device	Routing	Invert	Outlet Devices
#1	Primary	727.50'	**270.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=81.68 cfs @ 15.65 hrs HW=727.75' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 81.68 cfs @ 1.21 fps)

Pond ST-06: ST-06



Hydrograph for Pond ST-06: ST-06

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	726.00	0.00
0.50	0.00	0.000	726.00	0.00
1.00	0.00	0.000	726.00	0.00
1.50	0.00	0.000	726.00	0.00
2.00	0.00	0.000	726.00	0.00
2.50	0.00	0.000	726.00	0.00
3.00	0.00	0.000	726.00	0.00
3.50	0.00	0.000	726.00	0.00
4.00	0.00	0.000	726.00	0.00
4.50	0.00	0.000	726.00	0.00
5.00	0.00	0.000	726.00	0.00
5.50	0.00	0.000	726.00	0.00
6.00	0.00	0.000	726.00	0.00
6.50	0.00	0.000	726.00	0.00
7.00	0.00	0.000	726.00	0.00
7.50	0.00	0.000	726.00	0.00
8.00	0.00	0.000	726.00	0.00
8.50	0.01	0.000	726.00	0.00
9.00	0.03	0.001	726.00	0.00
9.50	0.10	0.003	726.00	0.00
10.00	0.26	0.010	726.00	0.00
10.50	0.54	0.026	726.00	0.00
11.00	0.99	0.057	726.01	0.00
11.50	1.68	0.111	726.02	0.00
12.00	2.81	0.203	726.04	0.00
12.50	7.18	0.392	726.07	0.00
13.00	16.80	0.865	726.15	0.00
13.50	33.00	1.873	726.33	0.00
14.00	54.04	3.672	726.64	0.00
14.50	71.82	6.295	727.10	0.00
15.00	**81.44**	9.354	727.62	27.13
15.50	**82.70**	**10.106**	**727.75**	**81.01**
16.00	77.83	**10.088**	**727.74**	**79.49**
16.50	68.22	9.991	727.73	71.32
17.00	56.77	9.852	727.70	60.22
17.50	46.72	9.711	727.68	49.96
18.00	39.22	9.591	727.66	41.79
18.50	33.21	9.492	727.64	35.42
19.00	28.28	9.406	727.63	30.22
19.50	24.27	9.332	727.62	25.95
20.00	21.09	9.269	727.61	22.50
20.50	18.49	9.216	727.60	19.70
21.00	16.36	9.169	727.59	17.39
21.50	14.62	9.130	727.58	15.47
22.00	13.22	9.098	727.58	13.96
22.50	12.04	9.069	727.57	12.69
23.00	11.04	9.044	727.57	11.60
23.50	10.21	9.023	727.56	10.69
24.00	9.52	9.005	727.56	9.92
24.50	8.92	8.990	727.56	9.29
25.00	8.35	8.974	727.56	8.73
25.50	7.69	8.958	727.55	8.12

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	6.86	8.938	727.55	7.39
26.50	5.86	8.914	727.55	6.50
27.00	4.82	8.887	727.54	5.50
27.50	3.84	8.857	727.54	4.60
28.00	2.97	8.826	727.53	3.71
28.50	2.23	8.797	727.53	2.88
29.00	1.65	8.772	727.52	2.18
29.50	1.24	8.752	727.52	1.72
30.00	0.93	8.732	727.52	1.41
30.50	0.70	8.714	727.51	1.12
31.00	0.52	8.698	727.51	0.87
31.50	0.39	8.685	727.51	0.67
32.00	0.29	8.674	727.51	0.51
32.50	0.21	8.666	727.50	0.38
33.00	0.16	8.660	727.50	0.29
33.50	0.12	8.656	727.50	0.22
34.00	0.09	8.652	727.50	0.16
34.50	0.06	8.649	727.50	0.12
35.00	0.04	8.647	727.50	0.09
35.50	0.03	8.646	727.50	0.06
36.00	0.02	8.645	727.50	0.04
36.50	0.01	8.644	727.50	0.03
37.00	0.01	8.643	727.50	0.02
37.50	0.00	8.643	727.50	0.01
38.00	0.00	8.642	727.50	0.01
38.50	0.00	8.642	727.50	0.00
39.00	0.00	8.642	727.50	0.00
39.50	0.00	8.642	727.50	0.00
40.00	0.00	8.642	727.50	0.00
40.50	0.00	8.642	727.50	0.00
41.00	0.00	8.642	727.50	0.00
41.50	0.00	8.642	727.50	0.00
42.00	0.00	8.642	727.50	0.00
42.50	0.00	8.642	727.50	0.00
43.00	0.00	8.642	727.50	0.00
43.50	0.00	8.642	727.50	0.00
44.00	0.00	8.642	727.50	0.00
44.50	0.00	8.642	727.50	0.00
45.00	0.00	8.642	727.50	0.00
45.50	0.00	8.642	727.50	0.00
46.00	0.00	8.642	727.50	0.00
46.50	0.00	8.642	727.50	0.00
47.00	0.00	8.642	727.50	0.00
47.50	0.00	8.642	727.50	0.00
48.00	0.00	8.642	727.50	0.00
48.50	0.00	8.642	727.50	0.00
49.00	0.00	8.642	727.50	0.00
49.50	0.00	8.642	727.50	0.00
50.00	0.00	8.642	727.50	0.00
50.50	0.00	8.642	727.50	0.00
51.00	0.00	8.642	727.50	0.00
51.50	0.00	8.642	727.50	0.00

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	8.642	727.50	0.00
52.50	0.00	8.642	727.50	0.00
53.00	0.00	8.642	727.50	0.00
53.50	0.00	8.642	727.50	0.00
54.00	0.00	8.642	727.50	0.00
54.50	0.00	8.642	727.50	0.00
55.00	0.00	8.642	727.50	0.00
55.50	0.00	8.642	727.50	0.00
56.00	0.00	8.642	727.50	0.00
56.50	0.00	8.642	727.50	0.00
57.00	0.00	8.642	727.50	0.00
57.50	0.00	8.642	727.50	0.00
58.00	0.00	8.642	727.50	0.00
58.50	0.00	8.642	727.50	0.00
59.00	0.00	8.642	727.50	0.00
59.50	0.00	8.642	727.50	0.00
60.00	0.00	8.642	727.50	0.00
60.50	0.00	8.642	727.50	0.00
61.00	0.00	8.642	727.50	0.00
61.50	0.00	8.642	727.50	0.00
62.00	0.00	8.642	727.50	0.00
62.50	0.00	8.642	727.50	0.00
63.00	0.00	8.642	727.50	0.00
63.50	0.00	8.642	727.50	0.00
64.00	0.00	8.642	727.50	0.00
64.50	0.00	8.642	727.50	0.00
65.00	0.00	8.642	727.50	0.00
65.50	0.00	8.642	727.50	0.00
66.00	0.00	8.642	727.50	0.00
66.50	0.00	8.642	727.50	0.00
67.00	0.00	8.642	727.50	0.00
67.50	0.00	8.642	727.50	0.00
68.00	0.00	8.642	727.50	0.00
68.50	0.00	8.642	727.50	0.00
69.00	0.00	8.642	727.50	0.00
69.50	0.00	8.642	727.50	0.00
70.00	0.00	8.642	727.50	0.00
70.50	0.00	8.642	727.50	0.00
71.00	0.00	8.642	727.50	0.00
71.50	0.00	8.642	727.50	0.00
72.00	0.00	8.642	727.50	0.00
72.50	0.00	8.642	727.50	0.00
73.00	0.00	8.642	727.50	0.00
73.50	0.00	8.642	727.50	0.00
74.00	0.00	8.642	727.50	0.00
74.50	0.00	8.642	727.50	0.00
75.00	0.00	8.642	727.50	0.00
75.50	0.00	8.642	727.50	0.00
76.00	0.00	8.642	727.50	0.00
76.50	0.00	8.642	727.50	0.00
77.00	0.00	8.642	727.50	0.00
77.50	0.00	8.642	727.50	0.00

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	8.642	727.50	0.00
78.50	0.00	8.642	727.50	0.00
79.00	0.00	8.642	727.50	0.00
79.50	0.00	8.642	727.50	0.00
80.00	0.00	8.642	727.50	0.00
80.50	0.00	8.642	727.50	0.00
81.00	0.00	8.642	727.50	0.00
81.50	0.00	8.642	727.50	0.00
82.00	0.00	8.642	727.50	0.00
82.50	0.00	8.642	727.50	0.00
83.00	0.00	8.642	727.50	0.00
83.50	0.00	8.642	727.50	0.00
84.00	0.00	8.642	727.50	0.00
84.50	0.00	8.642	727.50	0.00
85.00	0.00	8.642	727.50	0.00
85.50	0.00	8.642	727.50	0.00
86.00	0.00	8.642	727.50	0.00
86.50	0.00	8.642	727.50	0.00
87.00	0.00	8.642	727.50	0.00
87.50	0.00	8.642	727.50	0.00
88.00	0.00	8.642	727.50	0.00
88.50	0.00	8.642	727.50	0.00
89.00	0.00	8.642	727.50	0.00
89.50	0.00	8.642	727.50	0.00
90.00	0.00	8.642	727.50	0.00
90.50	0.00	8.642	727.50	0.00
91.00	0.00	8.642	727.50	0.00
91.50	0.00	8.642	727.50	0.00
92.00	0.00	8.642	727.50	0.00
92.50	0.00	8.642	727.50	0.00
93.00	0.00	8.642	727.50	0.00
93.50	0.00	8.642	727.50	0.00
94.00	0.00	8.642	727.50	0.00
94.50	0.00	8.642	727.50	0.00
95.00	0.00	8.642	727.50	0.00
95.50	0.00	8.642	727.50	0.00
96.00	0.00	8.642	727.50	0.00
96.50	0.00	8.642	727.50	0.00
97.00	0.00	8.642	727.50	0.00
97.50	0.00	8.642	727.50	0.00
98.00	0.00	8.642	727.50	0.00
98.50	0.00	8.642	727.50	0.00
99.00	0.00	8.642	727.50	0.00
99.50	0.00	8.642	727.50	0.00
100.00	0.00	8.642	727.50	0.00
100.50	0.00	8.642	727.50	0.00
101.00	0.00	8.642	727.50	0.00
101.50	0.00	8.642	727.50	0.00
102.00	0.00	8.642	727.50	0.00
102.50	0.00	8.642	727.50	0.00
103.00	0.00	8.642	727.50	0.00
103.50	0.00	8.642	727.50	0.00

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	8.642	727.50	0.00
104.50	0.00	8.642	727.50	0.00
105.00	0.00	8.642	727.50	0.00
105.50	0.00	8.642	727.50	0.00
106.00	0.00	8.642	727.50	0.00
106.50	0.00	8.642	727.50	0.00
107.00	0.00	8.642	727.50	0.00
107.50	0.00	8.642	727.50	0.00
108.00	0.00	8.642	727.50	0.00
108.50	0.00	8.642	727.50	0.00
109.00	0.00	8.642	727.50	0.00
109.50	0.00	8.642	727.50	0.00
110.00	0.00	8.642	727.50	0.00
110.50	0.00	8.642	727.50	0.00
111.00	0.00	8.642	727.50	0.00
111.50	0.00	8.642	727.50	0.00
112.00	0.00	8.642	727.50	0.00
112.50	0.00	8.642	727.50	0.00
113.00	0.00	8.642	727.50	0.00
113.50	0.00	8.642	727.50	0.00
114.00	0.00	8.642	727.50	0.00
114.50	0.00	8.642	727.50	0.00
115.00	0.00	8.642	727.50	0.00
115.50	0.00	8.642	727.50	0.00
116.00	0.00	8.642	727.50	0.00
116.50	0.00	8.642	727.50	0.00
117.00	0.00	8.642	727.50	0.00
117.50	0.00	8.642	727.50	0.00
118.00	0.00	8.642	727.50	0.00
118.50	0.00	8.642	727.50	0.00
119.00	0.00	8.642	727.50	0.00
119.50	0.00	8.642	727.50	0.00
120.00	0.00	8.642	727.50	0.00
120.50	0.00	8.642	727.50	0.00
121.00	0.00	8.642	727.50	0.00
121.50	0.00	8.642	727.50	0.00
122.00	0.00	8.642	727.50	0.00
122.50	0.00	8.642	727.50	0.00
123.00	0.00	8.642	727.50	0.00
123.50	0.00	8.642	727.50	0.00
124.00	0.00	8.642	727.50	0.00
124.50	0.00	8.642	727.50	0.00
125.00	0.00	8.642	727.50	0.00
125.50	0.00	8.642	727.50	0.00
126.00	0.00	8.642	727.50	0.00
126.50	0.00	8.642	727.50	0.00
127.00	0.00	8.642	727.50	0.00
127.50	0.00	8.642	727.50	0.00
128.00	0.00	8.642	727.50	0.00
128.50	0.00	8.642	727.50	0.00
129.00	0.00	8.642	727.50	0.00
129.50	0.00	8.642	727.50	0.00

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	8.642	727.50	0.00
130.50	0.00	8.642	727.50	0.00
131.00	0.00	8.642	727.50	0.00
131.50	0.00	8.642	727.50	0.00
132.00	0.00	8.642	727.50	0.00
132.50	0.00	8.642	727.50	0.00
133.00	0.00	8.642	727.50	0.00
133.50	0.00	8.642	727.50	0.00
134.00	0.00	8.642	727.50	0.00
134.50	0.00	8.642	727.50	0.00
135.00	0.00	8.642	727.50	0.00
135.50	0.00	8.642	727.50	0.00
136.00	0.00	8.642	727.50	0.00
136.50	0.00	8.642	727.50	0.00
137.00	0.00	8.642	727.50	0.00
137.50	0.00	8.642	727.50	0.00
138.00	0.00	8.642	727.50	0.00
138.50	0.00	8.642	727.50	0.00
139.00	0.00	8.642	727.50	0.00
139.50	0.00	8.642	727.50	0.00
140.00	0.00	8.642	727.50	0.00
140.50	0.00	8.642	727.50	0.00
141.00	0.00	8.642	727.50	0.00
141.50	0.00	8.642	727.50	0.00
142.00	0.00	8.642	727.50	0.00
142.50	0.00	8.642	727.50	0.00
143.00	0.00	8.642	727.50	0.00
143.50	0.00	8.642	727.50	0.00
144.00	0.00	8.642	727.50	0.00
144.50	0.00	8.642	727.50	0.00
145.00	0.00	8.642	727.50	0.00
145.50	0.00	8.642	727.50	0.00
146.00	0.00	8.642	727.50	0.00
146.50	0.00	8.642	727.50	0.00
147.00	0.00	8.642	727.50	0.00
147.50	0.00	8.642	727.50	0.00
148.00	0.00	8.642	727.50	0.00
148.50	0.00	8.642	727.50	0.00
149.00	0.00	8.642	727.50	0.00
149.50	0.00	8.642	727.50	0.00
150.00	0.00	8.642	727.50	0.00
150.50	0.00	8.642	727.50	0.00
151.00	0.00	8.642	727.50	0.00
151.50	0.00	8.642	727.50	0.00
152.00	0.00	8.642	727.50	0.00
152.50	0.00	8.642	727.50	0.00
153.00	0.00	8.642	727.50	0.00
153.50	0.00	8.642	727.50	0.00
154.00	0.00	8.642	727.50	0.00
154.50	0.00	8.642	727.50	0.00
155.00	0.00	8.642	727.50	0.00
155.50	0.00	8.642	727.50	0.00

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	8.642	727.50	0.00
156.50	0.00	8.642	727.50	0.00
157.00	0.00	8.642	727.50	0.00
157.50	0.00	8.642	727.50	0.00
158.00	0.00	8.642	727.50	0.00
158.50	0.00	8.642	727.50	0.00
159.00	0.00	8.642	727.50	0.00
159.50	0.00	8.642	727.50	0.00
160.00	0.00	8.642	727.50	0.00
160.50	0.00	8.642	727.50	0.00
161.00	0.00	8.642	727.50	0.00
161.50	0.00	8.642	727.50	0.00
162.00	0.00	8.642	727.50	0.00
162.50	0.00	8.642	727.50	0.00
163.00	0.00	8.642	727.50	0.00
163.50	0.00	8.642	727.50	0.00
164.00	0.00	8.642	727.50	0.00
164.50	0.00	8.642	727.50	0.00
165.00	0.00	8.642	727.50	0.00
165.50	0.00	8.642	727.50	0.00
166.00	0.00	8.642	727.50	0.00
166.50	0.00	8.642	727.50	0.00
167.00	0.00	8.642	727.50	0.00
167.50	0.00	8.642	727.50	0.00
168.00	0.00	8.642	727.50	0.00
168.50	0.00	8.642	727.50	0.00
169.00	0.00	8.642	727.50	0.00
169.50	0.00	8.642	727.50	0.00
170.00	0.00	8.642	727.50	0.00
170.50	0.00	8.642	727.50	0.00
171.00	0.00	8.642	727.50	0.00
171.50	0.00	8.642	727.50	0.00
172.00	0.00	8.642	727.50	0.00
172.50	0.00	8.642	727.50	0.00
173.00	0.00	8.642	727.50	0.00
173.50	0.00	8.642	727.50	0.00
174.00	0.00	8.642	727.50	0.00
174.50	0.00	8.642	727.50	0.00
175.00	0.00	8.642	727.50	0.00
175.50	0.00	8.642	727.50	0.00
176.00	0.00	8.642	727.50	0.00
176.50	0.00	8.642	727.50	0.00
177.00	0.00	8.642	727.50	0.00
177.50	0.00	8.642	727.50	0.00
178.00	0.00	8.642	727.50	0.00
178.50	0.00	8.642	727.50	0.00
179.00	0.00	8.642	727.50	0.00
179.50	0.00	8.642	727.50	0.00
180.00	0.00	8.642	727.50	0.00
180.50	0.00	8.642	727.50	0.00
181.00	0.00	8.642	727.50	0.00
181.50	0.00	8.642	727.50	0.00

Hydrograph for Pond ST-06: ST-06 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	8.642	727.50	0.00
182.50	0.00	8.642	727.50	0.00
183.00	0.00	8.642	727.50	0.00
183.50	0.00	8.642	727.50	0.00
184.00	0.00	8.642	727.50	0.00
184.50	0.00	8.642	727.50	0.00
185.00	0.00	8.642	727.50	0.00
185.50	0.00	8.642	727.50	0.00
186.00	0.00	8.642	727.50	0.00
186.50	0.00	8.642	727.50	0.00
187.00	0.00	8.642	727.50	0.00
187.50	0.00	8.642	727.50	0.00
188.00	0.00	8.642	727.50	0.00
188.50	0.00	8.642	727.50	0.00
189.00	0.00	8.642	727.50	0.00
189.50	0.00	8.642	727.50	0.00
190.00	0.00	8.642	727.50	0.00
190.50	0.00	8.642	727.50	0.00
191.00	0.00	8.642	727.50	0.00
191.50	0.00	8.642	727.50	0.00
192.00	0.00	8.642	727.50	0.00
192.50	0.00	8.642	727.50	0.00
193.00	0.00	8.642	727.50	0.00
193.50	0.00	8.642	727.50	0.00
194.00	0.00	8.642	727.50	0.00
194.50	0.00	8.642	727.50	0.00
195.00	0.00	8.642	727.50	0.00
195.50	0.00	8.642	727.50	0.00
196.00	0.00	8.642	727.50	0.00
196.50	0.00	8.642	727.50	0.00
197.00	0.00	8.642	727.50	0.00
197.50	0.00	8.642	727.50	0.00
198.00	0.00	8.642	727.50	0.00
198.50	0.00	8.642	727.50	0.00
199.00	0.00	8.642	727.50	0.00
199.50	0.00	8.642	727.50	0.00
200.00	0.00	8.642	727.50	0.00

Summary for Pond ST-07: ST-07

Inflow Area = 43.600 ac, 1.50% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 37.70 cfs @ 14.07 hrs, Volume= 11.564 af
Outflow = 37.22 cfs @ 14.26 hrs, Volume= 9.120 af, Atten= 1%, Lag= 11.3 min
Primary = 37.22 cfs @ 14.26 hrs, Volume= 9.120 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 732.25' @ 14.26 hrs Surf.Area= 1.852 ac Storage= 2.913 af

Plug-Flow detention time= 142.2 min calculated for 9.120 af (79% of inflow)
Center-of-Mass det. time= 59.5 min (1,013.0 - 953.5)

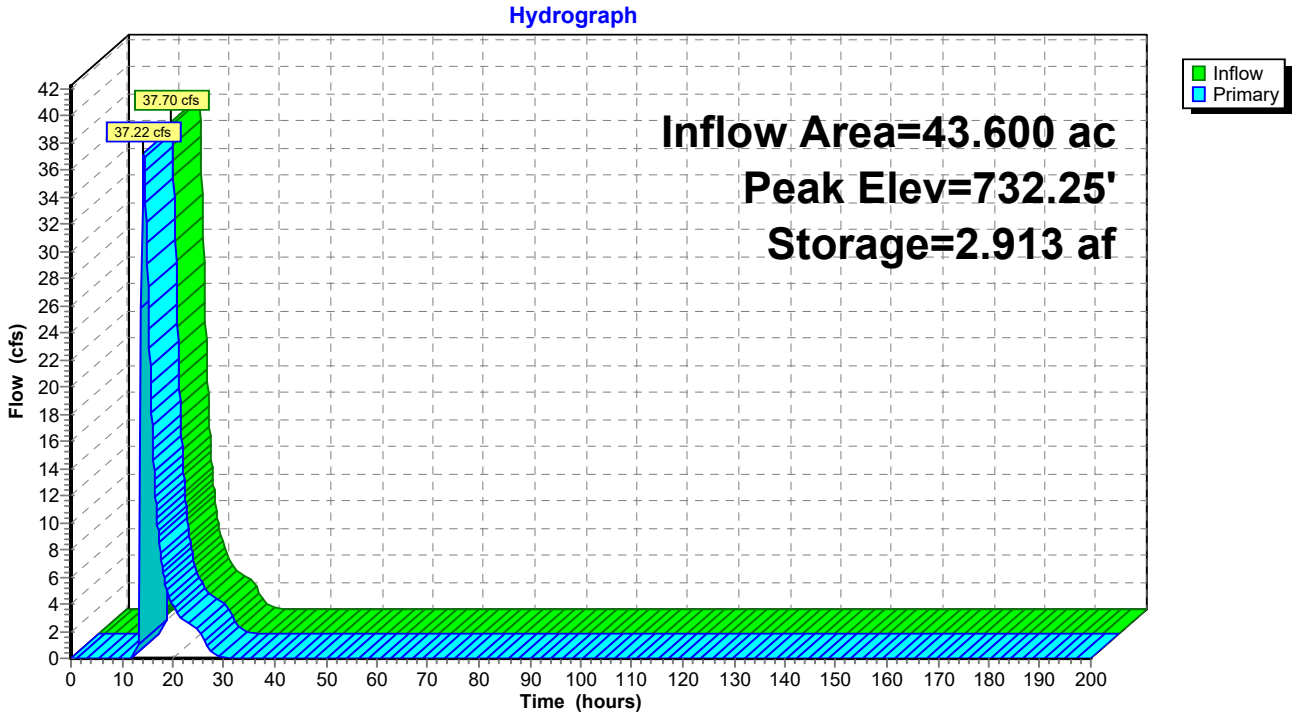
Volume	Invert	Avail.Storage	Storage Description
#1	730.50'	3.370 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
730.50	1.464	0.000	0.000
731.00	1.574	0.759	0.759
732.00	1.795	1.685	2.444
732.50	1.907	0.925	3.370

Device	Routing	Invert	Outlet Devices
#1	Primary	732.00'	**120.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=37.14 cfs @ 14.26 hrs HW=732.25' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 37.14 cfs @ 1.22 fps)

Pond ST-07: ST-07



Hydrograph for Pond ST-07: ST-07

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	730.50	0.00
0.50	0.00	0.000	730.50	0.00
1.00	0.00	0.000	730.50	0.00
1.50	0.00	0.000	730.50	0.00
2.00	0.00	0.000	730.50	0.00
2.50	0.00	0.000	730.50	0.00
3.00	0.00	0.000	730.50	0.00
3.50	0.00	0.000	730.50	0.00
4.00	0.00	0.000	730.50	0.00
4.50	0.00	0.000	730.50	0.00
5.00	0.00	0.000	730.50	0.00
5.50	0.00	0.000	730.50	0.00
6.00	0.00	0.000	730.50	0.00
6.50	0.00	0.000	730.50	0.00
7.00	0.00	0.000	730.50	0.00
7.50	0.00	0.000	730.50	0.00
8.00	0.00	0.000	730.50	0.00
8.50	0.01	0.000	730.50	0.00
9.00	0.05	0.001	730.50	0.00
9.50	0.13	0.005	730.50	0.00
10.00	0.28	0.013	730.51	0.00
10.50	0.51	0.029	730.52	0.00
11.00	0.84	0.057	730.54	0.00
11.50	1.34	0.101	730.57	0.00
12.00	2.36	0.174	730.61	0.00
12.50	6.71	0.343	730.73	0.00
13.00	17.94	0.830	731.04	0.00
13.50	31.66	1.865	731.66	0.00
14.00	**37.64**	**2.881**	**732.24**	**33.32**
14.50	**34.92**	**2.902**	**732.25**	**35.87**
15.00	27.32	2.844	732.22	29.04
15.50	19.94	2.772	732.18	21.53
16.00	15.02	2.716	732.15	16.21
16.50	11.56	2.672	732.12	12.48
17.00	9.14	2.639	732.11	9.84
17.50	7.41	2.613	732.09	7.97
18.00	6.17	2.593	732.08	6.58
18.50	5.29	2.578	732.07	5.62
19.00	4.61	2.565	732.07	4.87
19.50	4.11	2.556	732.06	4.31
20.00	3.72	2.549	732.06	3.90
20.50	3.39	2.542	732.05	3.54
21.00	3.11	2.536	732.05	3.23
21.50	2.90	2.531	732.05	3.00
22.00	2.74	2.528	732.05	2.82
22.50	2.60	2.525	732.04	2.67
23.00	2.48	2.523	732.04	2.54
23.50	2.37	2.520	732.04	2.42
24.00	2.27	2.518	732.04	2.32
24.50	2.17	2.516	732.04	2.23
25.00	2.00	2.513	732.04	2.10
25.50	1.66	2.507	732.03	1.86

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	1.22	2.497	732.03	1.48
26.50	0.81	2.487	732.02	1.06
27.00	0.51	2.478	732.02	0.74
27.50	0.32	2.468	732.01	0.53
28.00	0.20	2.460	732.01	0.36
28.50	0.12	2.455	732.01	0.24
29.00	0.08	2.451	732.00	0.15
29.50	0.05	2.448	732.00	0.10
30.00	0.03	2.447	732.00	0.06
30.50	0.02	2.446	732.00	0.04
31.00	0.01	2.445	732.00	0.02
31.50	0.01	2.445	732.00	0.01
32.00	0.00	2.444	732.00	0.01
32.50	0.00	2.444	732.00	0.00
33.00	0.00	2.444	732.00	0.00
33.50	0.00	2.444	732.00	0.00
34.00	0.00	2.444	732.00	0.00
34.50	0.00	2.444	732.00	0.00
35.00	0.00	2.444	732.00	0.00
35.50	0.00	2.444	732.00	0.00
36.00	0.00	2.444	732.00	0.00
36.50	0.00	2.444	732.00	0.00
37.00	0.00	2.444	732.00	0.00
37.50	0.00	2.444	732.00	0.00
38.00	0.00	2.444	732.00	0.00
38.50	0.00	2.444	732.00	0.00
39.00	0.00	2.444	732.00	0.00
39.50	0.00	2.444	732.00	0.00
40.00	0.00	2.444	732.00	0.00
40.50	0.00	2.444	732.00	0.00
41.00	0.00	2.444	732.00	0.00
41.50	0.00	2.444	732.00	0.00
42.00	0.00	2.444	732.00	0.00
42.50	0.00	2.444	732.00	0.00
43.00	0.00	2.444	732.00	0.00
43.50	0.00	2.444	732.00	0.00
44.00	0.00	2.444	732.00	0.00
44.50	0.00	2.444	732.00	0.00
45.00	0.00	2.444	732.00	0.00
45.50	0.00	2.444	732.00	0.00
46.00	0.00	2.444	732.00	0.00
46.50	0.00	2.444	732.00	0.00
47.00	0.00	2.444	732.00	0.00
47.50	0.00	2.444	732.00	0.00
48.00	0.00	2.444	732.00	0.00
48.50	0.00	2.444	732.00	0.00
49.00	0.00	2.444	732.00	0.00
49.50	0.00	2.444	732.00	0.00
50.00	0.00	2.444	732.00	0.00
50.50	0.00	2.444	732.00	0.00
51.00	0.00	2.444	732.00	0.00
51.50	0.00	2.444	732.00	0.00

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2.444	732.00	0.00
52.50	0.00	2.444	732.00	0.00
53.00	0.00	2.444	732.00	0.00
53.50	0.00	2.444	732.00	0.00
54.00	0.00	2.444	732.00	0.00
54.50	0.00	2.444	732.00	0.00
55.00	0.00	2.444	732.00	0.00
55.50	0.00	2.444	732.00	0.00
56.00	0.00	2.444	732.00	0.00
56.50	0.00	2.444	732.00	0.00
57.00	0.00	2.444	732.00	0.00
57.50	0.00	2.444	732.00	0.00
58.00	0.00	2.444	732.00	0.00
58.50	0.00	2.444	732.00	0.00
59.00	0.00	2.444	732.00	0.00
59.50	0.00	2.444	732.00	0.00
60.00	0.00	2.444	732.00	0.00
60.50	0.00	2.444	732.00	0.00
61.00	0.00	2.444	732.00	0.00
61.50	0.00	2.444	732.00	0.00
62.00	0.00	2.444	732.00	0.00
62.50	0.00	2.444	732.00	0.00
63.00	0.00	2.444	732.00	0.00
63.50	0.00	2.444	732.00	0.00
64.00	0.00	2.444	732.00	0.00
64.50	0.00	2.444	732.00	0.00
65.00	0.00	2.444	732.00	0.00
65.50	0.00	2.444	732.00	0.00
66.00	0.00	2.444	732.00	0.00
66.50	0.00	2.444	732.00	0.00
67.00	0.00	2.444	732.00	0.00
67.50	0.00	2.444	732.00	0.00
68.00	0.00	2.444	732.00	0.00
68.50	0.00	2.444	732.00	0.00
69.00	0.00	2.444	732.00	0.00
69.50	0.00	2.444	732.00	0.00
70.00	0.00	2.444	732.00	0.00
70.50	0.00	2.444	732.00	0.00
71.00	0.00	2.444	732.00	0.00
71.50	0.00	2.444	732.00	0.00
72.00	0.00	2.444	732.00	0.00
72.50	0.00	2.444	732.00	0.00
73.00	0.00	2.444	732.00	0.00
73.50	0.00	2.444	732.00	0.00
74.00	0.00	2.444	732.00	0.00
74.50	0.00	2.444	732.00	0.00
75.00	0.00	2.444	732.00	0.00
75.50	0.00	2.444	732.00	0.00
76.00	0.00	2.444	732.00	0.00
76.50	0.00	2.444	732.00	0.00
77.00	0.00	2.444	732.00	0.00
77.50	0.00	2.444	732.00	0.00

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	2.444	732.00	0.00
78.50	0.00	2.444	732.00	0.00
79.00	0.00	2.444	732.00	0.00
79.50	0.00	2.444	732.00	0.00
80.00	0.00	2.444	732.00	0.00
80.50	0.00	2.444	732.00	0.00
81.00	0.00	2.444	732.00	0.00
81.50	0.00	2.444	732.00	0.00
82.00	0.00	2.444	732.00	0.00
82.50	0.00	2.444	732.00	0.00
83.00	0.00	2.444	732.00	0.00
83.50	0.00	2.444	732.00	0.00
84.00	0.00	2.444	732.00	0.00
84.50	0.00	2.444	732.00	0.00
85.00	0.00	2.444	732.00	0.00
85.50	0.00	2.444	732.00	0.00
86.00	0.00	2.444	732.00	0.00
86.50	0.00	2.444	732.00	0.00
87.00	0.00	2.444	732.00	0.00
87.50	0.00	2.444	732.00	0.00
88.00	0.00	2.444	732.00	0.00
88.50	0.00	2.444	732.00	0.00
89.00	0.00	2.444	732.00	0.00
89.50	0.00	2.444	732.00	0.00
90.00	0.00	2.444	732.00	0.00
90.50	0.00	2.444	732.00	0.00
91.00	0.00	2.444	732.00	0.00
91.50	0.00	2.444	732.00	0.00
92.00	0.00	2.444	732.00	0.00
92.50	0.00	2.444	732.00	0.00
93.00	0.00	2.444	732.00	0.00
93.50	0.00	2.444	732.00	0.00
94.00	0.00	2.444	732.00	0.00
94.50	0.00	2.444	732.00	0.00
95.00	0.00	2.444	732.00	0.00
95.50	0.00	2.444	732.00	0.00
96.00	0.00	2.444	732.00	0.00
96.50	0.00	2.444	732.00	0.00
97.00	0.00	2.444	732.00	0.00
97.50	0.00	2.444	732.00	0.00
98.00	0.00	2.444	732.00	0.00
98.50	0.00	2.444	732.00	0.00
99.00	0.00	2.444	732.00	0.00
99.50	0.00	2.444	732.00	0.00
100.00	0.00	2.444	732.00	0.00
100.50	0.00	2.444	732.00	0.00
101.00	0.00	2.444	732.00	0.00
101.50	0.00	2.444	732.00	0.00
102.00	0.00	2.444	732.00	0.00
102.50	0.00	2.444	732.00	0.00
103.00	0.00	2.444	732.00	0.00
103.50	0.00	2.444	732.00	0.00

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	2.444	732.00	0.00
104.50	0.00	2.444	732.00	0.00
105.00	0.00	2.444	732.00	0.00
105.50	0.00	2.444	732.00	0.00
106.00	0.00	2.444	732.00	0.00
106.50	0.00	2.444	732.00	0.00
107.00	0.00	2.444	732.00	0.00
107.50	0.00	2.444	732.00	0.00
108.00	0.00	2.444	732.00	0.00
108.50	0.00	2.444	732.00	0.00
109.00	0.00	2.444	732.00	0.00
109.50	0.00	2.444	732.00	0.00
110.00	0.00	2.444	732.00	0.00
110.50	0.00	2.444	732.00	0.00
111.00	0.00	2.444	732.00	0.00
111.50	0.00	2.444	732.00	0.00
112.00	0.00	2.444	732.00	0.00
112.50	0.00	2.444	732.00	0.00
113.00	0.00	2.444	732.00	0.00
113.50	0.00	2.444	732.00	0.00
114.00	0.00	2.444	732.00	0.00
114.50	0.00	2.444	732.00	0.00
115.00	0.00	2.444	732.00	0.00
115.50	0.00	2.444	732.00	0.00
116.00	0.00	2.444	732.00	0.00
116.50	0.00	2.444	732.00	0.00
117.00	0.00	2.444	732.00	0.00
117.50	0.00	2.444	732.00	0.00
118.00	0.00	2.444	732.00	0.00
118.50	0.00	2.444	732.00	0.00
119.00	0.00	2.444	732.00	0.00
119.50	0.00	2.444	732.00	0.00
120.00	0.00	2.444	732.00	0.00
120.50	0.00	2.444	732.00	0.00
121.00	0.00	2.444	732.00	0.00
121.50	0.00	2.444	732.00	0.00
122.00	0.00	2.444	732.00	0.00
122.50	0.00	2.444	732.00	0.00
123.00	0.00	2.444	732.00	0.00
123.50	0.00	2.444	732.00	0.00
124.00	0.00	2.444	732.00	0.00
124.50	0.00	2.444	732.00	0.00
125.00	0.00	2.444	732.00	0.00
125.50	0.00	2.444	732.00	0.00
126.00	0.00	2.444	732.00	0.00
126.50	0.00	2.444	732.00	0.00
127.00	0.00	2.444	732.00	0.00
127.50	0.00	2.444	732.00	0.00
128.00	0.00	2.444	732.00	0.00
128.50	0.00	2.444	732.00	0.00
129.00	0.00	2.444	732.00	0.00
129.50	0.00	2.444	732.00	0.00

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	2.444	732.00	0.00
130.50	0.00	2.444	732.00	0.00
131.00	0.00	2.444	732.00	0.00
131.50	0.00	2.444	732.00	0.00
132.00	0.00	2.444	732.00	0.00
132.50	0.00	2.444	732.00	0.00
133.00	0.00	2.444	732.00	0.00
133.50	0.00	2.444	732.00	0.00
134.00	0.00	2.444	732.00	0.00
134.50	0.00	2.444	732.00	0.00
135.00	0.00	2.444	732.00	0.00
135.50	0.00	2.444	732.00	0.00
136.00	0.00	2.444	732.00	0.00
136.50	0.00	2.444	732.00	0.00
137.00	0.00	2.444	732.00	0.00
137.50	0.00	2.444	732.00	0.00
138.00	0.00	2.444	732.00	0.00
138.50	0.00	2.444	732.00	0.00
139.00	0.00	2.444	732.00	0.00
139.50	0.00	2.444	732.00	0.00
140.00	0.00	2.444	732.00	0.00
140.50	0.00	2.444	732.00	0.00
141.00	0.00	2.444	732.00	0.00
141.50	0.00	2.444	732.00	0.00
142.00	0.00	2.444	732.00	0.00
142.50	0.00	2.444	732.00	0.00
143.00	0.00	2.444	732.00	0.00
143.50	0.00	2.444	732.00	0.00
144.00	0.00	2.444	732.00	0.00
144.50	0.00	2.444	732.00	0.00
145.00	0.00	2.444	732.00	0.00
145.50	0.00	2.444	732.00	0.00
146.00	0.00	2.444	732.00	0.00
146.50	0.00	2.444	732.00	0.00
147.00	0.00	2.444	732.00	0.00
147.50	0.00	2.444	732.00	0.00
148.00	0.00	2.444	732.00	0.00
148.50	0.00	2.444	732.00	0.00
149.00	0.00	2.444	732.00	0.00
149.50	0.00	2.444	732.00	0.00
150.00	0.00	2.444	732.00	0.00
150.50	0.00	2.444	732.00	0.00
151.00	0.00	2.444	732.00	0.00
151.50	0.00	2.444	732.00	0.00
152.00	0.00	2.444	732.00	0.00
152.50	0.00	2.444	732.00	0.00
153.00	0.00	2.444	732.00	0.00
153.50	0.00	2.444	732.00	0.00
154.00	0.00	2.444	732.00	0.00
154.50	0.00	2.444	732.00	0.00
155.00	0.00	2.444	732.00	0.00
155.50	0.00	2.444	732.00	0.00

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	2.444	732.00	0.00
156.50	0.00	2.444	732.00	0.00
157.00	0.00	2.444	732.00	0.00
157.50	0.00	2.444	732.00	0.00
158.00	0.00	2.444	732.00	0.00
158.50	0.00	2.444	732.00	0.00
159.00	0.00	2.444	732.00	0.00
159.50	0.00	2.444	732.00	0.00
160.00	0.00	2.444	732.00	0.00
160.50	0.00	2.444	732.00	0.00
161.00	0.00	2.444	732.00	0.00
161.50	0.00	2.444	732.00	0.00
162.00	0.00	2.444	732.00	0.00
162.50	0.00	2.444	732.00	0.00
163.00	0.00	2.444	732.00	0.00
163.50	0.00	2.444	732.00	0.00
164.00	0.00	2.444	732.00	0.00
164.50	0.00	2.444	732.00	0.00
165.00	0.00	2.444	732.00	0.00
165.50	0.00	2.444	732.00	0.00
166.00	0.00	2.444	732.00	0.00
166.50	0.00	2.444	732.00	0.00
167.00	0.00	2.444	732.00	0.00
167.50	0.00	2.444	732.00	0.00
168.00	0.00	2.444	732.00	0.00
168.50	0.00	2.444	732.00	0.00
169.00	0.00	2.444	732.00	0.00
169.50	0.00	2.444	732.00	0.00
170.00	0.00	2.444	732.00	0.00
170.50	0.00	2.444	732.00	0.00
171.00	0.00	2.444	732.00	0.00
171.50	0.00	2.444	732.00	0.00
172.00	0.00	2.444	732.00	0.00
172.50	0.00	2.444	732.00	0.00
173.00	0.00	2.444	732.00	0.00
173.50	0.00	2.444	732.00	0.00
174.00	0.00	2.444	732.00	0.00
174.50	0.00	2.444	732.00	0.00
175.00	0.00	2.444	732.00	0.00
175.50	0.00	2.444	732.00	0.00
176.00	0.00	2.444	732.00	0.00
176.50	0.00	2.444	732.00	0.00
177.00	0.00	2.444	732.00	0.00
177.50	0.00	2.444	732.00	0.00
178.00	0.00	2.444	732.00	0.00
178.50	0.00	2.444	732.00	0.00
179.00	0.00	2.444	732.00	0.00
179.50	0.00	2.444	732.00	0.00
180.00	0.00	2.444	732.00	0.00
180.50	0.00	2.444	732.00	0.00
181.00	0.00	2.444	732.00	0.00
181.50	0.00	2.444	732.00	0.00

Hydrograph for Pond ST-07: ST-07 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	2.444	732.00	0.00
182.50	0.00	2.444	732.00	0.00
183.00	0.00	2.444	732.00	0.00
183.50	0.00	2.444	732.00	0.00
184.00	0.00	2.444	732.00	0.00
184.50	0.00	2.444	732.00	0.00
185.00	0.00	2.444	732.00	0.00
185.50	0.00	2.444	732.00	0.00
186.00	0.00	2.444	732.00	0.00
186.50	0.00	2.444	732.00	0.00
187.00	0.00	2.444	732.00	0.00
187.50	0.00	2.444	732.00	0.00
188.00	0.00	2.444	732.00	0.00
188.50	0.00	2.444	732.00	0.00
189.00	0.00	2.444	732.00	0.00
189.50	0.00	2.444	732.00	0.00
190.00	0.00	2.444	732.00	0.00
190.50	0.00	2.444	732.00	0.00
191.00	0.00	2.444	732.00	0.00
191.50	0.00	2.444	732.00	0.00
192.00	0.00	2.444	732.00	0.00
192.50	0.00	2.444	732.00	0.00
193.00	0.00	2.444	732.00	0.00
193.50	0.00	2.444	732.00	0.00
194.00	0.00	2.444	732.00	0.00
194.50	0.00	2.444	732.00	0.00
195.00	0.00	2.444	732.00	0.00
195.50	0.00	2.444	732.00	0.00
196.00	0.00	2.444	732.00	0.00
196.50	0.00	2.444	732.00	0.00
197.00	0.00	2.444	732.00	0.00
197.50	0.00	2.444	732.00	0.00
198.00	0.00	2.444	732.00	0.00
198.50	0.00	2.444	732.00	0.00
199.00	0.00	2.444	732.00	0.00
199.50	0.00	2.444	732.00	0.00
200.00	0.00	2.444	732.00	0.00

Summary for Pond ST-08: ST-08

Inflow Area = 34.556 ac, 1.74% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 35.81 cfs @ 13.63 hrs, Volume= 9.165 af
Outflow = 34.96 cfs @ 13.85 hrs, Volume= 7.063 af, Atten= 2%, Lag= 12.8 min
Primary = 34.96 cfs @ 13.85 hrs, Volume= 7.063 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 728.34' @ 13.85 hrs Surf.Area= 1.584 ac Storage= 2.487 af

Plug-Flow detention time= 143.1 min calculated for 7.060 af (77% of inflow)
Center-of-Mass det. time= 58.8 min (982.7 - 923.9)

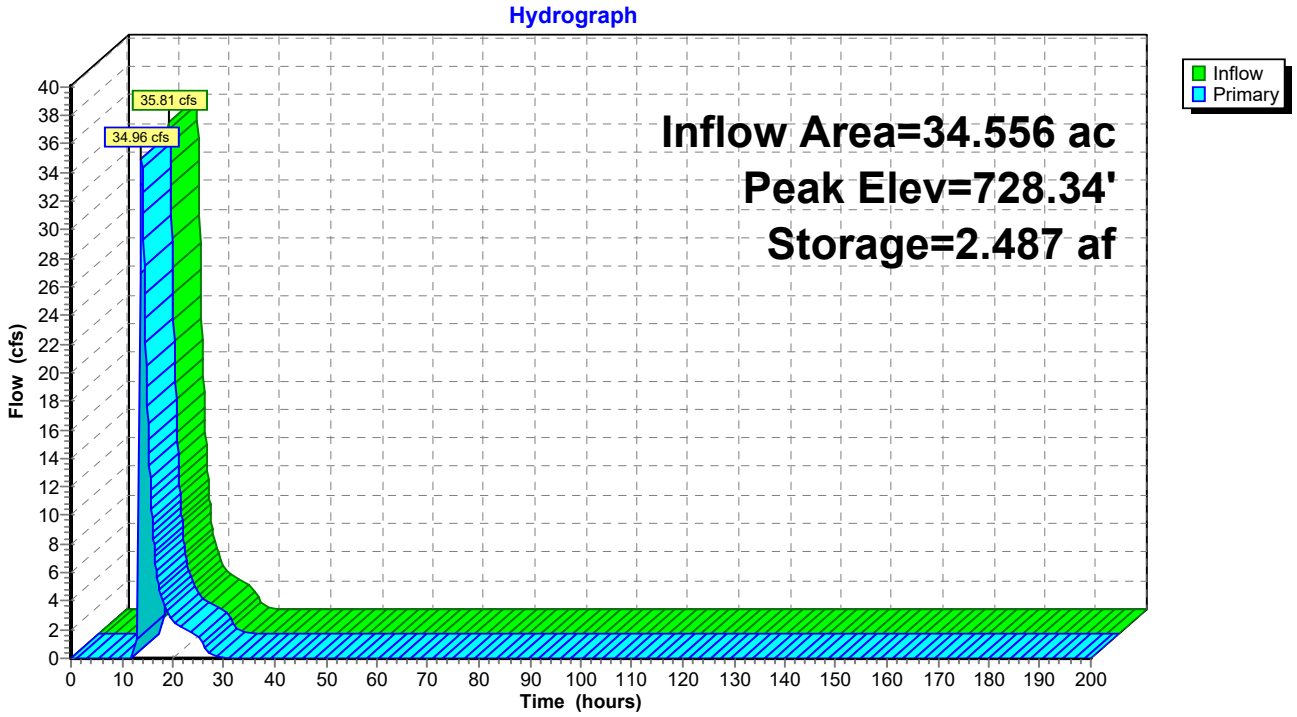
Volume	Invert	Avail.Storage	Storage Description
#1	726.60'	2.894 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
726.60	1.264	0.000	0.000
727.10	1.355	0.655	0.655
728.10	1.539	1.447	2.102
728.60	1.631	0.793	2.894

Device	Routing	Invert	Outlet Devices
#1	Primary	728.10'	**120.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=34.74 cfs @ 13.85 hrs HW=728.34' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 34.74 cfs @ 1.19 fps)

Pond ST-08: ST-08



Hydrograph for Pond ST-08: ST-08

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	726.60	0.00
0.50	0.00	0.000	726.60	0.00
1.00	0.00	0.000	726.60	0.00
1.50	0.00	0.000	726.60	0.00
2.00	0.00	0.000	726.60	0.00
2.50	0.00	0.000	726.60	0.00
3.00	0.00	0.000	726.60	0.00
3.50	0.00	0.000	726.60	0.00
4.00	0.00	0.000	726.60	0.00
4.50	0.00	0.000	726.60	0.00
5.00	0.00	0.000	726.60	0.00
5.50	0.00	0.000	726.60	0.00
6.00	0.00	0.000	726.60	0.00
6.50	0.00	0.000	726.60	0.00
7.00	0.00	0.000	726.60	0.00
7.50	0.00	0.000	726.60	0.00
8.00	0.00	0.000	726.60	0.00
8.50	0.02	0.000	726.60	0.00
9.00	0.07	0.002	726.60	0.00
9.50	0.18	0.007	726.61	0.00
10.00	0.35	0.017	726.61	0.00
10.50	0.59	0.036	726.63	0.00
11.00	0.93	0.067	726.65	0.00
11.50	1.46	0.116	726.69	0.00
12.00	2.63	0.196	726.75	0.00
12.50	8.97	0.405	726.91	0.00
13.00	24.44	1.076	727.39	0.00
13.50	**35.16**	**2.299**	**728.22**	**12.62**
14.00	**32.98**	**2.480**	**728.34**	**33.91**
14.50	23.75	2.417	728.30	25.55
15.00	16.27	2.348	728.26	17.69
15.50	11.59	2.298	728.22	12.60
16.00	8.57	2.262	728.20	9.30
16.50	6.63	2.236	728.18	7.15
17.00	5.35	2.218	728.17	5.74
17.50	4.47	2.204	728.16	4.74
18.00	3.85	2.194	728.16	4.07
18.50	3.40	2.186	728.15	3.58
19.00	3.03	2.180	728.15	3.18
19.50	2.77	2.174	728.15	2.87
20.00	2.57	2.171	728.14	2.65
20.50	2.41	2.168	728.14	2.47
21.00	2.27	2.166	728.14	2.33
21.50	2.16	2.163	728.14	2.21
22.00	2.05	2.161	728.14	2.10
22.50	1.95	2.159	728.14	2.00
23.00	1.87	2.157	728.13	1.91
23.50	1.79	2.155	728.13	1.83
24.00	1.72	2.154	728.13	1.76
24.50	1.64	2.152	728.13	1.69
25.00	1.43	2.149	728.13	1.54
25.50	1.04	2.142	728.13	1.23

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	0.63	2.134	728.12	0.83
26.50	0.35	2.124	728.11	0.58
27.00	0.20	2.116	728.11	0.37
27.50	0.11	2.110	728.11	0.22
28.00	0.06	2.107	728.10	0.13
28.50	0.03	2.105	728.10	0.07
29.00	0.02	2.103	728.10	0.04
29.50	0.01	2.103	728.10	0.02
30.00	0.00	2.102	728.10	0.01
30.50	0.00	2.102	728.10	0.01
31.00	0.00	2.102	728.10	0.00
31.50	0.00	2.102	728.10	0.00
32.00	0.00	2.102	728.10	0.00
32.50	0.00	2.102	728.10	0.00
33.00	0.00	2.102	728.10	0.00
33.50	0.00	2.102	728.10	0.00
34.00	0.00	2.102	728.10	0.00
34.50	0.00	2.102	728.10	0.00
35.00	0.00	2.102	728.10	0.00
35.50	0.00	2.102	728.10	0.00
36.00	0.00	2.102	728.10	0.00
36.50	0.00	2.102	728.10	0.00
37.00	0.00	2.102	728.10	0.00
37.50	0.00	2.102	728.10	0.00
38.00	0.00	2.102	728.10	0.00
38.50	0.00	2.102	728.10	0.00
39.00	0.00	2.102	728.10	0.00
39.50	0.00	2.102	728.10	0.00
40.00	0.00	2.102	728.10	0.00
40.50	0.00	2.102	728.10	0.00
41.00	0.00	2.102	728.10	0.00
41.50	0.00	2.102	728.10	0.00
42.00	0.00	2.102	728.10	0.00
42.50	0.00	2.102	728.10	0.00
43.00	0.00	2.102	728.10	0.00
43.50	0.00	2.102	728.10	0.00
44.00	0.00	2.102	728.10	0.00
44.50	0.00	2.102	728.10	0.00
45.00	0.00	2.102	728.10	0.00
45.50	0.00	2.102	728.10	0.00
46.00	0.00	2.102	728.10	0.00
46.50	0.00	2.102	728.10	0.00
47.00	0.00	2.102	728.10	0.00
47.50	0.00	2.102	728.10	0.00
48.00	0.00	2.102	728.10	0.00
48.50	0.00	2.102	728.10	0.00
49.00	0.00	2.102	728.10	0.00
49.50	0.00	2.102	728.10	0.00
50.00	0.00	2.102	728.10	0.00
50.50	0.00	2.102	728.10	0.00
51.00	0.00	2.102	728.10	0.00
51.50	0.00	2.102	728.10	0.00

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2.102	728.10	0.00
52.50	0.00	2.102	728.10	0.00
53.00	0.00	2.102	728.10	0.00
53.50	0.00	2.102	728.10	0.00
54.00	0.00	2.102	728.10	0.00
54.50	0.00	2.102	728.10	0.00
55.00	0.00	2.102	728.10	0.00
55.50	0.00	2.102	728.10	0.00
56.00	0.00	2.102	728.10	0.00
56.50	0.00	2.102	728.10	0.00
57.00	0.00	2.102	728.10	0.00
57.50	0.00	2.102	728.10	0.00
58.00	0.00	2.102	728.10	0.00
58.50	0.00	2.102	728.10	0.00
59.00	0.00	2.102	728.10	0.00
59.50	0.00	2.102	728.10	0.00
60.00	0.00	2.102	728.10	0.00
60.50	0.00	2.102	728.10	0.00
61.00	0.00	2.102	728.10	0.00
61.50	0.00	2.102	728.10	0.00
62.00	0.00	2.102	728.10	0.00
62.50	0.00	2.102	728.10	0.00
63.00	0.00	2.102	728.10	0.00
63.50	0.00	2.102	728.10	0.00
64.00	0.00	2.102	728.10	0.00
64.50	0.00	2.102	728.10	0.00
65.00	0.00	2.102	728.10	0.00
65.50	0.00	2.102	728.10	0.00
66.00	0.00	2.102	728.10	0.00
66.50	0.00	2.102	728.10	0.00
67.00	0.00	2.102	728.10	0.00
67.50	0.00	2.102	728.10	0.00
68.00	0.00	2.102	728.10	0.00
68.50	0.00	2.102	728.10	0.00
69.00	0.00	2.102	728.10	0.00
69.50	0.00	2.102	728.10	0.00
70.00	0.00	2.102	728.10	0.00
70.50	0.00	2.102	728.10	0.00
71.00	0.00	2.102	728.10	0.00
71.50	0.00	2.102	728.10	0.00
72.00	0.00	2.102	728.10	0.00
72.50	0.00	2.102	728.10	0.00
73.00	0.00	2.102	728.10	0.00
73.50	0.00	2.102	728.10	0.00
74.00	0.00	2.102	728.10	0.00
74.50	0.00	2.102	728.10	0.00
75.00	0.00	2.102	728.10	0.00
75.50	0.00	2.102	728.10	0.00
76.00	0.00	2.102	728.10	0.00
76.50	0.00	2.102	728.10	0.00
77.00	0.00	2.102	728.10	0.00
77.50	0.00	2.102	728.10	0.00

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	2.102	728.10	0.00
78.50	0.00	2.102	728.10	0.00
79.00	0.00	2.102	728.10	0.00
79.50	0.00	2.102	728.10	0.00
80.00	0.00	2.102	728.10	0.00
80.50	0.00	2.102	728.10	0.00
81.00	0.00	2.102	728.10	0.00
81.50	0.00	2.102	728.10	0.00
82.00	0.00	2.102	728.10	0.00
82.50	0.00	2.102	728.10	0.00
83.00	0.00	2.102	728.10	0.00
83.50	0.00	2.102	728.10	0.00
84.00	0.00	2.102	728.10	0.00
84.50	0.00	2.102	728.10	0.00
85.00	0.00	2.102	728.10	0.00
85.50	0.00	2.102	728.10	0.00
86.00	0.00	2.102	728.10	0.00
86.50	0.00	2.102	728.10	0.00
87.00	0.00	2.102	728.10	0.00
87.50	0.00	2.102	728.10	0.00
88.00	0.00	2.102	728.10	0.00
88.50	0.00	2.102	728.10	0.00
89.00	0.00	2.102	728.10	0.00
89.50	0.00	2.102	728.10	0.00
90.00	0.00	2.102	728.10	0.00
90.50	0.00	2.102	728.10	0.00
91.00	0.00	2.102	728.10	0.00
91.50	0.00	2.102	728.10	0.00
92.00	0.00	2.102	728.10	0.00
92.50	0.00	2.102	728.10	0.00
93.00	0.00	2.102	728.10	0.00
93.50	0.00	2.102	728.10	0.00
94.00	0.00	2.102	728.10	0.00
94.50	0.00	2.102	728.10	0.00
95.00	0.00	2.102	728.10	0.00
95.50	0.00	2.102	728.10	0.00
96.00	0.00	2.102	728.10	0.00
96.50	0.00	2.102	728.10	0.00
97.00	0.00	2.102	728.10	0.00
97.50	0.00	2.102	728.10	0.00
98.00	0.00	2.102	728.10	0.00
98.50	0.00	2.102	728.10	0.00
99.00	0.00	2.102	728.10	0.00
99.50	0.00	2.102	728.10	0.00
100.00	0.00	2.102	728.10	0.00
100.50	0.00	2.102	728.10	0.00
101.00	0.00	2.102	728.10	0.00
101.50	0.00	2.102	728.10	0.00
102.00	0.00	2.102	728.10	0.00
102.50	0.00	2.102	728.10	0.00
103.00	0.00	2.102	728.10	0.00
103.50	0.00	2.102	728.10	0.00

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	2.102	728.10	0.00
104.50	0.00	2.102	728.10	0.00
105.00	0.00	2.102	728.10	0.00
105.50	0.00	2.102	728.10	0.00
106.00	0.00	2.102	728.10	0.00
106.50	0.00	2.102	728.10	0.00
107.00	0.00	2.102	728.10	0.00
107.50	0.00	2.102	728.10	0.00
108.00	0.00	2.102	728.10	0.00
108.50	0.00	2.102	728.10	0.00
109.00	0.00	2.102	728.10	0.00
109.50	0.00	2.102	728.10	0.00
110.00	0.00	2.102	728.10	0.00
110.50	0.00	2.102	728.10	0.00
111.00	0.00	2.102	728.10	0.00
111.50	0.00	2.102	728.10	0.00
112.00	0.00	2.102	728.10	0.00
112.50	0.00	2.102	728.10	0.00
113.00	0.00	2.102	728.10	0.00
113.50	0.00	2.102	728.10	0.00
114.00	0.00	2.102	728.10	0.00
114.50	0.00	2.102	728.10	0.00
115.00	0.00	2.102	728.10	0.00
115.50	0.00	2.102	728.10	0.00
116.00	0.00	2.102	728.10	0.00
116.50	0.00	2.102	728.10	0.00
117.00	0.00	2.102	728.10	0.00
117.50	0.00	2.102	728.10	0.00
118.00	0.00	2.102	728.10	0.00
118.50	0.00	2.102	728.10	0.00
119.00	0.00	2.102	728.10	0.00
119.50	0.00	2.102	728.10	0.00
120.00	0.00	2.102	728.10	0.00
120.50	0.00	2.102	728.10	0.00
121.00	0.00	2.102	728.10	0.00
121.50	0.00	2.102	728.10	0.00
122.00	0.00	2.102	728.10	0.00
122.50	0.00	2.102	728.10	0.00
123.00	0.00	2.102	728.10	0.00
123.50	0.00	2.102	728.10	0.00
124.00	0.00	2.102	728.10	0.00
124.50	0.00	2.102	728.10	0.00
125.00	0.00	2.102	728.10	0.00
125.50	0.00	2.102	728.10	0.00
126.00	0.00	2.102	728.10	0.00
126.50	0.00	2.102	728.10	0.00
127.00	0.00	2.102	728.10	0.00
127.50	0.00	2.102	728.10	0.00
128.00	0.00	2.102	728.10	0.00
128.50	0.00	2.102	728.10	0.00
129.00	0.00	2.102	728.10	0.00
129.50	0.00	2.102	728.10	0.00

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	2.102	728.10	0.00
130.50	0.00	2.102	728.10	0.00
131.00	0.00	2.102	728.10	0.00
131.50	0.00	2.102	728.10	0.00
132.00	0.00	2.102	728.10	0.00
132.50	0.00	2.102	728.10	0.00
133.00	0.00	2.102	728.10	0.00
133.50	0.00	2.102	728.10	0.00
134.00	0.00	2.102	728.10	0.00
134.50	0.00	2.102	728.10	0.00
135.00	0.00	2.102	728.10	0.00
135.50	0.00	2.102	728.10	0.00
136.00	0.00	2.102	728.10	0.00
136.50	0.00	2.102	728.10	0.00
137.00	0.00	2.102	728.10	0.00
137.50	0.00	2.102	728.10	0.00
138.00	0.00	2.102	728.10	0.00
138.50	0.00	2.102	728.10	0.00
139.00	0.00	2.102	728.10	0.00
139.50	0.00	2.102	728.10	0.00
140.00	0.00	2.102	728.10	0.00
140.50	0.00	2.102	728.10	0.00
141.00	0.00	2.102	728.10	0.00
141.50	0.00	2.102	728.10	0.00
142.00	0.00	2.102	728.10	0.00
142.50	0.00	2.102	728.10	0.00
143.00	0.00	2.102	728.10	0.00
143.50	0.00	2.102	728.10	0.00
144.00	0.00	2.102	728.10	0.00
144.50	0.00	2.102	728.10	0.00
145.00	0.00	2.102	728.10	0.00
145.50	0.00	2.102	728.10	0.00
146.00	0.00	2.102	728.10	0.00
146.50	0.00	2.102	728.10	0.00
147.00	0.00	2.102	728.10	0.00
147.50	0.00	2.102	728.10	0.00
148.00	0.00	2.102	728.10	0.00
148.50	0.00	2.102	728.10	0.00
149.00	0.00	2.102	728.10	0.00
149.50	0.00	2.102	728.10	0.00
150.00	0.00	2.102	728.10	0.00
150.50	0.00	2.102	728.10	0.00
151.00	0.00	2.102	728.10	0.00
151.50	0.00	2.102	728.10	0.00
152.00	0.00	2.102	728.10	0.00
152.50	0.00	2.102	728.10	0.00
153.00	0.00	2.102	728.10	0.00
153.50	0.00	2.102	728.10	0.00
154.00	0.00	2.102	728.10	0.00
154.50	0.00	2.102	728.10	0.00
155.00	0.00	2.102	728.10	0.00
155.50	0.00	2.102	728.10	0.00

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	2.102	728.10	0.00
156.50	0.00	2.102	728.10	0.00
157.00	0.00	2.102	728.10	0.00
157.50	0.00	2.102	728.10	0.00
158.00	0.00	2.102	728.10	0.00
158.50	0.00	2.102	728.10	0.00
159.00	0.00	2.102	728.10	0.00
159.50	0.00	2.102	728.10	0.00
160.00	0.00	2.102	728.10	0.00
160.50	0.00	2.102	728.10	0.00
161.00	0.00	2.102	728.10	0.00
161.50	0.00	2.102	728.10	0.00
162.00	0.00	2.102	728.10	0.00
162.50	0.00	2.102	728.10	0.00
163.00	0.00	2.102	728.10	0.00
163.50	0.00	2.102	728.10	0.00
164.00	0.00	2.102	728.10	0.00
164.50	0.00	2.102	728.10	0.00
165.00	0.00	2.102	728.10	0.00
165.50	0.00	2.102	728.10	0.00
166.00	0.00	2.102	728.10	0.00
166.50	0.00	2.102	728.10	0.00
167.00	0.00	2.102	728.10	0.00
167.50	0.00	2.102	728.10	0.00
168.00	0.00	2.102	728.10	0.00
168.50	0.00	2.102	728.10	0.00
169.00	0.00	2.102	728.10	0.00
169.50	0.00	2.102	728.10	0.00
170.00	0.00	2.102	728.10	0.00
170.50	0.00	2.102	728.10	0.00
171.00	0.00	2.102	728.10	0.00
171.50	0.00	2.102	728.10	0.00
172.00	0.00	2.102	728.10	0.00
172.50	0.00	2.102	728.10	0.00
173.00	0.00	2.102	728.10	0.00
173.50	0.00	2.102	728.10	0.00
174.00	0.00	2.102	728.10	0.00
174.50	0.00	2.102	728.10	0.00
175.00	0.00	2.102	728.10	0.00
175.50	0.00	2.102	728.10	0.00
176.00	0.00	2.102	728.10	0.00
176.50	0.00	2.102	728.10	0.00
177.00	0.00	2.102	728.10	0.00
177.50	0.00	2.102	728.10	0.00
178.00	0.00	2.102	728.10	0.00
178.50	0.00	2.102	728.10	0.00
179.00	0.00	2.102	728.10	0.00
179.50	0.00	2.102	728.10	0.00
180.00	0.00	2.102	728.10	0.00
180.50	0.00	2.102	728.10	0.00
181.00	0.00	2.102	728.10	0.00
181.50	0.00	2.102	728.10	0.00

Hydrograph for Pond ST-08: ST-08 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	2.102	728.10	0.00
182.50	0.00	2.102	728.10	0.00
183.00	0.00	2.102	728.10	0.00
183.50	0.00	2.102	728.10	0.00
184.00	0.00	2.102	728.10	0.00
184.50	0.00	2.102	728.10	0.00
185.00	0.00	2.102	728.10	0.00
185.50	0.00	2.102	728.10	0.00
186.00	0.00	2.102	728.10	0.00
186.50	0.00	2.102	728.10	0.00
187.00	0.00	2.102	728.10	0.00
187.50	0.00	2.102	728.10	0.00
188.00	0.00	2.102	728.10	0.00
188.50	0.00	2.102	728.10	0.00
189.00	0.00	2.102	728.10	0.00
189.50	0.00	2.102	728.10	0.00
190.00	0.00	2.102	728.10	0.00
190.50	0.00	2.102	728.10	0.00
191.00	0.00	2.102	728.10	0.00
191.50	0.00	2.102	728.10	0.00
192.00	0.00	2.102	728.10	0.00
192.50	0.00	2.102	728.10	0.00
193.00	0.00	2.102	728.10	0.00
193.50	0.00	2.102	728.10	0.00
194.00	0.00	2.102	728.10	0.00
194.50	0.00	2.102	728.10	0.00
195.00	0.00	2.102	728.10	0.00
195.50	0.00	2.102	728.10	0.00
196.00	0.00	2.102	728.10	0.00
196.50	0.00	2.102	728.10	0.00
197.00	0.00	2.102	728.10	0.00
197.50	0.00	2.102	728.10	0.00
198.00	0.00	2.102	728.10	0.00
198.50	0.00	2.102	728.10	0.00
199.00	0.00	2.102	728.10	0.00
199.50	0.00	2.102	728.10	0.00
200.00	0.00	2.102	728.10	0.00

Summary for Pond ST-09-A: ST-09-A

Inflow Area = 11.765 ac, 1.98% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 16.18 cfs @ 13.13 hrs, Volume= 3.120 af
Outflow = 16.09 cfs @ 13.22 hrs, Volume= 2.494 af, Atten= 1%, Lag= 5.1 min
Primary = 16.09 cfs @ 13.22 hrs, Volume= 2.494 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 730.23' @ 13.22 hrs Surf.Area= 0.485 ac Storage= 0.738 af

Plug-Flow detention time= 122.5 min calculated for 2.494 af (80% of inflow)
Center-of-Mass det. time= 45.0 min (931.8 - 886.8)

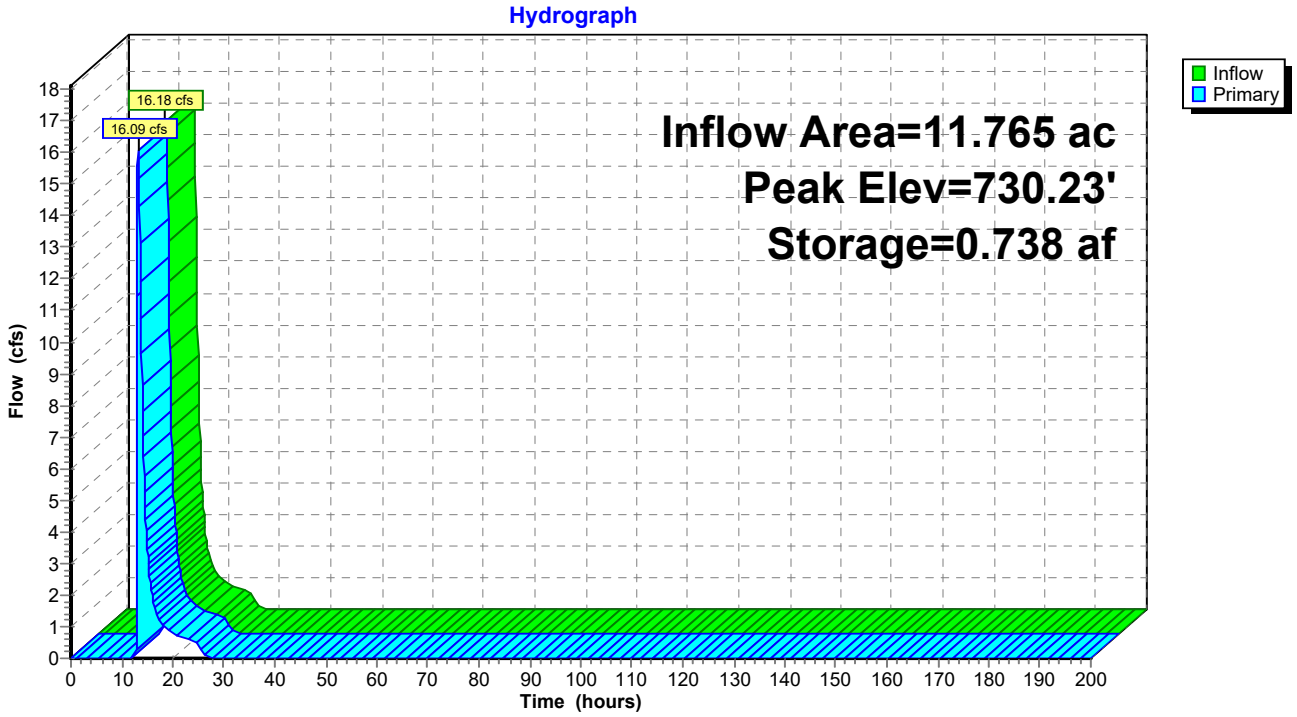
Volume	Invert	Avail.Storage	Storage Description
#1	728.50'	0.869 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
728.50	0.366	0.000	0.000
729.00	0.400	0.191	0.191
730.00	0.469	0.434	0.626
730.50	0.504	0.243	0.869

Device	Routing	Invert	Outlet Devices
#1	Primary	730.00'	**60.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=16.02 cfs @ 13.22 hrs HW=730.23' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 16.02 cfs @ 1.16 fps)

Pond ST-09-A: ST-09-A



Hydrograph for Pond ST-09-A: ST-09-A

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	728.50	0.00
0.50	0.00	0.000	728.50	0.00
1.00	0.00	0.000	728.50	0.00
1.50	0.00	0.000	728.50	0.00
2.00	0.00	0.000	728.50	0.00
2.50	0.00	0.000	728.50	0.00
3.00	0.00	0.000	728.50	0.00
3.50	0.00	0.000	728.50	0.00
4.00	0.00	0.000	728.50	0.00
4.50	0.00	0.000	728.50	0.00
5.00	0.00	0.000	728.50	0.00
5.50	0.00	0.000	728.50	0.00
6.00	0.00	0.000	728.50	0.00
6.50	0.00	0.000	728.50	0.00
7.00	0.00	0.000	728.50	0.00
7.50	0.00	0.000	728.50	0.00
8.00	0.00	0.000	728.50	0.00
8.50	0.02	0.000	728.50	0.00
9.00	0.06	0.002	728.50	0.00
9.50	0.12	0.005	728.51	0.00
10.00	0.20	0.012	728.53	0.00
10.50	0.32	0.022	728.56	0.00
11.00	0.49	0.038	728.60	0.00
11.50	0.77	0.064	728.67	0.00
12.00	1.60	0.108	728.78	0.00
12.50	7.41	0.267	729.17	0.00
13.00	**15.70**	**0.716**	**730.18**	**11.46**
13.50	**13.69**	**0.730**	**730.21**	**14.28**
14.00	8.02	0.701	730.15	8.67
14.50	4.85	0.679	730.11	5.25
15.00	3.20	0.666	730.08	3.44
15.50	2.32	0.658	730.07	2.48
16.00	1.83	0.653	730.06	1.93
16.50	1.51	0.650	730.05	1.58
17.00	1.29	0.647	730.04	1.34
17.50	1.16	0.646	730.04	1.19
18.00	1.06	0.645	730.04	1.09
18.50	0.98	0.643	730.04	1.00
19.00	0.91	0.643	730.03	0.93
19.50	0.85	0.642	730.03	0.87
20.00	0.80	0.641	730.03	0.82
20.50	0.76	0.640	730.03	0.77
21.00	0.72	0.640	730.03	0.73
21.50	0.69	0.639	730.03	0.70
22.00	0.65	0.639	730.03	0.66
22.50	0.63	0.639	730.03	0.64
23.00	0.60	0.638	730.03	0.61
23.50	0.58	0.638	730.02	0.59
24.00	0.56	0.638	730.02	0.57
24.50	0.52	0.637	730.02	0.54
25.00	0.35	0.636	730.02	0.41
25.50	0.17	0.632	730.01	0.26

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	0.07	0.629	730.01	0.13
26.50	0.03	0.627	730.00	0.06
27.00	0.01	0.627	730.00	0.02
27.50	0.00	0.626	730.00	0.01
28.00	0.00	0.626	730.00	0.00
28.50	0.00	0.626	730.00	0.00
29.00	0.00	0.626	730.00	0.00
29.50	0.00	0.626	730.00	0.00
30.00	0.00	0.626	730.00	0.00
30.50	0.00	0.626	730.00	0.00
31.00	0.00	0.626	730.00	0.00
31.50	0.00	0.626	730.00	0.00
32.00	0.00	0.626	730.00	0.00
32.50	0.00	0.626	730.00	0.00
33.00	0.00	0.626	730.00	0.00
33.50	0.00	0.626	730.00	0.00
34.00	0.00	0.626	730.00	0.00
34.50	0.00	0.626	730.00	0.00
35.00	0.00	0.626	730.00	0.00
35.50	0.00	0.626	730.00	0.00
36.00	0.00	0.626	730.00	0.00
36.50	0.00	0.626	730.00	0.00
37.00	0.00	0.626	730.00	0.00
37.50	0.00	0.626	730.00	0.00
38.00	0.00	0.626	730.00	0.00
38.50	0.00	0.626	730.00	0.00
39.00	0.00	0.626	730.00	0.00
39.50	0.00	0.626	730.00	0.00
40.00	0.00	0.626	730.00	0.00
40.50	0.00	0.626	730.00	0.00
41.00	0.00	0.626	730.00	0.00
41.50	0.00	0.626	730.00	0.00
42.00	0.00	0.626	730.00	0.00
42.50	0.00	0.626	730.00	0.00
43.00	0.00	0.626	730.00	0.00
43.50	0.00	0.626	730.00	0.00
44.00	0.00	0.626	730.00	0.00
44.50	0.00	0.626	730.00	0.00
45.00	0.00	0.626	730.00	0.00
45.50	0.00	0.626	730.00	0.00
46.00	0.00	0.626	730.00	0.00
46.50	0.00	0.626	730.00	0.00
47.00	0.00	0.626	730.00	0.00
47.50	0.00	0.626	730.00	0.00
48.00	0.00	0.626	730.00	0.00
48.50	0.00	0.626	730.00	0.00
49.00	0.00	0.626	730.00	0.00
49.50	0.00	0.626	730.00	0.00
50.00	0.00	0.626	730.00	0.00
50.50	0.00	0.626	730.00	0.00
51.00	0.00	0.626	730.00	0.00
51.50	0.00	0.626	730.00	0.00

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	0.626	730.00	0.00
52.50	0.00	0.626	730.00	0.00
53.00	0.00	0.626	730.00	0.00
53.50	0.00	0.626	730.00	0.00
54.00	0.00	0.626	730.00	0.00
54.50	0.00	0.626	730.00	0.00
55.00	0.00	0.626	730.00	0.00
55.50	0.00	0.626	730.00	0.00
56.00	0.00	0.626	730.00	0.00
56.50	0.00	0.626	730.00	0.00
57.00	0.00	0.626	730.00	0.00
57.50	0.00	0.626	730.00	0.00
58.00	0.00	0.626	730.00	0.00
58.50	0.00	0.626	730.00	0.00
59.00	0.00	0.626	730.00	0.00
59.50	0.00	0.626	730.00	0.00
60.00	0.00	0.626	730.00	0.00
60.50	0.00	0.626	730.00	0.00
61.00	0.00	0.626	730.00	0.00
61.50	0.00	0.626	730.00	0.00
62.00	0.00	0.626	730.00	0.00
62.50	0.00	0.626	730.00	0.00
63.00	0.00	0.626	730.00	0.00
63.50	0.00	0.626	730.00	0.00
64.00	0.00	0.626	730.00	0.00
64.50	0.00	0.626	730.00	0.00
65.00	0.00	0.626	730.00	0.00
65.50	0.00	0.626	730.00	0.00
66.00	0.00	0.626	730.00	0.00
66.50	0.00	0.626	730.00	0.00
67.00	0.00	0.626	730.00	0.00
67.50	0.00	0.626	730.00	0.00
68.00	0.00	0.626	730.00	0.00
68.50	0.00	0.626	730.00	0.00
69.00	0.00	0.626	730.00	0.00
69.50	0.00	0.626	730.00	0.00
70.00	0.00	0.626	730.00	0.00
70.50	0.00	0.626	730.00	0.00
71.00	0.00	0.626	730.00	0.00
71.50	0.00	0.626	730.00	0.00
72.00	0.00	0.626	730.00	0.00
72.50	0.00	0.626	730.00	0.00
73.00	0.00	0.626	730.00	0.00
73.50	0.00	0.626	730.00	0.00
74.00	0.00	0.626	730.00	0.00
74.50	0.00	0.626	730.00	0.00
75.00	0.00	0.626	730.00	0.00
75.50	0.00	0.626	730.00	0.00
76.00	0.00	0.626	730.00	0.00
76.50	0.00	0.626	730.00	0.00
77.00	0.00	0.626	730.00	0.00
77.50	0.00	0.626	730.00	0.00

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	0.626	730.00	0.00
78.50	0.00	0.626	730.00	0.00
79.00	0.00	0.626	730.00	0.00
79.50	0.00	0.626	730.00	0.00
80.00	0.00	0.626	730.00	0.00
80.50	0.00	0.626	730.00	0.00
81.00	0.00	0.626	730.00	0.00
81.50	0.00	0.626	730.00	0.00
82.00	0.00	0.626	730.00	0.00
82.50	0.00	0.626	730.00	0.00
83.00	0.00	0.626	730.00	0.00
83.50	0.00	0.626	730.00	0.00
84.00	0.00	0.626	730.00	0.00
84.50	0.00	0.626	730.00	0.00
85.00	0.00	0.626	730.00	0.00
85.50	0.00	0.626	730.00	0.00
86.00	0.00	0.626	730.00	0.00
86.50	0.00	0.626	730.00	0.00
87.00	0.00	0.626	730.00	0.00
87.50	0.00	0.626	730.00	0.00
88.00	0.00	0.626	730.00	0.00
88.50	0.00	0.626	730.00	0.00
89.00	0.00	0.626	730.00	0.00
89.50	0.00	0.626	730.00	0.00
90.00	0.00	0.626	730.00	0.00
90.50	0.00	0.626	730.00	0.00
91.00	0.00	0.626	730.00	0.00
91.50	0.00	0.626	730.00	0.00
92.00	0.00	0.626	730.00	0.00
92.50	0.00	0.626	730.00	0.00
93.00	0.00	0.626	730.00	0.00
93.50	0.00	0.626	730.00	0.00
94.00	0.00	0.626	730.00	0.00
94.50	0.00	0.626	730.00	0.00
95.00	0.00	0.626	730.00	0.00
95.50	0.00	0.626	730.00	0.00
96.00	0.00	0.626	730.00	0.00
96.50	0.00	0.626	730.00	0.00
97.00	0.00	0.626	730.00	0.00
97.50	0.00	0.626	730.00	0.00
98.00	0.00	0.626	730.00	0.00
98.50	0.00	0.626	730.00	0.00
99.00	0.00	0.626	730.00	0.00
99.50	0.00	0.626	730.00	0.00
100.00	0.00	0.626	730.00	0.00
100.50	0.00	0.626	730.00	0.00
101.00	0.00	0.626	730.00	0.00
101.50	0.00	0.626	730.00	0.00
102.00	0.00	0.626	730.00	0.00
102.50	0.00	0.626	730.00	0.00
103.00	0.00	0.626	730.00	0.00
103.50	0.00	0.626	730.00	0.00

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	0.626	730.00	0.00
104.50	0.00	0.626	730.00	0.00
105.00	0.00	0.626	730.00	0.00
105.50	0.00	0.626	730.00	0.00
106.00	0.00	0.626	730.00	0.00
106.50	0.00	0.626	730.00	0.00
107.00	0.00	0.626	730.00	0.00
107.50	0.00	0.626	730.00	0.00
108.00	0.00	0.626	730.00	0.00
108.50	0.00	0.626	730.00	0.00
109.00	0.00	0.626	730.00	0.00
109.50	0.00	0.626	730.00	0.00
110.00	0.00	0.626	730.00	0.00
110.50	0.00	0.626	730.00	0.00
111.00	0.00	0.626	730.00	0.00
111.50	0.00	0.626	730.00	0.00
112.00	0.00	0.626	730.00	0.00
112.50	0.00	0.626	730.00	0.00
113.00	0.00	0.626	730.00	0.00
113.50	0.00	0.626	730.00	0.00
114.00	0.00	0.626	730.00	0.00
114.50	0.00	0.626	730.00	0.00
115.00	0.00	0.626	730.00	0.00
115.50	0.00	0.626	730.00	0.00
116.00	0.00	0.626	730.00	0.00
116.50	0.00	0.626	730.00	0.00
117.00	0.00	0.626	730.00	0.00
117.50	0.00	0.626	730.00	0.00
118.00	0.00	0.626	730.00	0.00
118.50	0.00	0.626	730.00	0.00
119.00	0.00	0.626	730.00	0.00
119.50	0.00	0.626	730.00	0.00
120.00	0.00	0.626	730.00	0.00
120.50	0.00	0.626	730.00	0.00
121.00	0.00	0.626	730.00	0.00
121.50	0.00	0.626	730.00	0.00
122.00	0.00	0.626	730.00	0.00
122.50	0.00	0.626	730.00	0.00
123.00	0.00	0.626	730.00	0.00
123.50	0.00	0.626	730.00	0.00
124.00	0.00	0.626	730.00	0.00
124.50	0.00	0.626	730.00	0.00
125.00	0.00	0.626	730.00	0.00
125.50	0.00	0.626	730.00	0.00
126.00	0.00	0.626	730.00	0.00
126.50	0.00	0.626	730.00	0.00
127.00	0.00	0.626	730.00	0.00
127.50	0.00	0.626	730.00	0.00
128.00	0.00	0.626	730.00	0.00
128.50	0.00	0.626	730.00	0.00
129.00	0.00	0.626	730.00	0.00
129.50	0.00	0.626	730.00	0.00

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	0.626	730.00	0.00
130.50	0.00	0.626	730.00	0.00
131.00	0.00	0.626	730.00	0.00
131.50	0.00	0.626	730.00	0.00
132.00	0.00	0.626	730.00	0.00
132.50	0.00	0.626	730.00	0.00
133.00	0.00	0.626	730.00	0.00
133.50	0.00	0.626	730.00	0.00
134.00	0.00	0.626	730.00	0.00
134.50	0.00	0.626	730.00	0.00
135.00	0.00	0.626	730.00	0.00
135.50	0.00	0.626	730.00	0.00
136.00	0.00	0.626	730.00	0.00
136.50	0.00	0.626	730.00	0.00
137.00	0.00	0.626	730.00	0.00
137.50	0.00	0.626	730.00	0.00
138.00	0.00	0.626	730.00	0.00
138.50	0.00	0.626	730.00	0.00
139.00	0.00	0.626	730.00	0.00
139.50	0.00	0.626	730.00	0.00
140.00	0.00	0.626	730.00	0.00
140.50	0.00	0.626	730.00	0.00
141.00	0.00	0.626	730.00	0.00
141.50	0.00	0.626	730.00	0.00
142.00	0.00	0.626	730.00	0.00
142.50	0.00	0.626	730.00	0.00
143.00	0.00	0.626	730.00	0.00
143.50	0.00	0.626	730.00	0.00
144.00	0.00	0.626	730.00	0.00
144.50	0.00	0.626	730.00	0.00
145.00	0.00	0.626	730.00	0.00
145.50	0.00	0.626	730.00	0.00
146.00	0.00	0.626	730.00	0.00
146.50	0.00	0.626	730.00	0.00
147.00	0.00	0.626	730.00	0.00
147.50	0.00	0.626	730.00	0.00
148.00	0.00	0.626	730.00	0.00
148.50	0.00	0.626	730.00	0.00
149.00	0.00	0.626	730.00	0.00
149.50	0.00	0.626	730.00	0.00
150.00	0.00	0.626	730.00	0.00
150.50	0.00	0.626	730.00	0.00
151.00	0.00	0.626	730.00	0.00
151.50	0.00	0.626	730.00	0.00
152.00	0.00	0.626	730.00	0.00
152.50	0.00	0.626	730.00	0.00
153.00	0.00	0.626	730.00	0.00
153.50	0.00	0.626	730.00	0.00
154.00	0.00	0.626	730.00	0.00
154.50	0.00	0.626	730.00	0.00
155.00	0.00	0.626	730.00	0.00
155.50	0.00	0.626	730.00	0.00

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	0.626	730.00	0.00
156.50	0.00	0.626	730.00	0.00
157.00	0.00	0.626	730.00	0.00
157.50	0.00	0.626	730.00	0.00
158.00	0.00	0.626	730.00	0.00
158.50	0.00	0.626	730.00	0.00
159.00	0.00	0.626	730.00	0.00
159.50	0.00	0.626	730.00	0.00
160.00	0.00	0.626	730.00	0.00
160.50	0.00	0.626	730.00	0.00
161.00	0.00	0.626	730.00	0.00
161.50	0.00	0.626	730.00	0.00
162.00	0.00	0.626	730.00	0.00
162.50	0.00	0.626	730.00	0.00
163.00	0.00	0.626	730.00	0.00
163.50	0.00	0.626	730.00	0.00
164.00	0.00	0.626	730.00	0.00
164.50	0.00	0.626	730.00	0.00
165.00	0.00	0.626	730.00	0.00
165.50	0.00	0.626	730.00	0.00
166.00	0.00	0.626	730.00	0.00
166.50	0.00	0.626	730.00	0.00
167.00	0.00	0.626	730.00	0.00
167.50	0.00	0.626	730.00	0.00
168.00	0.00	0.626	730.00	0.00
168.50	0.00	0.626	730.00	0.00
169.00	0.00	0.626	730.00	0.00
169.50	0.00	0.626	730.00	0.00
170.00	0.00	0.626	730.00	0.00
170.50	0.00	0.626	730.00	0.00
171.00	0.00	0.626	730.00	0.00
171.50	0.00	0.626	730.00	0.00
172.00	0.00	0.626	730.00	0.00
172.50	0.00	0.626	730.00	0.00
173.00	0.00	0.626	730.00	0.00
173.50	0.00	0.626	730.00	0.00
174.00	0.00	0.626	730.00	0.00
174.50	0.00	0.626	730.00	0.00
175.00	0.00	0.626	730.00	0.00
175.50	0.00	0.626	730.00	0.00
176.00	0.00	0.626	730.00	0.00
176.50	0.00	0.626	730.00	0.00
177.00	0.00	0.626	730.00	0.00
177.50	0.00	0.626	730.00	0.00
178.00	0.00	0.626	730.00	0.00
178.50	0.00	0.626	730.00	0.00
179.00	0.00	0.626	730.00	0.00
179.50	0.00	0.626	730.00	0.00
180.00	0.00	0.626	730.00	0.00
180.50	0.00	0.626	730.00	0.00
181.00	0.00	0.626	730.00	0.00
181.50	0.00	0.626	730.00	0.00

Hydrograph for Pond ST-09-A: ST-09-A (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	0.626	730.00	0.00
182.50	0.00	0.626	730.00	0.00
183.00	0.00	0.626	730.00	0.00
183.50	0.00	0.626	730.00	0.00
184.00	0.00	0.626	730.00	0.00
184.50	0.00	0.626	730.00	0.00
185.00	0.00	0.626	730.00	0.00
185.50	0.00	0.626	730.00	0.00
186.00	0.00	0.626	730.00	0.00
186.50	0.00	0.626	730.00	0.00
187.00	0.00	0.626	730.00	0.00
187.50	0.00	0.626	730.00	0.00
188.00	0.00	0.626	730.00	0.00
188.50	0.00	0.626	730.00	0.00
189.00	0.00	0.626	730.00	0.00
189.50	0.00	0.626	730.00	0.00
190.00	0.00	0.626	730.00	0.00
190.50	0.00	0.626	730.00	0.00
191.00	0.00	0.626	730.00	0.00
191.50	0.00	0.626	730.00	0.00
192.00	0.00	0.626	730.00	0.00
192.50	0.00	0.626	730.00	0.00
193.00	0.00	0.626	730.00	0.00
193.50	0.00	0.626	730.00	0.00
194.00	0.00	0.626	730.00	0.00
194.50	0.00	0.626	730.00	0.00
195.00	0.00	0.626	730.00	0.00
195.50	0.00	0.626	730.00	0.00
196.00	0.00	0.626	730.00	0.00
196.50	0.00	0.626	730.00	0.00
197.00	0.00	0.626	730.00	0.00
197.50	0.00	0.626	730.00	0.00
198.00	0.00	0.626	730.00	0.00
198.50	0.00	0.626	730.00	0.00
199.00	0.00	0.626	730.00	0.00
199.50	0.00	0.626	730.00	0.00
200.00	0.00	0.626	730.00	0.00

Summary for Pond ST-09-B: ST-09-B

Inflow Area = 13.471 ac, 2.38% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 20.06 cfs @ 13.00 hrs, Volume= 3.573 af
Outflow = 19.86 cfs @ 13.10 hrs, Volume= 2.818 af, Atten= 1%, Lag= 5.9 min
Primary = 19.86 cfs @ 13.10 hrs, Volume= 2.818 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 730.94' @ 13.10 hrs Surf.Area= 0.594 ac Storage= 0.897 af

Plug-Flow detention time= 125.7 min calculated for 2.817 af (79% of inflow)
Center-of-Mass det. time= 46.6 min (923.6 - 877.0)

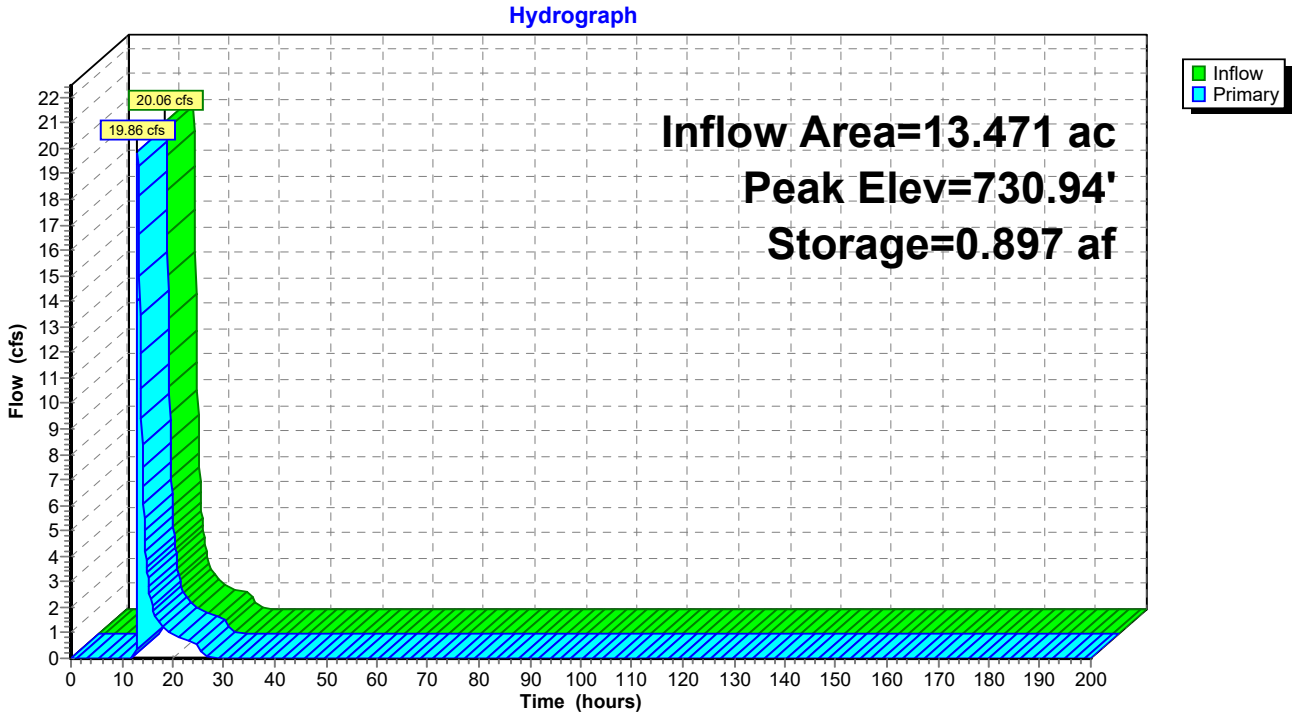
Volume	Invert	Avail.Storage	Storage Description
#1	729.20'	1.052 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
729.20	0.434	0.000	0.000
729.70	0.480	0.228	0.228
730.70	0.572	0.526	0.755
731.20	0.619	0.298	1.052

Device	Routing	Invert	Outlet Devices
#1	Primary	730.70'	**70.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=19.84 cfs @ 13.10 hrs HW=730.94' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 19.84 cfs @ 1.19 fps)

Pond ST-09-B: ST-09-B



Hydrograph for Pond ST-09-B: ST-09-B

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	729.20	0.00
0.50	0.00	0.000	729.20	0.00
1.00	0.00	0.000	729.20	0.00
1.50	0.00	0.000	729.20	0.00
2.00	0.00	0.000	729.20	0.00
2.50	0.00	0.000	729.20	0.00
3.00	0.00	0.000	729.20	0.00
3.50	0.00	0.000	729.20	0.00
4.00	0.00	0.000	729.20	0.00
4.50	0.00	0.000	729.20	0.00
5.00	0.00	0.000	729.20	0.00
5.50	0.00	0.000	729.20	0.00
6.00	0.00	0.000	729.20	0.00
6.50	0.00	0.000	729.20	0.00
7.00	0.00	0.000	729.20	0.00
7.50	0.00	0.000	729.20	0.00
8.00	0.00	0.000	729.20	0.00
8.50	0.03	0.001	729.20	0.00
9.00	0.08	0.003	729.21	0.00
9.50	0.15	0.007	729.22	0.00
10.00	0.26	0.016	729.23	0.00
10.50	0.40	0.029	729.26	0.00
11.00	0.62	0.050	729.31	0.00
11.50	0.99	0.083	729.38	0.00
12.00	2.26	0.142	729.51	0.00
12.50	11.65	0.389	730.01	0.00
13.00	**20.06**	**0.895**	**730.94**	**19.36**
13.50	13.99	**0.873**	**730.90**	**15.00**
14.00	7.62	0.835	730.84	8.36
14.50	4.57	0.812	730.80	5.00
15.00	3.09	0.798	730.77	3.35
15.50	2.33	0.790	730.76	2.47
16.00	1.88	0.785	730.75	1.98
16.50	1.59	0.782	730.75	1.65
17.00	1.41	0.779	730.74	1.45
17.50	1.28	0.778	730.74	1.32
18.00	1.18	0.776	730.74	1.21
18.50	1.09	0.775	730.73	1.12
19.00	1.02	0.774	730.73	1.04
19.50	0.95	0.773	730.73	0.97
20.00	0.90	0.772	730.73	0.92
20.50	0.85	0.772	730.73	0.87
21.00	0.81	0.771	730.73	0.82
21.50	0.77	0.771	730.73	0.78
22.00	0.74	0.770	730.73	0.75
22.50	0.71	0.770	730.73	0.72
23.00	0.68	0.769	730.72	0.69
23.50	0.66	0.769	730.72	0.66
24.00	0.63	0.769	730.72	0.64
24.50	0.57	0.768	730.72	0.60
25.00	0.34	0.766	730.72	0.44
25.50	0.13	0.761	730.71	0.25

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	0.05	0.757	730.70	0.11
26.50	0.02	0.756	730.70	0.04
27.00	0.01	0.755	730.70	0.02
27.50	0.00	0.755	730.70	0.01
28.00	0.00	0.755	730.70	0.00
28.50	0.00	0.755	730.70	0.00
29.00	0.00	0.755	730.70	0.00
29.50	0.00	0.755	730.70	0.00
30.00	0.00	0.755	730.70	0.00
30.50	0.00	0.755	730.70	0.00
31.00	0.00	0.755	730.70	0.00
31.50	0.00	0.755	730.70	0.00
32.00	0.00	0.755	730.70	0.00
32.50	0.00	0.755	730.70	0.00
33.00	0.00	0.755	730.70	0.00
33.50	0.00	0.755	730.70	0.00
34.00	0.00	0.755	730.70	0.00
34.50	0.00	0.755	730.70	0.00
35.00	0.00	0.755	730.70	0.00
35.50	0.00	0.755	730.70	0.00
36.00	0.00	0.755	730.70	0.00
36.50	0.00	0.755	730.70	0.00
37.00	0.00	0.755	730.70	0.00
37.50	0.00	0.755	730.70	0.00
38.00	0.00	0.755	730.70	0.00
38.50	0.00	0.755	730.70	0.00
39.00	0.00	0.755	730.70	0.00
39.50	0.00	0.755	730.70	0.00
40.00	0.00	0.755	730.70	0.00
40.50	0.00	0.755	730.70	0.00
41.00	0.00	0.755	730.70	0.00
41.50	0.00	0.755	730.70	0.00
42.00	0.00	0.755	730.70	0.00
42.50	0.00	0.755	730.70	0.00
43.00	0.00	0.755	730.70	0.00
43.50	0.00	0.755	730.70	0.00
44.00	0.00	0.755	730.70	0.00
44.50	0.00	0.755	730.70	0.00
45.00	0.00	0.755	730.70	0.00
45.50	0.00	0.755	730.70	0.00
46.00	0.00	0.755	730.70	0.00
46.50	0.00	0.755	730.70	0.00
47.00	0.00	0.755	730.70	0.00
47.50	0.00	0.755	730.70	0.00
48.00	0.00	0.755	730.70	0.00
48.50	0.00	0.755	730.70	0.00
49.00	0.00	0.755	730.70	0.00
49.50	0.00	0.755	730.70	0.00
50.00	0.00	0.755	730.70	0.00
50.50	0.00	0.755	730.70	0.00
51.00	0.00	0.755	730.70	0.00
51.50	0.00	0.755	730.70	0.00

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	0.755	730.70	0.00
52.50	0.00	0.755	730.70	0.00
53.00	0.00	0.755	730.70	0.00
53.50	0.00	0.755	730.70	0.00
54.00	0.00	0.755	730.70	0.00
54.50	0.00	0.755	730.70	0.00
55.00	0.00	0.755	730.70	0.00
55.50	0.00	0.755	730.70	0.00
56.00	0.00	0.755	730.70	0.00
56.50	0.00	0.755	730.70	0.00
57.00	0.00	0.755	730.70	0.00
57.50	0.00	0.755	730.70	0.00
58.00	0.00	0.755	730.70	0.00
58.50	0.00	0.755	730.70	0.00
59.00	0.00	0.755	730.70	0.00
59.50	0.00	0.755	730.70	0.00
60.00	0.00	0.755	730.70	0.00
60.50	0.00	0.755	730.70	0.00
61.00	0.00	0.755	730.70	0.00
61.50	0.00	0.755	730.70	0.00
62.00	0.00	0.755	730.70	0.00
62.50	0.00	0.755	730.70	0.00
63.00	0.00	0.755	730.70	0.00
63.50	0.00	0.755	730.70	0.00
64.00	0.00	0.755	730.70	0.00
64.50	0.00	0.755	730.70	0.00
65.00	0.00	0.755	730.70	0.00
65.50	0.00	0.755	730.70	0.00
66.00	0.00	0.755	730.70	0.00
66.50	0.00	0.755	730.70	0.00
67.00	0.00	0.755	730.70	0.00
67.50	0.00	0.755	730.70	0.00
68.00	0.00	0.755	730.70	0.00
68.50	0.00	0.755	730.70	0.00
69.00	0.00	0.755	730.70	0.00
69.50	0.00	0.755	730.70	0.00
70.00	0.00	0.755	730.70	0.00
70.50	0.00	0.755	730.70	0.00
71.00	0.00	0.755	730.70	0.00
71.50	0.00	0.755	730.70	0.00
72.00	0.00	0.755	730.70	0.00
72.50	0.00	0.755	730.70	0.00
73.00	0.00	0.755	730.70	0.00
73.50	0.00	0.755	730.70	0.00
74.00	0.00	0.755	730.70	0.00
74.50	0.00	0.755	730.70	0.00
75.00	0.00	0.755	730.70	0.00
75.50	0.00	0.755	730.70	0.00
76.00	0.00	0.755	730.70	0.00
76.50	0.00	0.755	730.70	0.00
77.00	0.00	0.755	730.70	0.00
77.50	0.00	0.755	730.70	0.00

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	0.755	730.70	0.00
78.50	0.00	0.755	730.70	0.00
79.00	0.00	0.755	730.70	0.00
79.50	0.00	0.755	730.70	0.00
80.00	0.00	0.755	730.70	0.00
80.50	0.00	0.755	730.70	0.00
81.00	0.00	0.755	730.70	0.00
81.50	0.00	0.755	730.70	0.00
82.00	0.00	0.755	730.70	0.00
82.50	0.00	0.755	730.70	0.00
83.00	0.00	0.755	730.70	0.00
83.50	0.00	0.755	730.70	0.00
84.00	0.00	0.755	730.70	0.00
84.50	0.00	0.755	730.70	0.00
85.00	0.00	0.755	730.70	0.00
85.50	0.00	0.755	730.70	0.00
86.00	0.00	0.755	730.70	0.00
86.50	0.00	0.755	730.70	0.00
87.00	0.00	0.755	730.70	0.00
87.50	0.00	0.755	730.70	0.00
88.00	0.00	0.755	730.70	0.00
88.50	0.00	0.755	730.70	0.00
89.00	0.00	0.755	730.70	0.00
89.50	0.00	0.755	730.70	0.00
90.00	0.00	0.755	730.70	0.00
90.50	0.00	0.755	730.70	0.00
91.00	0.00	0.755	730.70	0.00
91.50	0.00	0.755	730.70	0.00
92.00	0.00	0.755	730.70	0.00
92.50	0.00	0.755	730.70	0.00
93.00	0.00	0.755	730.70	0.00
93.50	0.00	0.755	730.70	0.00
94.00	0.00	0.755	730.70	0.00
94.50	0.00	0.755	730.70	0.00
95.00	0.00	0.755	730.70	0.00
95.50	0.00	0.755	730.70	0.00
96.00	0.00	0.755	730.70	0.00
96.50	0.00	0.755	730.70	0.00
97.00	0.00	0.755	730.70	0.00
97.50	0.00	0.755	730.70	0.00
98.00	0.00	0.755	730.70	0.00
98.50	0.00	0.755	730.70	0.00
99.00	0.00	0.755	730.70	0.00
99.50	0.00	0.755	730.70	0.00
100.00	0.00	0.755	730.70	0.00
100.50	0.00	0.755	730.70	0.00
101.00	0.00	0.755	730.70	0.00
101.50	0.00	0.755	730.70	0.00
102.00	0.00	0.755	730.70	0.00
102.50	0.00	0.755	730.70	0.00
103.00	0.00	0.755	730.70	0.00
103.50	0.00	0.755	730.70	0.00

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	0.755	730.70	0.00
104.50	0.00	0.755	730.70	0.00
105.00	0.00	0.755	730.70	0.00
105.50	0.00	0.755	730.70	0.00
106.00	0.00	0.755	730.70	0.00
106.50	0.00	0.755	730.70	0.00
107.00	0.00	0.755	730.70	0.00
107.50	0.00	0.755	730.70	0.00
108.00	0.00	0.755	730.70	0.00
108.50	0.00	0.755	730.70	0.00
109.00	0.00	0.755	730.70	0.00
109.50	0.00	0.755	730.70	0.00
110.00	0.00	0.755	730.70	0.00
110.50	0.00	0.755	730.70	0.00
111.00	0.00	0.755	730.70	0.00
111.50	0.00	0.755	730.70	0.00
112.00	0.00	0.755	730.70	0.00
112.50	0.00	0.755	730.70	0.00
113.00	0.00	0.755	730.70	0.00
113.50	0.00	0.755	730.70	0.00
114.00	0.00	0.755	730.70	0.00
114.50	0.00	0.755	730.70	0.00
115.00	0.00	0.755	730.70	0.00
115.50	0.00	0.755	730.70	0.00
116.00	0.00	0.755	730.70	0.00
116.50	0.00	0.755	730.70	0.00
117.00	0.00	0.755	730.70	0.00
117.50	0.00	0.755	730.70	0.00
118.00	0.00	0.755	730.70	0.00
118.50	0.00	0.755	730.70	0.00
119.00	0.00	0.755	730.70	0.00
119.50	0.00	0.755	730.70	0.00
120.00	0.00	0.755	730.70	0.00
120.50	0.00	0.755	730.70	0.00
121.00	0.00	0.755	730.70	0.00
121.50	0.00	0.755	730.70	0.00
122.00	0.00	0.755	730.70	0.00
122.50	0.00	0.755	730.70	0.00
123.00	0.00	0.755	730.70	0.00
123.50	0.00	0.755	730.70	0.00
124.00	0.00	0.755	730.70	0.00
124.50	0.00	0.755	730.70	0.00
125.00	0.00	0.755	730.70	0.00
125.50	0.00	0.755	730.70	0.00
126.00	0.00	0.755	730.70	0.00
126.50	0.00	0.755	730.70	0.00
127.00	0.00	0.755	730.70	0.00
127.50	0.00	0.755	730.70	0.00
128.00	0.00	0.755	730.70	0.00
128.50	0.00	0.755	730.70	0.00
129.00	0.00	0.755	730.70	0.00
129.50	0.00	0.755	730.70	0.00

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	0.755	730.70	0.00
130.50	0.00	0.755	730.70	0.00
131.00	0.00	0.755	730.70	0.00
131.50	0.00	0.755	730.70	0.00
132.00	0.00	0.755	730.70	0.00
132.50	0.00	0.755	730.70	0.00
133.00	0.00	0.755	730.70	0.00
133.50	0.00	0.755	730.70	0.00
134.00	0.00	0.755	730.70	0.00
134.50	0.00	0.755	730.70	0.00
135.00	0.00	0.755	730.70	0.00
135.50	0.00	0.755	730.70	0.00
136.00	0.00	0.755	730.70	0.00
136.50	0.00	0.755	730.70	0.00
137.00	0.00	0.755	730.70	0.00
137.50	0.00	0.755	730.70	0.00
138.00	0.00	0.755	730.70	0.00
138.50	0.00	0.755	730.70	0.00
139.00	0.00	0.755	730.70	0.00
139.50	0.00	0.755	730.70	0.00
140.00	0.00	0.755	730.70	0.00
140.50	0.00	0.755	730.70	0.00
141.00	0.00	0.755	730.70	0.00
141.50	0.00	0.755	730.70	0.00
142.00	0.00	0.755	730.70	0.00
142.50	0.00	0.755	730.70	0.00
143.00	0.00	0.755	730.70	0.00
143.50	0.00	0.755	730.70	0.00
144.00	0.00	0.755	730.70	0.00
144.50	0.00	0.755	730.70	0.00
145.00	0.00	0.755	730.70	0.00
145.50	0.00	0.755	730.70	0.00
146.00	0.00	0.755	730.70	0.00
146.50	0.00	0.755	730.70	0.00
147.00	0.00	0.755	730.70	0.00
147.50	0.00	0.755	730.70	0.00
148.00	0.00	0.755	730.70	0.00
148.50	0.00	0.755	730.70	0.00
149.00	0.00	0.755	730.70	0.00
149.50	0.00	0.755	730.70	0.00
150.00	0.00	0.755	730.70	0.00
150.50	0.00	0.755	730.70	0.00
151.00	0.00	0.755	730.70	0.00
151.50	0.00	0.755	730.70	0.00
152.00	0.00	0.755	730.70	0.00
152.50	0.00	0.755	730.70	0.00
153.00	0.00	0.755	730.70	0.00
153.50	0.00	0.755	730.70	0.00
154.00	0.00	0.755	730.70	0.00
154.50	0.00	0.755	730.70	0.00
155.00	0.00	0.755	730.70	0.00
155.50	0.00	0.755	730.70	0.00

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	0.755	730.70	0.00
156.50	0.00	0.755	730.70	0.00
157.00	0.00	0.755	730.70	0.00
157.50	0.00	0.755	730.70	0.00
158.00	0.00	0.755	730.70	0.00
158.50	0.00	0.755	730.70	0.00
159.00	0.00	0.755	730.70	0.00
159.50	0.00	0.755	730.70	0.00
160.00	0.00	0.755	730.70	0.00
160.50	0.00	0.755	730.70	0.00
161.00	0.00	0.755	730.70	0.00
161.50	0.00	0.755	730.70	0.00
162.00	0.00	0.755	730.70	0.00
162.50	0.00	0.755	730.70	0.00
163.00	0.00	0.755	730.70	0.00
163.50	0.00	0.755	730.70	0.00
164.00	0.00	0.755	730.70	0.00
164.50	0.00	0.755	730.70	0.00
165.00	0.00	0.755	730.70	0.00
165.50	0.00	0.755	730.70	0.00
166.00	0.00	0.755	730.70	0.00
166.50	0.00	0.755	730.70	0.00
167.00	0.00	0.755	730.70	0.00
167.50	0.00	0.755	730.70	0.00
168.00	0.00	0.755	730.70	0.00
168.50	0.00	0.755	730.70	0.00
169.00	0.00	0.755	730.70	0.00
169.50	0.00	0.755	730.70	0.00
170.00	0.00	0.755	730.70	0.00
170.50	0.00	0.755	730.70	0.00
171.00	0.00	0.755	730.70	0.00
171.50	0.00	0.755	730.70	0.00
172.00	0.00	0.755	730.70	0.00
172.50	0.00	0.755	730.70	0.00
173.00	0.00	0.755	730.70	0.00
173.50	0.00	0.755	730.70	0.00
174.00	0.00	0.755	730.70	0.00
174.50	0.00	0.755	730.70	0.00
175.00	0.00	0.755	730.70	0.00
175.50	0.00	0.755	730.70	0.00
176.00	0.00	0.755	730.70	0.00
176.50	0.00	0.755	730.70	0.00
177.00	0.00	0.755	730.70	0.00
177.50	0.00	0.755	730.70	0.00
178.00	0.00	0.755	730.70	0.00
178.50	0.00	0.755	730.70	0.00
179.00	0.00	0.755	730.70	0.00
179.50	0.00	0.755	730.70	0.00
180.00	0.00	0.755	730.70	0.00
180.50	0.00	0.755	730.70	0.00
181.00	0.00	0.755	730.70	0.00
181.50	0.00	0.755	730.70	0.00

Hydrograph for Pond ST-09-B: ST-09-B (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	0.755	730.70	0.00
182.50	0.00	0.755	730.70	0.00
183.00	0.00	0.755	730.70	0.00
183.50	0.00	0.755	730.70	0.00
184.00	0.00	0.755	730.70	0.00
184.50	0.00	0.755	730.70	0.00
185.00	0.00	0.755	730.70	0.00
185.50	0.00	0.755	730.70	0.00
186.00	0.00	0.755	730.70	0.00
186.50	0.00	0.755	730.70	0.00
187.00	0.00	0.755	730.70	0.00
187.50	0.00	0.755	730.70	0.00
188.00	0.00	0.755	730.70	0.00
188.50	0.00	0.755	730.70	0.00
189.00	0.00	0.755	730.70	0.00
189.50	0.00	0.755	730.70	0.00
190.00	0.00	0.755	730.70	0.00
190.50	0.00	0.755	730.70	0.00
191.00	0.00	0.755	730.70	0.00
191.50	0.00	0.755	730.70	0.00
192.00	0.00	0.755	730.70	0.00
192.50	0.00	0.755	730.70	0.00
193.00	0.00	0.755	730.70	0.00
193.50	0.00	0.755	730.70	0.00
194.00	0.00	0.755	730.70	0.00
194.50	0.00	0.755	730.70	0.00
195.00	0.00	0.755	730.70	0.00
195.50	0.00	0.755	730.70	0.00
196.00	0.00	0.755	730.70	0.00
196.50	0.00	0.755	730.70	0.00
197.00	0.00	0.755	730.70	0.00
197.50	0.00	0.755	730.70	0.00
198.00	0.00	0.755	730.70	0.00
198.50	0.00	0.755	730.70	0.00
199.00	0.00	0.755	730.70	0.00
199.50	0.00	0.755	730.70	0.00
200.00	0.00	0.755	730.70	0.00

Summary for Pond ST-10: ST-10

Inflow Area = 24.085 ac, 3.26% Impervious, Inflow Depth = 3.28" for 100-year, 24-hour event
Inflow = 18.99 cfs @ 14.41 hrs, Volume= 6.581 af
Outflow = 18.73 cfs @ 14.65 hrs, Volume= 5.120 af, Atten= 1%, Lag= 14.3 min
Primary = 18.73 cfs @ 14.65 hrs, Volume= 5.120 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 733.25' @ 14.65 hrs Surf.Area= 1.034 ac Storage= 1.724 af

Plug-Flow detention time= 152.6 min calculated for 5.120 af (78% of inflow)
Center-of-Mass det. time= 66.1 min (1,042.8 - 976.6)

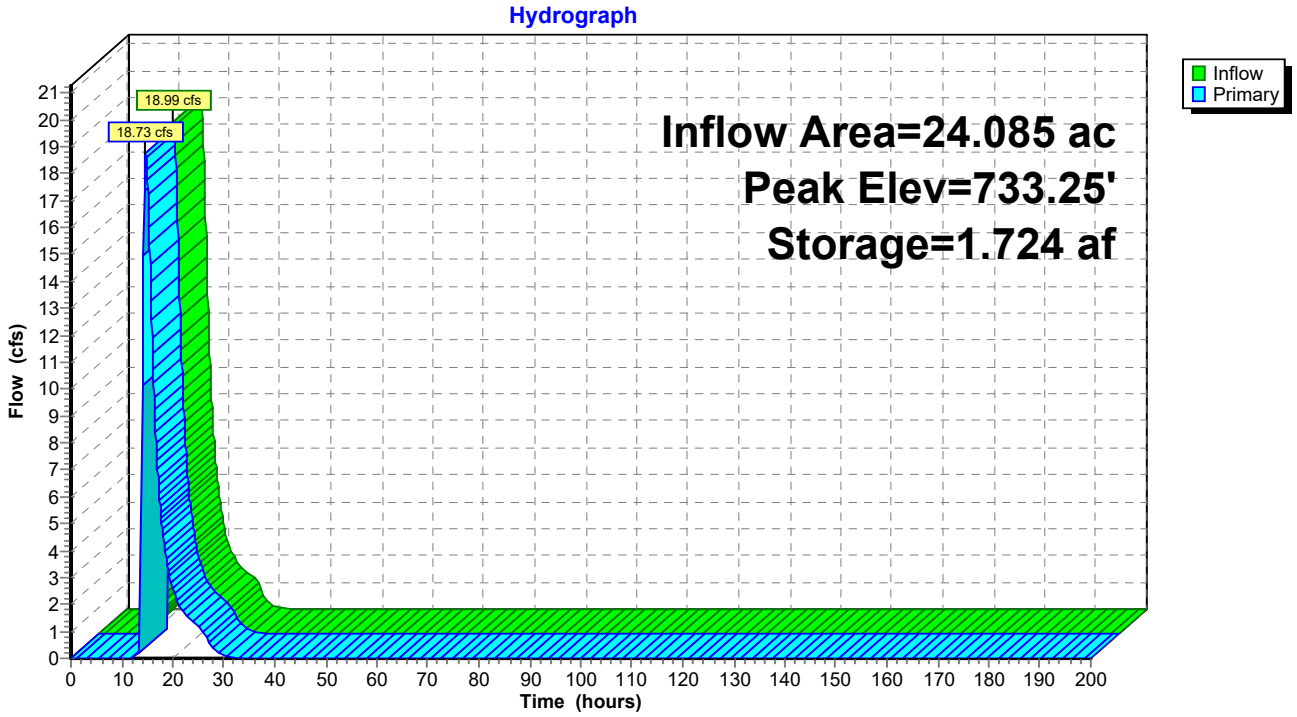
Volume	Invert	Avail.Storage	Storage Description
#1	731.50'	1.978 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
731.50	0.930	0.000	0.000
732.00	0.959	0.472	0.472
733.00	1.018	0.989	1.461
733.50	1.049	0.517	1.978

Device	Routing	Invert	Outlet Devices
#1	Primary	733.00'	**60.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=18.70 cfs @ 14.65 hrs HW=733.25' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 18.70 cfs @ 1.23 fps)

Pond ST-10: ST-10



Hydrograph for Pond ST-10: ST-10

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	731.50	0.00
0.50	0.00	0.000	731.50	0.00
1.00	0.00	0.000	731.50	0.00
1.50	0.00	0.000	731.50	0.00
2.00	0.00	0.000	731.50	0.00
2.50	0.00	0.000	731.50	0.00
3.00	0.00	0.000	731.50	0.00
3.50	0.00	0.000	731.50	0.00
4.00	0.00	0.000	731.50	0.00
4.50	0.00	0.000	731.50	0.00
5.00	0.00	0.000	731.50	0.00
5.50	0.00	0.000	731.50	0.00
6.00	0.00	0.000	731.50	0.00
6.50	0.00	0.000	731.50	0.00
7.00	0.00	0.000	731.50	0.00
7.50	0.00	0.000	731.50	0.00
8.00	0.00	0.000	731.50	0.00
8.50	0.01	0.000	731.50	0.00
9.00	0.03	0.001	731.50	0.00
9.50	0.08	0.003	731.50	0.00
10.00	0.15	0.008	731.51	0.00
10.50	0.27	0.016	731.52	0.00
11.00	0.43	0.030	731.53	0.00
11.50	0.66	0.053	731.56	0.00
12.00	1.10	0.088	731.59	0.00
12.50	2.70	0.160	731.67	0.00
13.00	6.79	0.347	731.87	0.00
13.50	12.97	0.753	732.28	0.00
14.00	**17.81**	1.400	732.94	0.00
14.50	**18.95**	**1.720**	**733.25**	**18.38**
15.00	17.22	**1.715**	**733.25**	**17.73**
15.50	13.83	1.685	733.22	14.66
16.00	10.51	1.650	733.18	11.30
16.50	8.19	1.621	733.16	8.81
17.00	6.51	1.598	733.13	7.01
17.50	5.25	1.580	733.12	5.65
18.00	4.32	1.565	733.10	4.63
18.50	3.62	1.553	733.09	3.88
19.00	3.10	1.544	733.08	3.30
19.50	2.71	1.536	733.07	2.87
20.00	2.40	1.530	733.07	2.53
20.50	2.16	1.525	733.06	2.26
21.00	1.97	1.522	733.06	2.06
21.50	1.81	1.518	733.06	1.89
22.00	1.67	1.515	733.05	1.74
22.50	1.55	1.512	733.05	1.61
23.00	1.46	1.510	733.05	1.51
23.50	1.39	1.508	733.05	1.43
24.00	1.33	1.507	733.04	1.36
24.50	1.27	1.505	733.04	1.30
25.00	1.18	1.504	733.04	1.23
25.50	1.04	1.501	733.04	1.12

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	0.84	1.497	733.04	0.97
26.50	0.63	1.491	733.03	0.77
27.00	0.44	1.486	733.02	0.57
27.50	0.29	1.481	733.02	0.40
28.00	0.19	1.476	733.02	0.31
28.50	0.13	1.472	733.01	0.22
29.00	0.09	1.469	733.01	0.16
29.50	0.06	1.466	733.01	0.11
30.00	0.04	1.465	733.00	0.07
30.50	0.03	1.463	733.00	0.05
31.00	0.02	1.462	733.00	0.03
31.50	0.01	1.462	733.00	0.02
32.00	0.01	1.461	733.00	0.01
32.50	0.00	1.461	733.00	0.01
33.00	0.00	1.461	733.00	0.01
33.50	0.00	1.461	733.00	0.00
34.00	0.00	1.461	733.00	0.00
34.50	0.00	1.461	733.00	0.00
35.00	0.00	1.461	733.00	0.00
35.50	0.00	1.461	733.00	0.00
36.00	0.00	1.461	733.00	0.00
36.50	0.00	1.461	733.00	0.00
37.00	0.00	1.461	733.00	0.00
37.50	0.00	1.461	733.00	0.00
38.00	0.00	1.461	733.00	0.00
38.50	0.00	1.461	733.00	0.00
39.00	0.00	1.461	733.00	0.00
39.50	0.00	1.461	733.00	0.00
40.00	0.00	1.461	733.00	0.00
40.50	0.00	1.461	733.00	0.00
41.00	0.00	1.461	733.00	0.00
41.50	0.00	1.461	733.00	0.00
42.00	0.00	1.461	733.00	0.00
42.50	0.00	1.461	733.00	0.00
43.00	0.00	1.461	733.00	0.00
43.50	0.00	1.461	733.00	0.00
44.00	0.00	1.461	733.00	0.00
44.50	0.00	1.461	733.00	0.00
45.00	0.00	1.461	733.00	0.00
45.50	0.00	1.461	733.00	0.00
46.00	0.00	1.461	733.00	0.00
46.50	0.00	1.461	733.00	0.00
47.00	0.00	1.461	733.00	0.00
47.50	0.00	1.461	733.00	0.00
48.00	0.00	1.461	733.00	0.00
48.50	0.00	1.461	733.00	0.00
49.00	0.00	1.461	733.00	0.00
49.50	0.00	1.461	733.00	0.00
50.00	0.00	1.461	733.00	0.00
50.50	0.00	1.461	733.00	0.00
51.00	0.00	1.461	733.00	0.00
51.50	0.00	1.461	733.00	0.00

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	1.461	733.00	0.00
52.50	0.00	1.461	733.00	0.00
53.00	0.00	1.461	733.00	0.00
53.50	0.00	1.461	733.00	0.00
54.00	0.00	1.461	733.00	0.00
54.50	0.00	1.461	733.00	0.00
55.00	0.00	1.461	733.00	0.00
55.50	0.00	1.461	733.00	0.00
56.00	0.00	1.461	733.00	0.00
56.50	0.00	1.461	733.00	0.00
57.00	0.00	1.461	733.00	0.00
57.50	0.00	1.461	733.00	0.00
58.00	0.00	1.461	733.00	0.00
58.50	0.00	1.461	733.00	0.00
59.00	0.00	1.461	733.00	0.00
59.50	0.00	1.461	733.00	0.00
60.00	0.00	1.461	733.00	0.00
60.50	0.00	1.461	733.00	0.00
61.00	0.00	1.461	733.00	0.00
61.50	0.00	1.461	733.00	0.00
62.00	0.00	1.461	733.00	0.00
62.50	0.00	1.461	733.00	0.00
63.00	0.00	1.461	733.00	0.00
63.50	0.00	1.461	733.00	0.00
64.00	0.00	1.461	733.00	0.00
64.50	0.00	1.461	733.00	0.00
65.00	0.00	1.461	733.00	0.00
65.50	0.00	1.461	733.00	0.00
66.00	0.00	1.461	733.00	0.00
66.50	0.00	1.461	733.00	0.00
67.00	0.00	1.461	733.00	0.00
67.50	0.00	1.461	733.00	0.00
68.00	0.00	1.461	733.00	0.00
68.50	0.00	1.461	733.00	0.00
69.00	0.00	1.461	733.00	0.00
69.50	0.00	1.461	733.00	0.00
70.00	0.00	1.461	733.00	0.00
70.50	0.00	1.461	733.00	0.00
71.00	0.00	1.461	733.00	0.00
71.50	0.00	1.461	733.00	0.00
72.00	0.00	1.461	733.00	0.00
72.50	0.00	1.461	733.00	0.00
73.00	0.00	1.461	733.00	0.00
73.50	0.00	1.461	733.00	0.00
74.00	0.00	1.461	733.00	0.00
74.50	0.00	1.461	733.00	0.00
75.00	0.00	1.461	733.00	0.00
75.50	0.00	1.461	733.00	0.00
76.00	0.00	1.461	733.00	0.00
76.50	0.00	1.461	733.00	0.00
77.00	0.00	1.461	733.00	0.00
77.50	0.00	1.461	733.00	0.00

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	1.461	733.00	0.00
78.50	0.00	1.461	733.00	0.00
79.00	0.00	1.461	733.00	0.00
79.50	0.00	1.461	733.00	0.00
80.00	0.00	1.461	733.00	0.00
80.50	0.00	1.461	733.00	0.00
81.00	0.00	1.461	733.00	0.00
81.50	0.00	1.461	733.00	0.00
82.00	0.00	1.461	733.00	0.00
82.50	0.00	1.461	733.00	0.00
83.00	0.00	1.461	733.00	0.00
83.50	0.00	1.461	733.00	0.00
84.00	0.00	1.461	733.00	0.00
84.50	0.00	1.461	733.00	0.00
85.00	0.00	1.461	733.00	0.00
85.50	0.00	1.461	733.00	0.00
86.00	0.00	1.461	733.00	0.00
86.50	0.00	1.461	733.00	0.00
87.00	0.00	1.461	733.00	0.00
87.50	0.00	1.461	733.00	0.00
88.00	0.00	1.461	733.00	0.00
88.50	0.00	1.461	733.00	0.00
89.00	0.00	1.461	733.00	0.00
89.50	0.00	1.461	733.00	0.00
90.00	0.00	1.461	733.00	0.00
90.50	0.00	1.461	733.00	0.00
91.00	0.00	1.461	733.00	0.00
91.50	0.00	1.461	733.00	0.00
92.00	0.00	1.461	733.00	0.00
92.50	0.00	1.461	733.00	0.00
93.00	0.00	1.461	733.00	0.00
93.50	0.00	1.461	733.00	0.00
94.00	0.00	1.461	733.00	0.00
94.50	0.00	1.461	733.00	0.00
95.00	0.00	1.461	733.00	0.00
95.50	0.00	1.461	733.00	0.00
96.00	0.00	1.461	733.00	0.00
96.50	0.00	1.461	733.00	0.00
97.00	0.00	1.461	733.00	0.00
97.50	0.00	1.461	733.00	0.00
98.00	0.00	1.461	733.00	0.00
98.50	0.00	1.461	733.00	0.00
99.00	0.00	1.461	733.00	0.00
99.50	0.00	1.461	733.00	0.00
100.00	0.00	1.461	733.00	0.00
100.50	0.00	1.461	733.00	0.00
101.00	0.00	1.461	733.00	0.00
101.50	0.00	1.461	733.00	0.00
102.00	0.00	1.461	733.00	0.00
102.50	0.00	1.461	733.00	0.00
103.00	0.00	1.461	733.00	0.00
103.50	0.00	1.461	733.00	0.00

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1.461	733.00	0.00
104.50	0.00	1.461	733.00	0.00
105.00	0.00	1.461	733.00	0.00
105.50	0.00	1.461	733.00	0.00
106.00	0.00	1.461	733.00	0.00
106.50	0.00	1.461	733.00	0.00
107.00	0.00	1.461	733.00	0.00
107.50	0.00	1.461	733.00	0.00
108.00	0.00	1.461	733.00	0.00
108.50	0.00	1.461	733.00	0.00
109.00	0.00	1.461	733.00	0.00
109.50	0.00	1.461	733.00	0.00
110.00	0.00	1.461	733.00	0.00
110.50	0.00	1.461	733.00	0.00
111.00	0.00	1.461	733.00	0.00
111.50	0.00	1.461	733.00	0.00
112.00	0.00	1.461	733.00	0.00
112.50	0.00	1.461	733.00	0.00
113.00	0.00	1.461	733.00	0.00
113.50	0.00	1.461	733.00	0.00
114.00	0.00	1.461	733.00	0.00
114.50	0.00	1.461	733.00	0.00
115.00	0.00	1.461	733.00	0.00
115.50	0.00	1.461	733.00	0.00
116.00	0.00	1.461	733.00	0.00
116.50	0.00	1.461	733.00	0.00
117.00	0.00	1.461	733.00	0.00
117.50	0.00	1.461	733.00	0.00
118.00	0.00	1.461	733.00	0.00
118.50	0.00	1.461	733.00	0.00
119.00	0.00	1.461	733.00	0.00
119.50	0.00	1.461	733.00	0.00
120.00	0.00	1.461	733.00	0.00
120.50	0.00	1.461	733.00	0.00
121.00	0.00	1.461	733.00	0.00
121.50	0.00	1.461	733.00	0.00
122.00	0.00	1.461	733.00	0.00
122.50	0.00	1.461	733.00	0.00
123.00	0.00	1.461	733.00	0.00
123.50	0.00	1.461	733.00	0.00
124.00	0.00	1.461	733.00	0.00
124.50	0.00	1.461	733.00	0.00
125.00	0.00	1.461	733.00	0.00
125.50	0.00	1.461	733.00	0.00
126.00	0.00	1.461	733.00	0.00
126.50	0.00	1.461	733.00	0.00
127.00	0.00	1.461	733.00	0.00
127.50	0.00	1.461	733.00	0.00
128.00	0.00	1.461	733.00	0.00
128.50	0.00	1.461	733.00	0.00
129.00	0.00	1.461	733.00	0.00
129.50	0.00	1.461	733.00	0.00

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	1.461	733.00	0.00
130.50	0.00	1.461	733.00	0.00
131.00	0.00	1.461	733.00	0.00
131.50	0.00	1.461	733.00	0.00
132.00	0.00	1.461	733.00	0.00
132.50	0.00	1.461	733.00	0.00
133.00	0.00	1.461	733.00	0.00
133.50	0.00	1.461	733.00	0.00
134.00	0.00	1.461	733.00	0.00
134.50	0.00	1.461	733.00	0.00
135.00	0.00	1.461	733.00	0.00
135.50	0.00	1.461	733.00	0.00
136.00	0.00	1.461	733.00	0.00
136.50	0.00	1.461	733.00	0.00
137.00	0.00	1.461	733.00	0.00
137.50	0.00	1.461	733.00	0.00
138.00	0.00	1.461	733.00	0.00
138.50	0.00	1.461	733.00	0.00
139.00	0.00	1.461	733.00	0.00
139.50	0.00	1.461	733.00	0.00
140.00	0.00	1.461	733.00	0.00
140.50	0.00	1.461	733.00	0.00
141.00	0.00	1.461	733.00	0.00
141.50	0.00	1.461	733.00	0.00
142.00	0.00	1.461	733.00	0.00
142.50	0.00	1.461	733.00	0.00
143.00	0.00	1.461	733.00	0.00
143.50	0.00	1.461	733.00	0.00
144.00	0.00	1.461	733.00	0.00
144.50	0.00	1.461	733.00	0.00
145.00	0.00	1.461	733.00	0.00
145.50	0.00	1.461	733.00	0.00
146.00	0.00	1.461	733.00	0.00
146.50	0.00	1.461	733.00	0.00
147.00	0.00	1.461	733.00	0.00
147.50	0.00	1.461	733.00	0.00
148.00	0.00	1.461	733.00	0.00
148.50	0.00	1.461	733.00	0.00
149.00	0.00	1.461	733.00	0.00
149.50	0.00	1.461	733.00	0.00
150.00	0.00	1.461	733.00	0.00
150.50	0.00	1.461	733.00	0.00
151.00	0.00	1.461	733.00	0.00
151.50	0.00	1.461	733.00	0.00
152.00	0.00	1.461	733.00	0.00
152.50	0.00	1.461	733.00	0.00
153.00	0.00	1.461	733.00	0.00
153.50	0.00	1.461	733.00	0.00
154.00	0.00	1.461	733.00	0.00
154.50	0.00	1.461	733.00	0.00
155.00	0.00	1.461	733.00	0.00
155.50	0.00	1.461	733.00	0.00

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	1.461	733.00	0.00
156.50	0.00	1.461	733.00	0.00
157.00	0.00	1.461	733.00	0.00
157.50	0.00	1.461	733.00	0.00
158.00	0.00	1.461	733.00	0.00
158.50	0.00	1.461	733.00	0.00
159.00	0.00	1.461	733.00	0.00
159.50	0.00	1.461	733.00	0.00
160.00	0.00	1.461	733.00	0.00
160.50	0.00	1.461	733.00	0.00
161.00	0.00	1.461	733.00	0.00
161.50	0.00	1.461	733.00	0.00
162.00	0.00	1.461	733.00	0.00
162.50	0.00	1.461	733.00	0.00
163.00	0.00	1.461	733.00	0.00
163.50	0.00	1.461	733.00	0.00
164.00	0.00	1.461	733.00	0.00
164.50	0.00	1.461	733.00	0.00
165.00	0.00	1.461	733.00	0.00
165.50	0.00	1.461	733.00	0.00
166.00	0.00	1.461	733.00	0.00
166.50	0.00	1.461	733.00	0.00
167.00	0.00	1.461	733.00	0.00
167.50	0.00	1.461	733.00	0.00
168.00	0.00	1.461	733.00	0.00
168.50	0.00	1.461	733.00	0.00
169.00	0.00	1.461	733.00	0.00
169.50	0.00	1.461	733.00	0.00
170.00	0.00	1.461	733.00	0.00
170.50	0.00	1.461	733.00	0.00
171.00	0.00	1.461	733.00	0.00
171.50	0.00	1.461	733.00	0.00
172.00	0.00	1.461	733.00	0.00
172.50	0.00	1.461	733.00	0.00
173.00	0.00	1.461	733.00	0.00
173.50	0.00	1.461	733.00	0.00
174.00	0.00	1.461	733.00	0.00
174.50	0.00	1.461	733.00	0.00
175.00	0.00	1.461	733.00	0.00
175.50	0.00	1.461	733.00	0.00
176.00	0.00	1.461	733.00	0.00
176.50	0.00	1.461	733.00	0.00
177.00	0.00	1.461	733.00	0.00
177.50	0.00	1.461	733.00	0.00
178.00	0.00	1.461	733.00	0.00
178.50	0.00	1.461	733.00	0.00
179.00	0.00	1.461	733.00	0.00
179.50	0.00	1.461	733.00	0.00
180.00	0.00	1.461	733.00	0.00
180.50	0.00	1.461	733.00	0.00
181.00	0.00	1.461	733.00	0.00
181.50	0.00	1.461	733.00	0.00

Hydrograph for Pond ST-10: ST-10 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	1.461	733.00	0.00
182.50	0.00	1.461	733.00	0.00
183.00	0.00	1.461	733.00	0.00
183.50	0.00	1.461	733.00	0.00
184.00	0.00	1.461	733.00	0.00
184.50	0.00	1.461	733.00	0.00
185.00	0.00	1.461	733.00	0.00
185.50	0.00	1.461	733.00	0.00
186.00	0.00	1.461	733.00	0.00
186.50	0.00	1.461	733.00	0.00
187.00	0.00	1.461	733.00	0.00
187.50	0.00	1.461	733.00	0.00
188.00	0.00	1.461	733.00	0.00
188.50	0.00	1.461	733.00	0.00
189.00	0.00	1.461	733.00	0.00
189.50	0.00	1.461	733.00	0.00
190.00	0.00	1.461	733.00	0.00
190.50	0.00	1.461	733.00	0.00
191.00	0.00	1.461	733.00	0.00
191.50	0.00	1.461	733.00	0.00
192.00	0.00	1.461	733.00	0.00
192.50	0.00	1.461	733.00	0.00
193.00	0.00	1.461	733.00	0.00
193.50	0.00	1.461	733.00	0.00
194.00	0.00	1.461	733.00	0.00
194.50	0.00	1.461	733.00	0.00
195.00	0.00	1.461	733.00	0.00
195.50	0.00	1.461	733.00	0.00
196.00	0.00	1.461	733.00	0.00
196.50	0.00	1.461	733.00	0.00
197.00	0.00	1.461	733.00	0.00
197.50	0.00	1.461	733.00	0.00
198.00	0.00	1.461	733.00	0.00
198.50	0.00	1.461	733.00	0.00
199.00	0.00	1.461	733.00	0.00
199.50	0.00	1.461	733.00	0.00
200.00	0.00	1.461	733.00	0.00

Summary for Pond ST-11: ST-11

Inflow Area = 63.402 ac, 2.27% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 31.13 cfs @ 16.11 hrs, Volume= 16.816 af
Outflow = 30.21 cfs @ 16.66 hrs, Volume= 12.771 af, Atten= 3%, Lag= 33.2 min
Primary = 30.21 cfs @ 16.66 hrs, Volume= 12.771 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 733.00' @ 16.66 hrs Surf.Area= 3.027 ac Storage= 4.798 af

Plug-Flow detention time= 202.7 min calculated for 12.771 af (76% of inflow)
Center-of-Mass det. time= 97.3 min (1,200.6 - 1,103.3)

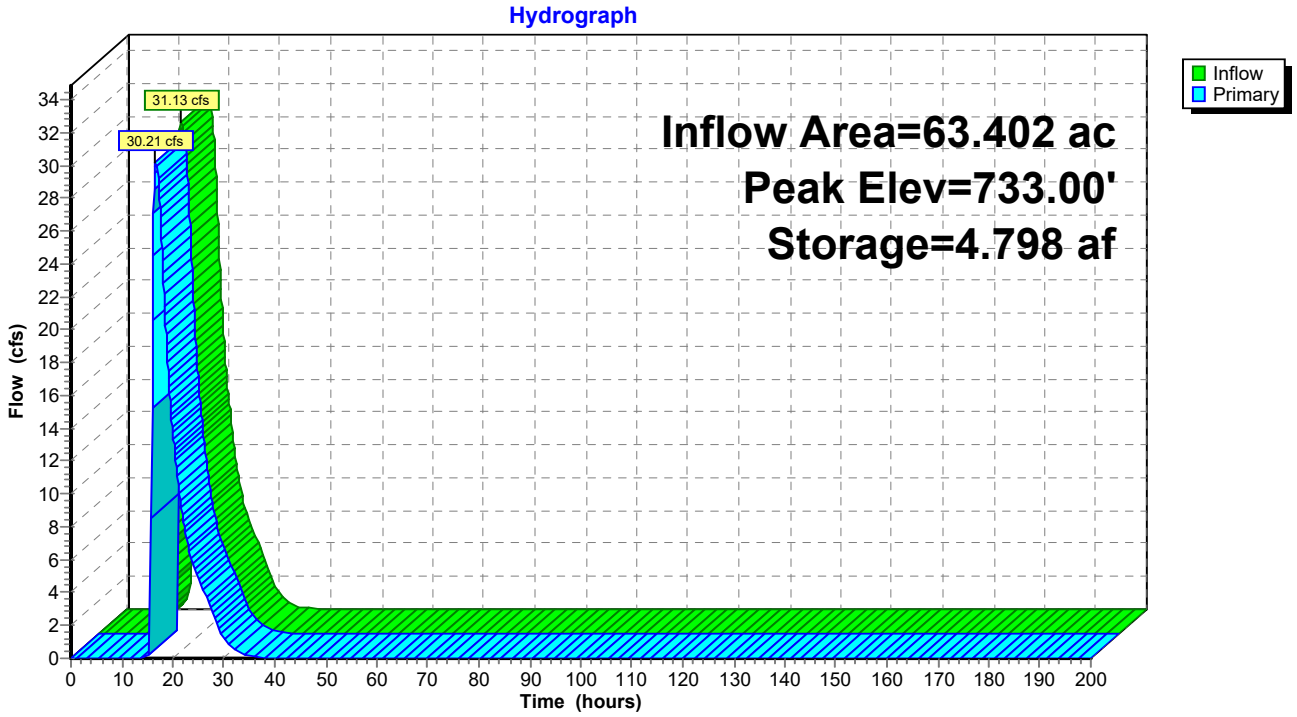
Volume	Invert	Avail.Storage	Storage Description
#1	731.25'	5.558 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
731.25	2.449	0.000	0.000
731.75	2.614	1.266	1.266
732.75	2.944	2.779	4.045
733.25	3.110	1.513	5.558

Device	Routing	Invert	Outlet Devices
#1	Primary	732.75'	**100.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=30.17 cfs @ 16.66 hrs HW=733.00' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 30.17 cfs @ 1.21 fps)

Pond ST-11: ST-11



Hydrograph for Pond ST-11: ST-11

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	731.25	0.00
0.50	0.00	0.000	731.25	0.00
1.00	0.00	0.000	731.25	0.00
1.50	0.00	0.000	731.25	0.00
2.00	0.00	0.000	731.25	0.00
2.50	0.00	0.000	731.25	0.00
3.00	0.00	0.000	731.25	0.00
3.50	0.00	0.000	731.25	0.00
4.00	0.00	0.000	731.25	0.00
4.50	0.00	0.000	731.25	0.00
5.00	0.00	0.000	731.25	0.00
5.50	0.00	0.000	731.25	0.00
6.00	0.00	0.000	731.25	0.00
6.50	0.00	0.000	731.25	0.00
7.00	0.00	0.000	731.25	0.00
7.50	0.00	0.000	731.25	0.00
8.00	0.00	0.000	731.25	0.00
8.50	0.00	0.000	731.25	0.00
9.00	0.01	0.000	731.25	0.00
9.50	0.02	0.001	731.25	0.00
10.00	0.06	0.002	731.25	0.00
10.50	0.13	0.006	731.25	0.00
11.00	0.24	0.013	731.26	0.00
11.50	0.43	0.027	731.26	0.00
12.00	0.74	0.051	731.27	0.00
12.50	1.70	0.097	731.29	0.00
13.00	4.15	0.214	731.33	0.00
13.50	7.95	0.458	731.43	0.00
14.00	13.47	0.896	731.60	0.00
14.50	19.99	1.588	731.87	0.00
15.00	25.69	2.536	732.21	0.00
15.50	29.27	3.679	732.62	0.00
16.00	**30.98**	4.633	732.94	20.57
16.50	**30.58**	**4.795**	**733.00**	**30.00**
17.00	28.97	**4.789**	**733.00**	**29.61**
17.50	26.30	4.753	732.98	27.39
18.00	22.72	4.698	732.97	24.16
18.50	19.47	4.639	732.95	20.87
19.00	16.74	4.583	732.93	18.01
19.50	14.58	4.535	732.91	15.64
20.00	12.76	4.493	732.90	13.71
20.50	11.21	4.456	732.89	12.06
21.00	9.90	4.423	732.88	10.64
21.50	8.79	4.395	732.87	9.45
22.00	7.86	4.369	732.86	8.44
22.50	7.08	4.347	732.85	7.57
23.00	6.40	4.327	732.84	6.86
23.50	5.83	4.309	732.84	6.23
24.00	5.35	4.294	732.83	5.69
24.50	4.94	4.281	732.83	5.24
25.00	4.56	4.269	732.82	4.86
25.50	4.22	4.257	732.82	4.49

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	3.86	4.246	732.82	4.13
26.50	3.48	4.234	732.81	3.77
27.00	3.07	4.221	732.81	3.40
27.50	2.65	4.207	732.80	3.01
28.00	2.23	4.192	732.80	2.60
28.50	1.83	4.176	732.79	2.20
29.00	1.47	4.162	732.79	1.83
29.50	1.16	4.146	732.78	1.52
30.00	0.89	4.132	732.78	1.22
30.50	0.70	4.119	732.77	0.97
31.00	0.55	4.109	732.77	0.76
31.50	0.43	4.101	732.77	0.63
32.00	0.34	4.093	732.77	0.54
32.50	0.27	4.085	732.76	0.45
33.00	0.21	4.078	732.76	0.37
33.50	0.17	4.072	732.76	0.30
34.00	0.13	4.067	732.76	0.25
34.50	0.10	4.062	732.76	0.20
35.00	0.08	4.059	732.75	0.16
35.50	0.06	4.056	732.75	0.13
36.00	0.05	4.054	732.75	0.10
36.50	0.04	4.052	732.75	0.08
37.00	0.03	4.050	732.75	0.06
37.50	0.02	4.049	732.75	0.05
38.00	0.02	4.048	732.75	0.04
38.50	0.01	4.047	732.75	0.03
39.00	0.01	4.047	732.75	0.02
39.50	0.01	4.046	732.75	0.02
40.00	0.00	4.046	732.75	0.01
40.50	0.00	4.046	732.75	0.01
41.00	0.00	4.045	732.75	0.01
41.50	0.00	4.045	732.75	0.00
42.00	0.00	4.045	732.75	0.00
42.50	0.00	4.045	732.75	0.00
43.00	0.00	4.045	732.75	0.00
43.50	0.00	4.045	732.75	0.00
44.00	0.00	4.045	732.75	0.00
44.50	0.00	4.045	732.75	0.00
45.00	0.00	4.045	732.75	0.00
45.50	0.00	4.045	732.75	0.00
46.00	0.00	4.045	732.75	0.00
46.50	0.00	4.045	732.75	0.00
47.00	0.00	4.045	732.75	0.00
47.50	0.00	4.045	732.75	0.00
48.00	0.00	4.045	732.75	0.00
48.50	0.00	4.045	732.75	0.00
49.00	0.00	4.045	732.75	0.00
49.50	0.00	4.045	732.75	0.00
50.00	0.00	4.045	732.75	0.00
50.50	0.00	4.045	732.75	0.00
51.00	0.00	4.045	732.75	0.00
51.50	0.00	4.045	732.75	0.00

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	4.045	732.75	0.00
52.50	0.00	4.045	732.75	0.00
53.00	0.00	4.045	732.75	0.00
53.50	0.00	4.045	732.75	0.00
54.00	0.00	4.045	732.75	0.00
54.50	0.00	4.045	732.75	0.00
55.00	0.00	4.045	732.75	0.00
55.50	0.00	4.045	732.75	0.00
56.00	0.00	4.045	732.75	0.00
56.50	0.00	4.045	732.75	0.00
57.00	0.00	4.045	732.75	0.00
57.50	0.00	4.045	732.75	0.00
58.00	0.00	4.045	732.75	0.00
58.50	0.00	4.045	732.75	0.00
59.00	0.00	4.045	732.75	0.00
59.50	0.00	4.045	732.75	0.00
60.00	0.00	4.045	732.75	0.00
60.50	0.00	4.045	732.75	0.00
61.00	0.00	4.045	732.75	0.00
61.50	0.00	4.045	732.75	0.00
62.00	0.00	4.045	732.75	0.00
62.50	0.00	4.045	732.75	0.00
63.00	0.00	4.045	732.75	0.00
63.50	0.00	4.045	732.75	0.00
64.00	0.00	4.045	732.75	0.00
64.50	0.00	4.045	732.75	0.00
65.00	0.00	4.045	732.75	0.00
65.50	0.00	4.045	732.75	0.00
66.00	0.00	4.045	732.75	0.00
66.50	0.00	4.045	732.75	0.00
67.00	0.00	4.045	732.75	0.00
67.50	0.00	4.045	732.75	0.00
68.00	0.00	4.045	732.75	0.00
68.50	0.00	4.045	732.75	0.00
69.00	0.00	4.045	732.75	0.00
69.50	0.00	4.045	732.75	0.00
70.00	0.00	4.045	732.75	0.00
70.50	0.00	4.045	732.75	0.00
71.00	0.00	4.045	732.75	0.00
71.50	0.00	4.045	732.75	0.00
72.00	0.00	4.045	732.75	0.00
72.50	0.00	4.045	732.75	0.00
73.00	0.00	4.045	732.75	0.00
73.50	0.00	4.045	732.75	0.00
74.00	0.00	4.045	732.75	0.00
74.50	0.00	4.045	732.75	0.00
75.00	0.00	4.045	732.75	0.00
75.50	0.00	4.045	732.75	0.00
76.00	0.00	4.045	732.75	0.00
76.50	0.00	4.045	732.75	0.00
77.00	0.00	4.045	732.75	0.00
77.50	0.00	4.045	732.75	0.00

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	4.045	732.75	0.00
78.50	0.00	4.045	732.75	0.00
79.00	0.00	4.045	732.75	0.00
79.50	0.00	4.045	732.75	0.00
80.00	0.00	4.045	732.75	0.00
80.50	0.00	4.045	732.75	0.00
81.00	0.00	4.045	732.75	0.00
81.50	0.00	4.045	732.75	0.00
82.00	0.00	4.045	732.75	0.00
82.50	0.00	4.045	732.75	0.00
83.00	0.00	4.045	732.75	0.00
83.50	0.00	4.045	732.75	0.00
84.00	0.00	4.045	732.75	0.00
84.50	0.00	4.045	732.75	0.00
85.00	0.00	4.045	732.75	0.00
85.50	0.00	4.045	732.75	0.00
86.00	0.00	4.045	732.75	0.00
86.50	0.00	4.045	732.75	0.00
87.00	0.00	4.045	732.75	0.00
87.50	0.00	4.045	732.75	0.00
88.00	0.00	4.045	732.75	0.00
88.50	0.00	4.045	732.75	0.00
89.00	0.00	4.045	732.75	0.00
89.50	0.00	4.045	732.75	0.00
90.00	0.00	4.045	732.75	0.00
90.50	0.00	4.045	732.75	0.00
91.00	0.00	4.045	732.75	0.00
91.50	0.00	4.045	732.75	0.00
92.00	0.00	4.045	732.75	0.00
92.50	0.00	4.045	732.75	0.00
93.00	0.00	4.045	732.75	0.00
93.50	0.00	4.045	732.75	0.00
94.00	0.00	4.045	732.75	0.00
94.50	0.00	4.045	732.75	0.00
95.00	0.00	4.045	732.75	0.00
95.50	0.00	4.045	732.75	0.00
96.00	0.00	4.045	732.75	0.00
96.50	0.00	4.045	732.75	0.00
97.00	0.00	4.045	732.75	0.00
97.50	0.00	4.045	732.75	0.00
98.00	0.00	4.045	732.75	0.00
98.50	0.00	4.045	732.75	0.00
99.00	0.00	4.045	732.75	0.00
99.50	0.00	4.045	732.75	0.00
100.00	0.00	4.045	732.75	0.00
100.50	0.00	4.045	732.75	0.00
101.00	0.00	4.045	732.75	0.00
101.50	0.00	4.045	732.75	0.00
102.00	0.00	4.045	732.75	0.00
102.50	0.00	4.045	732.75	0.00
103.00	0.00	4.045	732.75	0.00
103.50	0.00	4.045	732.75	0.00

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	4.045	732.75	0.00
104.50	0.00	4.045	732.75	0.00
105.00	0.00	4.045	732.75	0.00
105.50	0.00	4.045	732.75	0.00
106.00	0.00	4.045	732.75	0.00
106.50	0.00	4.045	732.75	0.00
107.00	0.00	4.045	732.75	0.00
107.50	0.00	4.045	732.75	0.00
108.00	0.00	4.045	732.75	0.00
108.50	0.00	4.045	732.75	0.00
109.00	0.00	4.045	732.75	0.00
109.50	0.00	4.045	732.75	0.00
110.00	0.00	4.045	732.75	0.00
110.50	0.00	4.045	732.75	0.00
111.00	0.00	4.045	732.75	0.00
111.50	0.00	4.045	732.75	0.00
112.00	0.00	4.045	732.75	0.00
112.50	0.00	4.045	732.75	0.00
113.00	0.00	4.045	732.75	0.00
113.50	0.00	4.045	732.75	0.00
114.00	0.00	4.045	732.75	0.00
114.50	0.00	4.045	732.75	0.00
115.00	0.00	4.045	732.75	0.00
115.50	0.00	4.045	732.75	0.00
116.00	0.00	4.045	732.75	0.00
116.50	0.00	4.045	732.75	0.00
117.00	0.00	4.045	732.75	0.00
117.50	0.00	4.045	732.75	0.00
118.00	0.00	4.045	732.75	0.00
118.50	0.00	4.045	732.75	0.00
119.00	0.00	4.045	732.75	0.00
119.50	0.00	4.045	732.75	0.00
120.00	0.00	4.045	732.75	0.00
120.50	0.00	4.045	732.75	0.00
121.00	0.00	4.045	732.75	0.00
121.50	0.00	4.045	732.75	0.00
122.00	0.00	4.045	732.75	0.00
122.50	0.00	4.045	732.75	0.00
123.00	0.00	4.045	732.75	0.00
123.50	0.00	4.045	732.75	0.00
124.00	0.00	4.045	732.75	0.00
124.50	0.00	4.045	732.75	0.00
125.00	0.00	4.045	732.75	0.00
125.50	0.00	4.045	732.75	0.00
126.00	0.00	4.045	732.75	0.00
126.50	0.00	4.045	732.75	0.00
127.00	0.00	4.045	732.75	0.00
127.50	0.00	4.045	732.75	0.00
128.00	0.00	4.045	732.75	0.00
128.50	0.00	4.045	732.75	0.00
129.00	0.00	4.045	732.75	0.00
129.50	0.00	4.045	732.75	0.00

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	4.045	732.75	0.00
130.50	0.00	4.045	732.75	0.00
131.00	0.00	4.045	732.75	0.00
131.50	0.00	4.045	732.75	0.00
132.00	0.00	4.045	732.75	0.00
132.50	0.00	4.045	732.75	0.00
133.00	0.00	4.045	732.75	0.00
133.50	0.00	4.045	732.75	0.00
134.00	0.00	4.045	732.75	0.00
134.50	0.00	4.045	732.75	0.00
135.00	0.00	4.045	732.75	0.00
135.50	0.00	4.045	732.75	0.00
136.00	0.00	4.045	732.75	0.00
136.50	0.00	4.045	732.75	0.00
137.00	0.00	4.045	732.75	0.00
137.50	0.00	4.045	732.75	0.00
138.00	0.00	4.045	732.75	0.00
138.50	0.00	4.045	732.75	0.00
139.00	0.00	4.045	732.75	0.00
139.50	0.00	4.045	732.75	0.00
140.00	0.00	4.045	732.75	0.00
140.50	0.00	4.045	732.75	0.00
141.00	0.00	4.045	732.75	0.00
141.50	0.00	4.045	732.75	0.00
142.00	0.00	4.045	732.75	0.00
142.50	0.00	4.045	732.75	0.00
143.00	0.00	4.045	732.75	0.00
143.50	0.00	4.045	732.75	0.00
144.00	0.00	4.045	732.75	0.00
144.50	0.00	4.045	732.75	0.00
145.00	0.00	4.045	732.75	0.00
145.50	0.00	4.045	732.75	0.00
146.00	0.00	4.045	732.75	0.00
146.50	0.00	4.045	732.75	0.00
147.00	0.00	4.045	732.75	0.00
147.50	0.00	4.045	732.75	0.00
148.00	0.00	4.045	732.75	0.00
148.50	0.00	4.045	732.75	0.00
149.00	0.00	4.045	732.75	0.00
149.50	0.00	4.045	732.75	0.00
150.00	0.00	4.045	732.75	0.00
150.50	0.00	4.045	732.75	0.00
151.00	0.00	4.045	732.75	0.00
151.50	0.00	4.045	732.75	0.00
152.00	0.00	4.045	732.75	0.00
152.50	0.00	4.045	732.75	0.00
153.00	0.00	4.045	732.75	0.00
153.50	0.00	4.045	732.75	0.00
154.00	0.00	4.045	732.75	0.00
154.50	0.00	4.045	732.75	0.00
155.00	0.00	4.045	732.75	0.00
155.50	0.00	4.045	732.75	0.00

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	4.045	732.75	0.00
156.50	0.00	4.045	732.75	0.00
157.00	0.00	4.045	732.75	0.00
157.50	0.00	4.045	732.75	0.00
158.00	0.00	4.045	732.75	0.00
158.50	0.00	4.045	732.75	0.00
159.00	0.00	4.045	732.75	0.00
159.50	0.00	4.045	732.75	0.00
160.00	0.00	4.045	732.75	0.00
160.50	0.00	4.045	732.75	0.00
161.00	0.00	4.045	732.75	0.00
161.50	0.00	4.045	732.75	0.00
162.00	0.00	4.045	732.75	0.00
162.50	0.00	4.045	732.75	0.00
163.00	0.00	4.045	732.75	0.00
163.50	0.00	4.045	732.75	0.00
164.00	0.00	4.045	732.75	0.00
164.50	0.00	4.045	732.75	0.00
165.00	0.00	4.045	732.75	0.00
165.50	0.00	4.045	732.75	0.00
166.00	0.00	4.045	732.75	0.00
166.50	0.00	4.045	732.75	0.00
167.00	0.00	4.045	732.75	0.00
167.50	0.00	4.045	732.75	0.00
168.00	0.00	4.045	732.75	0.00
168.50	0.00	4.045	732.75	0.00
169.00	0.00	4.045	732.75	0.00
169.50	0.00	4.045	732.75	0.00
170.00	0.00	4.045	732.75	0.00
170.50	0.00	4.045	732.75	0.00
171.00	0.00	4.045	732.75	0.00
171.50	0.00	4.045	732.75	0.00
172.00	0.00	4.045	732.75	0.00
172.50	0.00	4.045	732.75	0.00
173.00	0.00	4.045	732.75	0.00
173.50	0.00	4.045	732.75	0.00
174.00	0.00	4.045	732.75	0.00
174.50	0.00	4.045	732.75	0.00
175.00	0.00	4.045	732.75	0.00
175.50	0.00	4.045	732.75	0.00
176.00	0.00	4.045	732.75	0.00
176.50	0.00	4.045	732.75	0.00
177.00	0.00	4.045	732.75	0.00
177.50	0.00	4.045	732.75	0.00
178.00	0.00	4.045	732.75	0.00
178.50	0.00	4.045	732.75	0.00
179.00	0.00	4.045	732.75	0.00
179.50	0.00	4.045	732.75	0.00
180.00	0.00	4.045	732.75	0.00
180.50	0.00	4.045	732.75	0.00
181.00	0.00	4.045	732.75	0.00
181.50	0.00	4.045	732.75	0.00

Hydrograph for Pond ST-11: ST-11 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	4.045	732.75	0.00
182.50	0.00	4.045	732.75	0.00
183.00	0.00	4.045	732.75	0.00
183.50	0.00	4.045	732.75	0.00
184.00	0.00	4.045	732.75	0.00
184.50	0.00	4.045	732.75	0.00
185.00	0.00	4.045	732.75	0.00
185.50	0.00	4.045	732.75	0.00
186.00	0.00	4.045	732.75	0.00
186.50	0.00	4.045	732.75	0.00
187.00	0.00	4.045	732.75	0.00
187.50	0.00	4.045	732.75	0.00
188.00	0.00	4.045	732.75	0.00
188.50	0.00	4.045	732.75	0.00
189.00	0.00	4.045	732.75	0.00
189.50	0.00	4.045	732.75	0.00
190.00	0.00	4.045	732.75	0.00
190.50	0.00	4.045	732.75	0.00
191.00	0.00	4.045	732.75	0.00
191.50	0.00	4.045	732.75	0.00
192.00	0.00	4.045	732.75	0.00
192.50	0.00	4.045	732.75	0.00
193.00	0.00	4.045	732.75	0.00
193.50	0.00	4.045	732.75	0.00
194.00	0.00	4.045	732.75	0.00
194.50	0.00	4.045	732.75	0.00
195.00	0.00	4.045	732.75	0.00
195.50	0.00	4.045	732.75	0.00
196.00	0.00	4.045	732.75	0.00
196.50	0.00	4.045	732.75	0.00
197.00	0.00	4.045	732.75	0.00
197.50	0.00	4.045	732.75	0.00
198.00	0.00	4.045	732.75	0.00
198.50	0.00	4.045	732.75	0.00
199.00	0.00	4.045	732.75	0.00
199.50	0.00	4.045	732.75	0.00
200.00	0.00	4.045	732.75	0.00

Summary for Pond ST-12: ST-12

Inflow Area = 192.148 ac, 1.99% Impervious, Inflow Depth = 3.18" for 100-year, 24-hour event
Inflow = 79.59 cfs @ 17.26 hrs, Volume= 50.962 af
Outflow = 78.03 cfs @ 17.66 hrs, Volume= 38.986 af, Atten= 2%, Lag= 23.5 min
Primary = 78.03 cfs @ 17.66 hrs, Volume= 38.986 af

Routing by Stor-Ind method, Time Span= 0.00-200.00 hrs, dt= 0.10 hrs
Peak Elev= 733.00' @ 17.66 hrs Surf.Area= 8.201 ac Storage= 14.062 af

Plug-Flow detention time= 219.6 min calculated for 38.986 af (76% of inflow)
Center-of-Mass det. time= 106.1 min (1,282.0 - 1,175.9)

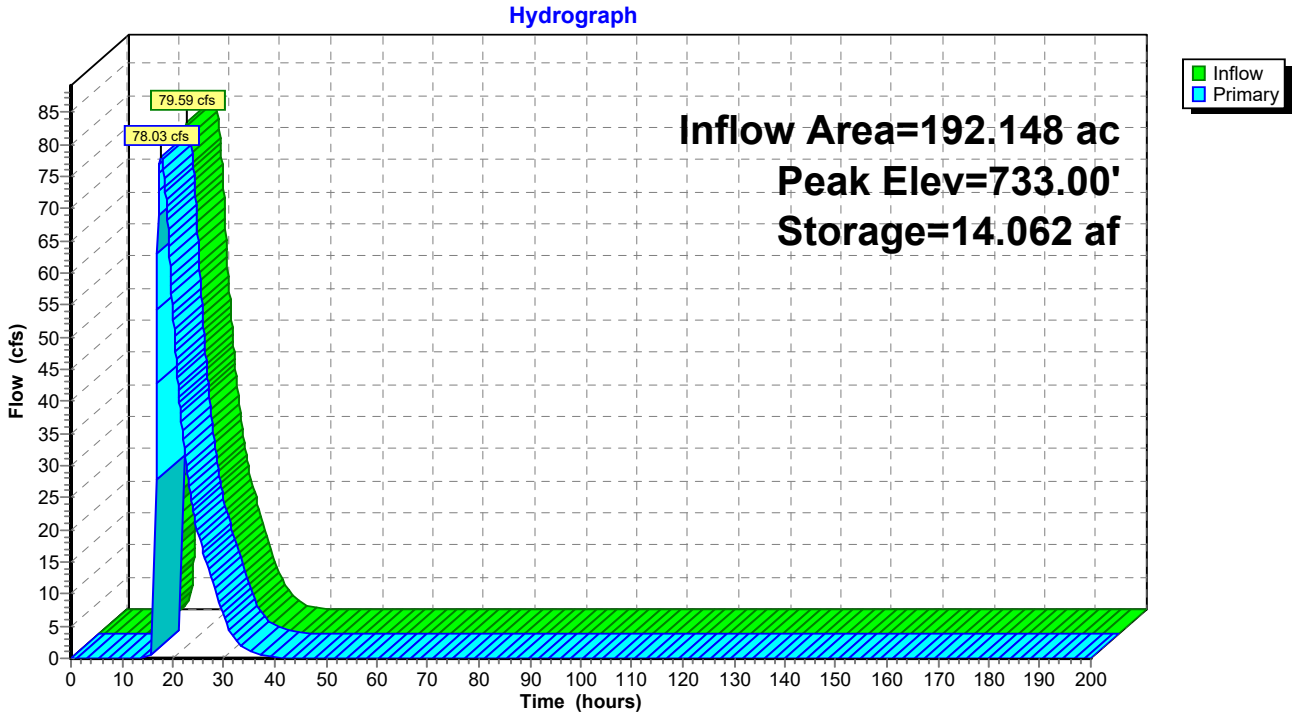
Volume	Invert	Avail.Storage	Storage Description
#1	731.25'	16.077 af	**Custom Stage Data (Prismatic)** Listed below

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
731.25	7.823	0.000	0.000
731.75	7.930	3.938	3.938
732.75	8.146	8.038	11.976
733.25	8.255	4.100	16.077

Device	Routing	Invert	Outlet Devices
#1	Primary	732.75'	**250.0' long x 7.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=77.96 cfs @ 17.66 hrs HW=733.00' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 77.96 cfs @ 1.23 fps)

Pond ST-12: ST-12



Hydrograph for Pond ST-12: ST-12

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.000	731.25	0.00
0.50	0.00	0.000	731.25	0.00
1.00	0.00	0.000	731.25	0.00
1.50	0.00	0.000	731.25	0.00
2.00	0.00	0.000	731.25	0.00
2.50	0.00	0.000	731.25	0.00
3.00	0.00	0.000	731.25	0.00
3.50	0.00	0.000	731.25	0.00
4.00	0.00	0.000	731.25	0.00
4.50	0.00	0.000	731.25	0.00
5.00	0.00	0.000	731.25	0.00
5.50	0.00	0.000	731.25	0.00
6.00	0.00	0.000	731.25	0.00
6.50	0.00	0.000	731.25	0.00
7.00	0.00	0.000	731.25	0.00
7.50	0.00	0.000	731.25	0.00
8.00	0.00	0.000	731.25	0.00
8.50	0.00	0.000	731.25	0.00
9.00	0.01	0.000	731.25	0.00
9.50	0.04	0.001	731.25	0.00
10.00	0.09	0.004	731.25	0.00
10.50	0.19	0.009	731.25	0.00
11.00	0.38	0.021	731.25	0.00
11.50	0.69	0.042	731.26	0.00
12.00	1.23	0.082	731.26	0.00
12.50	2.44	0.151	731.27	0.00
13.00	6.11	0.316	731.29	0.00
13.50	12.35	0.689	731.34	0.00
14.00	20.92	1.365	731.42	0.00
14.50	32.38	2.454	731.56	0.00
15.00	46.43	4.075	731.77	0.00
15.50	59.64	6.270	732.04	0.00
16.00	69.70	8.950	732.37	0.00
16.50	75.98	11.973	732.75	0.00
17.00	**78.83**	13.794	732.97	62.99
17.50	**78.70**	**14.056**	**733.00**	**77.70**
18.00	75.86	**14.043**	**733.00**	**76.96**
18.50	71.47	13.981	732.99	73.36
19.00	65.40	13.886	732.98	68.05
19.50	57.55	13.757	732.97	61.00
20.00	50.58	13.618	732.95	53.76
20.50	44.90	13.493	732.93	47.75
21.00	39.98	13.380	732.92	42.56
21.50	35.84	13.280	732.91	38.05
22.00	32.30	13.192	732.90	34.32
22.50	29.05	13.112	732.89	30.94
23.00	26.19	13.036	732.88	27.95
23.50	23.83	12.970	732.87	25.33
24.00	21.70	12.910	732.86	23.11
24.50	19.87	12.855	732.86	21.12
25.00	18.24	12.806	732.85	19.34
25.50	16.75	12.762	732.85	17.84

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
26.00	15.38	12.718	732.84	16.39
26.50	14.06	12.677	732.84	15.04
27.00	12.78	12.637	732.83	13.73
27.50	11.45	12.595	732.83	12.50
28.00	10.16	12.552	732.82	11.23
28.50	8.86	12.507	732.81	9.93
29.00	7.65	12.463	732.81	8.70
29.50	6.52	12.419	732.80	7.60
30.00	5.50	12.375	732.80	6.53
30.50	4.58	12.334	732.79	5.53
31.00	3.81	12.297	732.79	4.67
31.50	3.16	12.262	732.78	4.00
32.00	2.63	12.229	732.78	3.38
32.50	2.18	12.200	732.78	2.83
33.00	1.79	12.175	732.77	2.36
33.50	1.46	12.153	732.77	1.95
34.00	1.17	12.134	732.77	1.63
34.50	0.91	12.114	732.77	1.42
35.00	0.74	12.093	732.76	1.21
35.50	0.60	12.075	732.76	1.02
36.00	0.50	12.059	732.76	0.86
36.50	0.41	12.045	732.76	0.71
37.00	0.33	12.033	732.76	0.59
37.50	0.27	12.024	732.76	0.49
38.00	0.22	12.015	732.75	0.40
38.50	0.18	12.008	732.75	0.33
39.00	0.15	12.003	732.75	0.27
39.50	0.12	11.998	732.75	0.22
40.00	0.10	11.994	732.75	0.18
40.50	0.08	11.991	732.75	0.15
41.00	0.06	11.988	732.75	0.12
41.50	0.05	11.986	732.75	0.10
42.00	0.04	11.984	732.75	0.08
42.50	0.03	11.982	732.75	0.06
43.00	0.02	11.981	732.75	0.05
43.50	0.02	11.980	732.75	0.04
44.00	0.01	11.979	732.75	0.03
44.50	0.01	11.978	732.75	0.02
45.00	0.00	11.978	732.75	0.02
45.50	0.00	11.977	732.75	0.01
46.00	0.00	11.977	732.75	0.01
46.50	0.00	11.977	732.75	0.01
47.00	0.00	11.977	732.75	0.00
47.50	0.00	11.976	732.75	0.00
48.00	0.00	11.976	732.75	0.00
48.50	0.00	11.976	732.75	0.00
49.00	0.00	11.976	732.75	0.00
49.50	0.00	11.976	732.75	0.00
50.00	0.00	11.976	732.75	0.00
50.50	0.00	11.976	732.75	0.00
51.00	0.00	11.976	732.75	0.00
51.50	0.00	11.976	732.75	0.00

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	11.976	732.75	0.00
52.50	0.00	11.976	732.75	0.00
53.00	0.00	11.976	732.75	0.00
53.50	0.00	11.976	732.75	0.00
54.00	0.00	11.976	732.75	0.00
54.50	0.00	11.976	732.75	0.00
55.00	0.00	11.976	732.75	0.00
55.50	0.00	11.976	732.75	0.00
56.00	0.00	11.976	732.75	0.00
56.50	0.00	11.976	732.75	0.00
57.00	0.00	11.976	732.75	0.00
57.50	0.00	11.976	732.75	0.00
58.00	0.00	11.976	732.75	0.00
58.50	0.00	11.976	732.75	0.00
59.00	0.00	11.976	732.75	0.00
59.50	0.00	11.976	732.75	0.00
60.00	0.00	11.976	732.75	0.00
60.50	0.00	11.976	732.75	0.00
61.00	0.00	11.976	732.75	0.00
61.50	0.00	11.976	732.75	0.00
62.00	0.00	11.976	732.75	0.00
62.50	0.00	11.976	732.75	0.00
63.00	0.00	11.976	732.75	0.00
63.50	0.00	11.976	732.75	0.00
64.00	0.00	11.976	732.75	0.00
64.50	0.00	11.976	732.75	0.00
65.00	0.00	11.976	732.75	0.00
65.50	0.00	11.976	732.75	0.00
66.00	0.00	11.976	732.75	0.00
66.50	0.00	11.976	732.75	0.00
67.00	0.00	11.976	732.75	0.00
67.50	0.00	11.976	732.75	0.00
68.00	0.00	11.976	732.75	0.00
68.50	0.00	11.976	732.75	0.00
69.00	0.00	11.976	732.75	0.00
69.50	0.00	11.976	732.75	0.00
70.00	0.00	11.976	732.75	0.00
70.50	0.00	11.976	732.75	0.00
71.00	0.00	11.976	732.75	0.00
71.50	0.00	11.976	732.75	0.00
72.00	0.00	11.976	732.75	0.00
72.50	0.00	11.976	732.75	0.00
73.00	0.00	11.976	732.75	0.00
73.50	0.00	11.976	732.75	0.00
74.00	0.00	11.976	732.75	0.00
74.50	0.00	11.976	732.75	0.00
75.00	0.00	11.976	732.75	0.00
75.50	0.00	11.976	732.75	0.00
76.00	0.00	11.976	732.75	0.00
76.50	0.00	11.976	732.75	0.00
77.00	0.00	11.976	732.75	0.00
77.50	0.00	11.976	732.75	0.00

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
78.00	0.00	11.976	732.75	0.00
78.50	0.00	11.976	732.75	0.00
79.00	0.00	11.976	732.75	0.00
79.50	0.00	11.976	732.75	0.00
80.00	0.00	11.976	732.75	0.00
80.50	0.00	11.976	732.75	0.00
81.00	0.00	11.976	732.75	0.00
81.50	0.00	11.976	732.75	0.00
82.00	0.00	11.976	732.75	0.00
82.50	0.00	11.976	732.75	0.00
83.00	0.00	11.976	732.75	0.00
83.50	0.00	11.976	732.75	0.00
84.00	0.00	11.976	732.75	0.00
84.50	0.00	11.976	732.75	0.00
85.00	0.00	11.976	732.75	0.00
85.50	0.00	11.976	732.75	0.00
86.00	0.00	11.976	732.75	0.00
86.50	0.00	11.976	732.75	0.00
87.00	0.00	11.976	732.75	0.00
87.50	0.00	11.976	732.75	0.00
88.00	0.00	11.976	732.75	0.00
88.50	0.00	11.976	732.75	0.00
89.00	0.00	11.976	732.75	0.00
89.50	0.00	11.976	732.75	0.00
90.00	0.00	11.976	732.75	0.00
90.50	0.00	11.976	732.75	0.00
91.00	0.00	11.976	732.75	0.00
91.50	0.00	11.976	732.75	0.00
92.00	0.00	11.976	732.75	0.00
92.50	0.00	11.976	732.75	0.00
93.00	0.00	11.976	732.75	0.00
93.50	0.00	11.976	732.75	0.00
94.00	0.00	11.976	732.75	0.00
94.50	0.00	11.976	732.75	0.00
95.00	0.00	11.976	732.75	0.00
95.50	0.00	11.976	732.75	0.00
96.00	0.00	11.976	732.75	0.00
96.50	0.00	11.976	732.75	0.00
97.00	0.00	11.976	732.75	0.00
97.50	0.00	11.976	732.75	0.00
98.00	0.00	11.976	732.75	0.00
98.50	0.00	11.976	732.75	0.00
99.00	0.00	11.976	732.75	0.00
99.50	0.00	11.976	732.75	0.00
100.00	0.00	11.976	732.75	0.00
100.50	0.00	11.976	732.75	0.00
101.00	0.00	11.976	732.75	0.00
101.50	0.00	11.976	732.75	0.00
102.00	0.00	11.976	732.75	0.00
102.50	0.00	11.976	732.75	0.00
103.00	0.00	11.976	732.75	0.00
103.50	0.00	11.976	732.75	0.00

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	11.976	732.75	0.00
104.50	0.00	11.976	732.75	0.00
105.00	0.00	11.976	732.75	0.00
105.50	0.00	11.976	732.75	0.00
106.00	0.00	11.976	732.75	0.00
106.50	0.00	11.976	732.75	0.00
107.00	0.00	11.976	732.75	0.00
107.50	0.00	11.976	732.75	0.00
108.00	0.00	11.976	732.75	0.00
108.50	0.00	11.976	732.75	0.00
109.00	0.00	11.976	732.75	0.00
109.50	0.00	11.976	732.75	0.00
110.00	0.00	11.976	732.75	0.00
110.50	0.00	11.976	732.75	0.00
111.00	0.00	11.976	732.75	0.00
111.50	0.00	11.976	732.75	0.00
112.00	0.00	11.976	732.75	0.00
112.50	0.00	11.976	732.75	0.00
113.00	0.00	11.976	732.75	0.00
113.50	0.00	11.976	732.75	0.00
114.00	0.00	11.976	732.75	0.00
114.50	0.00	11.976	732.75	0.00
115.00	0.00	11.976	732.75	0.00
115.50	0.00	11.976	732.75	0.00
116.00	0.00	11.976	732.75	0.00
116.50	0.00	11.976	732.75	0.00
117.00	0.00	11.976	732.75	0.00
117.50	0.00	11.976	732.75	0.00
118.00	0.00	11.976	732.75	0.00
118.50	0.00	11.976	732.75	0.00
119.00	0.00	11.976	732.75	0.00
119.50	0.00	11.976	732.75	0.00
120.00	0.00	11.976	732.75	0.00
120.50	0.00	11.976	732.75	0.00
121.00	0.00	11.976	732.75	0.00
121.50	0.00	11.976	732.75	0.00
122.00	0.00	11.976	732.75	0.00
122.50	0.00	11.976	732.75	0.00
123.00	0.00	11.976	732.75	0.00
123.50	0.00	11.976	732.75	0.00
124.00	0.00	11.976	732.75	0.00
124.50	0.00	11.976	732.75	0.00
125.00	0.00	11.976	732.75	0.00
125.50	0.00	11.976	732.75	0.00
126.00	0.00	11.976	732.75	0.00
126.50	0.00	11.976	732.75	0.00
127.00	0.00	11.976	732.75	0.00
127.50	0.00	11.976	732.75	0.00
128.00	0.00	11.976	732.75	0.00
128.50	0.00	11.976	732.75	0.00
129.00	0.00	11.976	732.75	0.00
129.50	0.00	11.976	732.75	0.00

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
130.00	0.00	11.976	732.75	0.00
130.50	0.00	11.976	732.75	0.00
131.00	0.00	11.976	732.75	0.00
131.50	0.00	11.976	732.75	0.00
132.00	0.00	11.976	732.75	0.00
132.50	0.00	11.976	732.75	0.00
133.00	0.00	11.976	732.75	0.00
133.50	0.00	11.976	732.75	0.00
134.00	0.00	11.976	732.75	0.00
134.50	0.00	11.976	732.75	0.00
135.00	0.00	11.976	732.75	0.00
135.50	0.00	11.976	732.75	0.00
136.00	0.00	11.976	732.75	0.00
136.50	0.00	11.976	732.75	0.00
137.00	0.00	11.976	732.75	0.00
137.50	0.00	11.976	732.75	0.00
138.00	0.00	11.976	732.75	0.00
138.50	0.00	11.976	732.75	0.00
139.00	0.00	11.976	732.75	0.00
139.50	0.00	11.976	732.75	0.00
140.00	0.00	11.976	732.75	0.00
140.50	0.00	11.976	732.75	0.00
141.00	0.00	11.976	732.75	0.00
141.50	0.00	11.976	732.75	0.00
142.00	0.00	11.976	732.75	0.00
142.50	0.00	11.976	732.75	0.00
143.00	0.00	11.976	732.75	0.00
143.50	0.00	11.976	732.75	0.00
144.00	0.00	11.976	732.75	0.00
144.50	0.00	11.976	732.75	0.00
145.00	0.00	11.976	732.75	0.00
145.50	0.00	11.976	732.75	0.00
146.00	0.00	11.976	732.75	0.00
146.50	0.00	11.976	732.75	0.00
147.00	0.00	11.976	732.75	0.00
147.50	0.00	11.976	732.75	0.00
148.00	0.00	11.976	732.75	0.00
148.50	0.00	11.976	732.75	0.00
149.00	0.00	11.976	732.75	0.00
149.50	0.00	11.976	732.75	0.00
150.00	0.00	11.976	732.75	0.00
150.50	0.00	11.976	732.75	0.00
151.00	0.00	11.976	732.75	0.00
151.50	0.00	11.976	732.75	0.00
152.00	0.00	11.976	732.75	0.00
152.50	0.00	11.976	732.75	0.00
153.00	0.00	11.976	732.75	0.00
153.50	0.00	11.976	732.75	0.00
154.00	0.00	11.976	732.75	0.00
154.50	0.00	11.976	732.75	0.00
155.00	0.00	11.976	732.75	0.00
155.50	0.00	11.976	732.75	0.00

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	11.976	732.75	0.00
156.50	0.00	11.976	732.75	0.00
157.00	0.00	11.976	732.75	0.00
157.50	0.00	11.976	732.75	0.00
158.00	0.00	11.976	732.75	0.00
158.50	0.00	11.976	732.75	0.00
159.00	0.00	11.976	732.75	0.00
159.50	0.00	11.976	732.75	0.00
160.00	0.00	11.976	732.75	0.00
160.50	0.00	11.976	732.75	0.00
161.00	0.00	11.976	732.75	0.00
161.50	0.00	11.976	732.75	0.00
162.00	0.00	11.976	732.75	0.00
162.50	0.00	11.976	732.75	0.00
163.00	0.00	11.976	732.75	0.00
163.50	0.00	11.976	732.75	0.00
164.00	0.00	11.976	732.75	0.00
164.50	0.00	11.976	732.75	0.00
165.00	0.00	11.976	732.75	0.00
165.50	0.00	11.976	732.75	0.00
166.00	0.00	11.976	732.75	0.00
166.50	0.00	11.976	732.75	0.00
167.00	0.00	11.976	732.75	0.00
167.50	0.00	11.976	732.75	0.00
168.00	0.00	11.976	732.75	0.00
168.50	0.00	11.976	732.75	0.00
169.00	0.00	11.976	732.75	0.00
169.50	0.00	11.976	732.75	0.00
170.00	0.00	11.976	732.75	0.00
170.50	0.00	11.976	732.75	0.00
171.00	0.00	11.976	732.75	0.00
171.50	0.00	11.976	732.75	0.00
172.00	0.00	11.976	732.75	0.00
172.50	0.00	11.976	732.75	0.00
173.00	0.00	11.976	732.75	0.00
173.50	0.00	11.976	732.75	0.00
174.00	0.00	11.976	732.75	0.00
174.50	0.00	11.976	732.75	0.00
175.00	0.00	11.976	732.75	0.00
175.50	0.00	11.976	732.75	0.00
176.00	0.00	11.976	732.75	0.00
176.50	0.00	11.976	732.75	0.00
177.00	0.00	11.976	732.75	0.00
177.50	0.00	11.976	732.75	0.00
178.00	0.00	11.976	732.75	0.00
178.50	0.00	11.976	732.75	0.00
179.00	0.00	11.976	732.75	0.00
179.50	0.00	11.976	732.75	0.00
180.00	0.00	11.976	732.75	0.00
180.50	0.00	11.976	732.75	0.00
181.00	0.00	11.976	732.75	0.00
181.50	0.00	11.976	732.75	0.00

Hydrograph for Pond ST-12: ST-12 (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
182.00	0.00	11.976	732.75	0.00
182.50	0.00	11.976	732.75	0.00
183.00	0.00	11.976	732.75	0.00
183.50	0.00	11.976	732.75	0.00
184.00	0.00	11.976	732.75	0.00
184.50	0.00	11.976	732.75	0.00
185.00	0.00	11.976	732.75	0.00
185.50	0.00	11.976	732.75	0.00
186.00	0.00	11.976	732.75	0.00
186.50	0.00	11.976	732.75	0.00
187.00	0.00	11.976	732.75	0.00
187.50	0.00	11.976	732.75	0.00
188.00	0.00	11.976	732.75	0.00
188.50	0.00	11.976	732.75	0.00
189.00	0.00	11.976	732.75	0.00
189.50	0.00	11.976	732.75	0.00
190.00	0.00	11.976	732.75	0.00
190.50	0.00	11.976	732.75	0.00
191.00	0.00	11.976	732.75	0.00
191.50	0.00	11.976	732.75	0.00
192.00	0.00	11.976	732.75	0.00
192.50	0.00	11.976	732.75	0.00
193.00	0.00	11.976	732.75	0.00
193.50	0.00	11.976	732.75	0.00
194.00	0.00	11.976	732.75	0.00
194.50	0.00	11.976	732.75	0.00
195.00	0.00	11.976	732.75	0.00
195.50	0.00	11.976	732.75	0.00
196.00	0.00	11.976	732.75	0.00
196.50	0.00	11.976	732.75	0.00
197.00	0.00	11.976	732.75	0.00
197.50	0.00	11.976	732.75	0.00
198.00	0.00	11.976	732.75	0.00
198.50	0.00	11.976	732.75	0.00
199.00	0.00	11.976	732.75	0.00
199.50	0.00	11.976	732.75	0.00
200.00	0.00	11.976	732.75	0.00

Attachment I

Sediment Trap Dewatering Calculation

CALCULATION FOR DEWATERING

Drainage area ID	Sediment Trap ID	Total Drainage Area	Total Dewatering Volume (67 CY/ AC)	Discharge through Infilteration (From HydroCAD)	No. of Available drain tiles	Diameter of Existing Drain Tile Considered	Discharge through Existing drain tiles	Total Discharge	Time required for Dewatering
		(AC)	(CF)	(CFS)	(NOS)	(INCH)	(CFS)	(CFS)	(Hrs.)
DA-01	ST-01	71	128,228	0.10	4	6	0.18	0.82	43
DA-02	ST-02	77	139,393	0.10	4	6	0.18	0.82	47
DA-03-A	ST-03-A	83	149,452	0.11	1	10	0.61	0.72	58
DA-03-B	ST-03-B	19	34,284	0.03	1	6	0.18	0.21	45
DA-04-A	ST-04-A	44	80,234	0.06	1	10	0.61	0.67	33
DA-04-B	ST-04-B	20	35,530	0.02	1	6	0.18	0.20	49
DA-05-A	ST-05-A	58	104,760	0.08	1	10	0.61	0.69	42
DA-05-B	ST-05-B	26	47,066	0.03	1	6	0.18	0.21	62
DA-06	ST-06	142	257,304	0.18	2	10	0.61	1.40	51
DA-07	ST-07	44	78,871	0.05	1	8	0.35	0.40	55
DA-08	ST-08	35	62,513	0.05	1	10	0.61	0.66	26
DA-09-A	ST-09-A	12	21,283	0.01	1	6	0.18	0.19	31
DA-09-B	ST-09-B	13	24,368	0.02	1	6	0.18	0.20	34
DA-10	ST-10	24	43,569	0.03	1	10	0.61	0.64	19
DA-11	ST-11	63	114,695	0.09	1	10	0.61	0.70	46
DA-12	ST-12	192	347,594	0.25	2	10	0.61	1.47	66

Existing Drain Tile - Capacity calculation Report

Solve For	Friction Method	Roughness Coefficient	Channel Slope (%)
Discharge	Manning Formula	0.010	0.10000
Discharge	Manning Formula	0.010	0.10000
Discharge	Manning Formula	0.010	0.10000

Normal Depth (in)	Diameter (in)	Discharge (ft³/s)	Percent Full (%)
4.00	6.00	0.18	66.7
5.00	8.00	0.35	62.5
6.00	10.00	0.61	60.0

Velocity (ft/s)	Maximum Discharge (ft³/s)	Label
1.30	0.25	Circular Pipe - 1
1.55	0.53	Circular Pipe - 2
1.77	0.97	Circular Pipe - 3

Appendix G. Dewatering Plan

Dewatering Procedure

The dewatering of groundwater is not anticipated since no boreholes encountered groundwater during on-site geotechnical investigations. If dewatering is required during cable trenching and boring pit operations, localized dewatering methods will provide dry work areas and conditions. Dewatering practices will likely occur no more than 3 days but will not exceed a maximum of 7 days per the General Permit. A traditional sump pump will be used to pull water from excavations. Discharge from the pumps will be routed to sediment traps. Any discharge would occur offsite via the emergency spillway structures within the sediment traps. Sediment traps will limit turbidity off all discharge leaving site. Construction may designate additional discharge points as needed based on site conditions if surface or ground water enters excavations and other portions of work areas.

Appendix H. **Additional Information**

Included in Appendix H:

- Geotechnical Report
- Hydrology Study
- Solar Seeding Plan
- Vegetation Management Plan

MOTT MACDONALD

AVANGRID RENEWABLES

Avangrid Renewables Powell Creek Solar Project

Geotechnical Report

June 16, 2020



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Powell Creek Solar Project

Geotechnical Report

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Executive Summary

Mott MacDonald was retained by Avangrid Renewables LLC (Avangrid) to conduct a geotechnical investigation program for the proposed Powell Creek solar development, located in Miller City, Putnam County, Ohio. The purpose of this Geotechnical Report is to provide Information for Bidders (IFB) to inform them of expected subsurface conditions for the proposed photovoltaic development, as well as support their respective design. It is expected that the successful Contractor may perform their own final investigation and studies, as required, to complete detailed design and construction.

We understand the Powell Creek solar development will include buried cabling, access roadways, substation(s), and post-mounted solar modules. We understand the project is still in the planning phase, and that the number of solar panels, length of roadways, and length of cabling and/or transmission lines has not been confirmed at this time. The project area encompasses over approximately 1,000 acres of public and private land, which is generally vegetated with relatively flat terrain.

This Geotechnical Report summarizes the field geotechnical investigation program conducted by Mott MacDonald in May and June 2020. Studies completed by Mott MacDonald included a desktop review of local geology, test pit investigations, soil boring explorations, pile load testing, field electrical resistivity testing, laboratory thermal resistivity testing, laboratory soil material testing, and limited chemical testing (i.e., corrosivity and sulfates). An Investigation Location Plan identifying our sampling and testing locations is provided as **Appendix A**.

Mott MacDonald's field investigation, described in **Section 3**, included 14 exploratory test pits, 31 soil borings, 54 pile load tests, as well as laboratory thermal resistivity testing of soil samples collected from 12 widely-spaced, representative locations, and in-situ electrical resistivity testing at 24 locations. Test pits and soil borings were observed by a Mott MacDonald geotechnical representative under the direction of a Professional Engineer. Test pit photo logs and soil boring logs are provided in **Appendices C and D**, respectfully. Explorations generally encountered stiff clayey soils down to 20 feet below grade; more detail is provided in **Section 4**.

As previously introduced, a pile load testing program was completed to determine representative performance of W6x9 and W6x12 piles as solar panel foundations, evaluated with varying embedments across the project site. Both lateral load testing as well as uplift testing were completed on each pile during our testing program. The results of the pile load testing are summarized within **Section 6** and are provided, in full detail, within **Appendix H**.

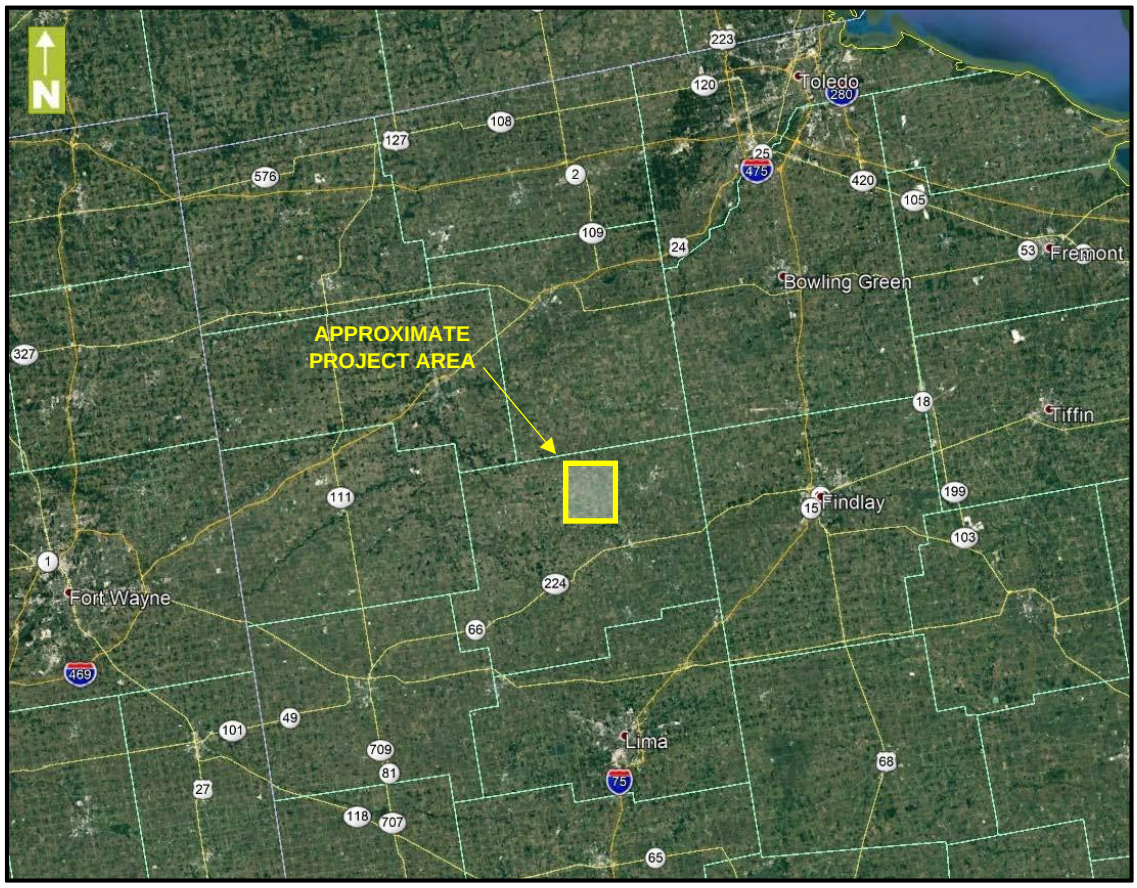
Based on the subsurface conditions encountered and results of laboratory testing, Mott MacDonald has prepared preliminary geotechnical recommendations for the various portions of civil/site grading, roadway improvements, foundation design, and construction for consideration by the designer of the solar development. Geotechnical considerations and construction recommendations for solar array and substation foundations are discussed in **Sections 8 and 9.**

1 Introduction

Mott MacDonald was retained by Avangrid to conduct a geotechnical investigation program in support of the proposed Powell Creek Solar project within Miller City of Putnam County, Ohio. It is our understanding that the proposed solar development encompasses over 1,800 acres and expected to generate approximately 150 megawatts (MWac) of renewable solar energy.

Our supporting geotechnical investigation program included an initial desktop review of local geology, exploratory soil borings, test pit excavations, electrical resistivity testing, pile load testing, as well as laboratory material index testing and thermal resistivity testing. This Geotechnical Report has been prepared to summarize the findings of our investigation program as well as provide geotechnical recommendations for the development of the Powell Creek Solar project. A Vicinity Plan depicting the approximate project area has been included as Figure 1. An Investigation Location Plan depicting our subsurface explorations is provided in **Appendix A**.

Figure 1 – Project Vicinity Plan



2 Geologic Desktop Study

Prior to our field investigation, Mott MacDonald conducted a desktop study of the local geology within the project area using publicly-available references including published maps and online geologic databases. Geologic materials reviewed within our study are provided as **Appendix B**.

2.1 Surficial Geology

Mott MacDonald reviewed the "Surficial Geology of the Defiance 30x60-Minute Quadrangle in Ohio" prepared by the Ohio Division of Geologic Survey which indicated the project area is located within Wisconsinan-aged Clay surficial material underlain by Till material. The Clay unit is described as "Massive to laminated; may contain interbedded silt and fine sand…" and is mapped to a depth of at least 10 feet below grade. The Till unit is described as "Unsorted mix of silt, clay, sand, gravel, and boulders…" and is mapped as a 40-foot thick layer.

Mott MacDonald additionally reviewed surficial soil mapping available from the Natural Resource Conservation Service (NRCS) Web Soil Survey application. NRCS was initially created by the US Department of Agriculture to provide reference information regarding soil characteristics for agricultural purposes, however it also provides preliminary information related to soil chemistry. NRCS identifies the project area to be primarily comprised of the Paulding Clay unit as well as the Toledo Silty Clay Loam and Roselms Silty Clay Loam units, each of which are identified as clay-dominant soil formations. It should be noted that NRCS descriptions are generally limited to the upper five (5) feet of overburden. A summary of predominant soil unit properties is provided as Table 1.

Table 1 – NRCS Soil Properties

Soil Unit	Drainage Class	Available Water Storage	Erosion Hazard
Paulding Clay	Very poorly drained	Low (~3.3 inches)	Slight
Toledo Silty Clay Loam	Very poorly drained	Moderate (~7.0 inches)	Slight
Roselms Silty Clay Loam	Somewhat poorly drained	Moderate (~7.3 inches)	Slight to Moderate

2.1.1 Predominant Soil Units – Corrosivity Potential

Mott MacDonald notes that NRCS mapping indicates the native soil units generally present a low to moderate risk of corrosion to concrete and a high risk of corrosion to steel. To confirm NRCS's preliminary assessment of the material, Mott MacDonald collected additional samples from two (2) to three (3) feet below grade within 24 investigation locations for corrosivity testing. The results of the testing, completed by Atlantic Testing Laboratories (ATL) of Canton, New York, are summarized within Table 4 of **Section 5** and detailed within **Appendix F**.

2.1.2 Predominant Soil Units – Erodibility, Drainage Characteristics, Organic Content

Based on the findings of our desktop study and subsequent field investigation, it is expected that the organic content of natural soils should be negligible. It is expected that a thin layer of organics (topsoil) will exist near the surface in vegetated areas; however, the extent of this was identified to be minimal (average thickness of 6 inches) during our geotechnical investigation. It is typical for most developments that any surficial organics are stripped and appropriately staged on-site for re-use in vegetated areas.

At this time, it is not expected that construction will occur on slopes greater than 10 percent. With respect to erodibility of natural soils, or impacts to sensitive environmental, agricultural, and

human health or safety receptors, the topographic relief and nature of the project area is generally flat to gently-sloped with some vegetation thereby minimizing the concern for appreciable erosion. In addition, proper run-on/run-off control, soil erosion and sediment control, and good housekeeping measures should be implemented during construction, which will limit the erodibility of the native materials. It is expected that the proposed improvements should not impact existing groundwater, aquifer systems, historic slopes and relief, or create hazardous conditions with respect to local geology or landforms.

2.2 Bedrock Geology

Mott MacDonald reviewed geologic mapping made available by the Ohio Department of Natural Resources which indicated the bedrock beneath the project area is mapped as material of the Salina Group. The Salina Group consists predominantly of dolomite and is described as shades of gray and brown; very finely crystalline; mostly thin to medium beds and laminae; locally includes shale, anhydrite, and/or gypsum beds and laminae. Based on available surficial geological mapping, the depth to bedrock within the project area is assumed to exist at approximately 50 feet below ground surface.

2.3 Karst Geology

Ground subsidence, commonly referred to as “sinkholes”, is the local downward movement of surface material with little or no horizontal movement. Subsidence is a potential geologic hazard in areas where karst terrain occurs, or where underground mining has taken place. In karst terrain, limestone and dolomite bedrock (carbonate rock formations) are eroded by water and create karst features such as subsurface channels, caves, and sinkholes.

Based on Mott MacDonald’s review of available USGS mapping and our local experience, the bedrock formation beneath the project site is confirmed to be dolomite, a carbonate-bearing formation which can be susceptible to karst activity. In the general context of karst, however, limestone and gypsum tend to be relatively more active than dolomite with regard to sinkhole activity. Considering bedrock geology indicates that carbonate formations such as dolomite exist under the project area, Mott MacDonald also reviewed the USGS Mineral Resources On-Line Spatial Database which is used to report the presence or absence of sinkholes. Mott MacDonald found no historic evidence of karst formations or known sinkholes within the extents of the project area. Furthermore, no evidence of such karst geology nor surficial depressions were identified within our field investigation program and is therefore considered to be a low to negligible risk for the proposed solar farm.

Based on the above review and our field observations, karst is not expected to exist within the project area.

2.4 Geologic Impacts

It is our professional opinion that the construction of the proposed solar development will not create significant impacts to the regional geology provided appropriate construction practices and proper soil erosion and sediment control measures are maintained. The potential impacts considered include, but are not limited to, significant soil erosion, detrimental fracturing of bedrock, introduction of slippage or failure planes, and creation of subsurface instability.

3 Methodology

3.1 Soil Boring Explorations

Mott MacDonald retained Ohio TestBor, Inc. of Hinckley, Ohio to advance 31 geotechnical soil borings (B-01 through B-29, B-SS-1, and B-SS-2) drilled throughout the project area between May 11 and 27, 2020.

Each soil boring was advanced to approximately 20 feet below ground surface (BGS) using a track-mounted Diedrich D-50 drill rig to collect soil samples using the Standard Penetration Test (SPT) Method through hollow-stem augers in accordance with American Society for Testing and Materials (ASTM) Standard D1586. Soil samples were generally collected continuously within the upper 10 feet in each boring, then in five-foot intervals thereafter to the termination depth. Soil borings, proposed by Mott MacDonald and confirmed by Avangrid review, were located at relatively evenly-spread locations throughout the project's array area(s). Two (2) soil borings (B-SS-1 and B-SS-2) were advanced within the footprint of potential substation locations.

At select soil boring locations, auger cuttings were collected within four (4) feet of grade with the purpose of obtaining bulk soil samples for laboratory thermal resistivity and corrosion testing. As-drilled boring locations are reflected on the Investigation Location Plan provided as **Appendix A**. Upon completion, each borehole was backfilled to its existing grade with soil cuttings. All subsurface explorations were observed and logged by a Mott MacDonald geotechnical representative, under the direction of a Professional Engineer licensed in the State of Ohio.

3.2 Test Pit Explorations

Mott MacDonald retained Fenson Contracting, LLC of Fort Jennings, Ohio to excavate the 14 geotechnical test pits (TP-1 through TP-14) completed at select locations across the project's array area(s) between May 28 and 29, 2020 and are depicted in the Investigation Location Plan, provided as **Appendix A**.

All test pits were excavated using a Komatsu PC78MR trackhoe and were overseen and documented by a Mott MacDonald geotechnical representative under the direction of a Professional Engineer licensed in the State of Ohio. Soil strata changes, soil classification, and excavation depths were documented during each test pit excavation and are presented within the test pit logs provided as **Appendix D**. Test pits were excavated to approximately ten (10) feet below grade, and bulk soil samples were collected from select locations for laboratory testing. Upon completion, each test pit excavation was backfilled with native soil cuttings, bucket-tamped, and tracked over with the excavator to minimize any post-excavation settlement.

3.3 Electrical Resistivity Testing

As part of our field investigation program, Mott MacDonald performed field Electrical Resistivity Tomography (ERT) testing from June 5 through 7, 2020. Testing was conducted within two (2) potential substation locations as well as 22 other locations spaced throughout the proposed array area(s). In-situ soil resistivity measurements were obtained by utilizing the Wenner 4-Pin Method in accordance with ASTM G57 and IEEE Standard 80.

Two (2) mutually perpendicular traverses were collected at each location utilizing "a"-spacings of 2, 5, 10, 25, 50, and 100 feet. Test results are presented in **Appendix E**.

4 Investigation Results

Based on observations from our subsurface investigation program, Mott MacDonald has summarized the encountered subsurface materials in **Section 4.1** below. It should be noted that this summary depicts a highly generalized representation of materials encountered, and soil boring and test pit logs, provided as **Appendices C and D**, respectively, should be referenced for detailed and location-specific information. Although conditions were observed to be largely consistent throughout the project area, additional investigations should be performed by the successful EPC, as needed, to confirm Mott MacDonald's findings and interpretations.

4.1 Subsurface Conditions

Table 2 presents a summary of subsurface materials encountered, in approximate depth order, within our subsurface investigation.

Table 2 – Generalized Subsurface Profile

Average Depth	Material	Average Consistency	Description
0' – 0.5'	Topsoil	-	Approximately six (6) inches (up to 12 inches in a few locations) of topsoil existed at the surface within most of the project area.
0.5 – 8'	Clay (CL)	Medium Stiff	Brown to gray medium stiff clay was encountered beneath the topsoil within each boring location. Average pocket penetrometer measurements of approximately 2.5 tons per square foot were recorded within this interval, and generally exhibited a medium plasticity.
8' – 12'	Clay (CL)	Stiff	This upper clay layer transitioned to a more stiff consistency around eight (8) feet below grade. Similarly, average pocket penetrometer measurements of approximately 2.5 tons per square foot were recorded within this interval, and generally exhibited a medium plasticity.
12' – 20'	Clay (CH)	Very Stiff	Stiff to very stiff, dark brown clay was observed beneath the upper clay stratum. This layer generally exhibited a high plasticity and extended to the boring termination depths of 20 feet below grade.

Mott MacDonald notes that the observed subsurface conditions were largely consistent across the project site.

4.2 Groundwater

At the time of our investigation, groundwater was not encountered within any of the boreholes or test pit excavations. No monitoring wells were installed as part of our investigation scope. It should be noted that water conditions are ephemeral and may fluctuate due to seasonal and climate conditions.

5 Laboratory Testing

5.1 Soil Index Testing

Representative soil samples collected within our investigation program were submitted to Atlantic Testing Laboratories (ATL) of Canton, New York, an accredited geotechnical laboratory for testing of material index properties in accordance with their applicable ASTM standards. A summary of laboratory testing data is provided in Table 3 below. Complete, as-received laboratory results have been provided as **Appendix F**.

Table 3 – Laboratory Testing Summary

Boring ID	Sample	Depth	% Gravel	% Sand	% Fines		Moisture Content (%)
					Silt	Clay	
B-5	S-3	4’-6’	0	5	21	73	20.0
B-10	S-6	13’-15’	0	1	20	79	25.8
B-15	S-2	2’-4’	0	4	17	79	22.1
B-16	S-3	4’-6’	0	2	19	79	24.6
B-20	S-5	8’-10’	0	1	21	78	24.1
B-27	S-6	13’-15’	1	1	15	83	25.9
B-SS-1	S-2	2’-4’	0	1	20	79	26.6
Boring ID	**Sample**	**Depth**	**Liquid Limit**	**Plastic Limit**	**Plasticity Index**		**Moisture Content (%)**
B-1	S-3	4’-6’	-	-	-		19.3
B-2	S-6	13’-15’	42	20	22		20.7
B-3	S-2	2’-4’	-	-	-		28.1
B-4	S-6	13’-15	-	-	-		27.6
B-7	S-5	8’-10’	65	27	38		35.3
B-8	S-3	4’-6’	33	19	14		25.4
B-9	S-4	6’-8’	57	26	31		25.3
B-11	S-2	2’-4’	-	-	-		27.4
B-13	S-6	13’-15’	-	-	-		20.9
B-14	S-4	6’-8’	67	25	42		26.8
B-15	S-2	2’-4’	-	-	-		22.1
B-17	S-6	13’-15’	-	-	-		21.5
B-19	S-2	2’-4’	65	23	42		22.1
B-21	S-7	18’-20’	52	25	27		25.9
B-22	S-3	4’-6’	-	-	-		21.6
B-24	S-5	8’-10’	-	-	-		24.5
B-25	S-3	4’-6’	-	-	-		21.2
B-26	S-5	8’-10’	55	24	31		25.3
B-27	S-6	13’-15’	-	-	-		25.9
B-28	S-2	2’-4’	75	24	51		20.6
B-29	S-4	6’-8’	-	-	-		23.8
B-SS-2	S-3	4’-6’	56	24	32		22.4

5.2 Corrosivity Testing

Mott MacDonald collected bulk samples from two (2) to three (3) feet below grade within 22 array locations throughout the project area, as well as two (2) substation locations, for laboratory corrosivity testing. The results of the testing, also completed by ATL, are summarized within Table 4 and detailed within **Appendix F**.

Table 4 – Corrosivity Testing Summary

Location ID	pH (average)	Sulfate [mg/kg]	Chloride [mg/kg]	Soil Box (Calculated Resistivity) [Ω/cm]	Redox Potential (average)
TP-01	7.85	4,000	50	8,643	8.7
TP-02	7.75	13,800	25	9,417	14.7
TP-03	7.92	11,600	40	7,998	-2.3
TP-04	7.16	5,100	35	8,514	-7.0
TP-05	7.39	4,800	30	10,062	1.0
TP-06	7.53	9,800	30	6,708	4.7
TP-07	7.78	5,300	45	7,482	4.7
TP-08	6.84	5,900	20	8,643	-3.0
TP-09	7.01	2,300	45	9,159	-13.7
TP-10	7.21	1,300	35	7,611	-6.7
TP-11	7.53	3,800	15	5,547	17.7
TP-12	7.21	3,900	40	6,321	5.7
TP-13	7.41	6,100	50	6,579	10.0
TP-14	7.08	2,300	45	9,288	-1.7
B-12	8.06	200	30	27,090	-24.7
B-13	7.06	800	50	5,934	5.3
B-14	7.82	1,100	50	7,353	21.0
B-24	6.92	1,200	50	5,547	-6.3
B-26	6.55	5,600	55	9,933	-10.3
B-27	6.72	2,200	40	7,998	3.3
B-28	6.98	1,200	25	6,579	5.7
B-29	7.43	600	35	8,514	-0.7
B-SS-1	8.26	0	40	21,930	-30.7
B-SS-2	6.55	1,000	35	5,031	16.7

The results of the corrosivity testing indicate a mild to moderate risk of corrosion to the proposed foundation elements and should be considered during material selection and design. Additional corrosion considerations are included within Section 8.2.

5.3 Laboratory Thermal Resistivity Testing

As briefly discussed in Section 3.1.1, Mott MacDonald collected bulk soil samples from 12 investigation locations between three (3) and five (5) feet below grade for laboratory testing of Thermal Resistivity. Soils were collected in a five-gallon bucket and delivered to ATL's laboratory in Rochester, New York. The soil was compacted to 85 percent of its Standard Proctor Density in accordance with ASTM D698, and Thermal Resistivity Testing was conducted in accordance with IEEE Standard 442-2017. Results of the thermal resistivity are summarized within Table 5, and the complete report is provided as **Appendix G**.

Table 5 – Thermal Resistivity Testing Values

Sample ID	Material Type	Thermal Resistivity Values at Various Moisture Contents						Received Moisture Content (%)	Re-Molded Dry Density (lb/ft^3)
		% water	% water	% water	% water	% water	% water		
		(ºC-cm/W)	(ºC-cm/W)	(ºC-cm/W)	(ºC-cm/W)	(ºC-cm/W)	(ºC-cm/W)		
TP-01	CLAY, little Silt	0.00	2.96	7.20	12.05	16.77	23.01	25.6	82.5
		318	**278**	**205**	**156**	**128**	**112**		
TP-02	CLAY, trace Silt	0.00	3.75	8.85	12.71	17.64	25.10	29.1	82.7
		366	**296**	**194**	**148**	**121**	**100**		
TP-04	CLAY, trace Silt	0.00	2.60	7.04	11.88	16.64	23.01	24.2	83.4
		331	**287**	**225**	**168**	**147**	**112**		
TP-05	CLAY, trace Silt	0.00	2.72	6.97	11.87	16.70	22.70	30.7	83.0
		315	**280**	**222**	**170**	**126**	**110**		
TP-06	CLAY, trace Silt	0.00	2.50	7.34	12.22	17.17	22.10	25.0	84.5
		366	**294**	**219**	**156**	**125**	**104**		
TP-07	CLAY, trace Silt	0.00	2.34	6.94	11.88	16.82	22.81	27.7	82.5
		352	**307**	**242**	**175**	**133**	**113**		
TP-08	CLAY, little Silt	0.00	4.49	8.40	12.25	18.49	25.05	25.9	81.3
		355	**272**	**211**	**165**	**128**	**108**		
TP-10	CLAY, trace Silt	0.00	4.16	8.09	12.36	18.38	24.16	23.1	82.1
		337	**264**	**214**	**162**	**130**	**99**		
TP-12	CLAY, trace Silt	0.00	2.74	7.24	12.12	17.17	23.57	25.3	84.5
		353	**300**	**220**	**154**	**123**	**101**		
TP-14	CLAY, trace Silt	0.00	2.44	5.76	9.79	14.81	20.67	25.1	84.8
		356	**306**	**249**	**178**	**136**	**107**		
B-SS-1	CLAY, little Silt	0.00	2.56	7.43	12.01	17.02	22.86	24.3	84.5
		325	**273**	**184**	**142**	**124**	**106**		
B-SS-2	CLAY	0.00	3.67	7.96	11.40	17.05	24.01	27.8	86.6
		312	**256**	**204**	**164**	**118**	**96**		

For design purposes, resistivity values obtained for the in-situ (received) moisture conditions, or drier, should be considered. It should be noted that our investigation was conducted in late May, and temperature and water table fluctuations due to seasonal variations should be considered.

6 Pile Load Testing

Mott MacDonald, supported by J&B Solar, LLC (J&B) of Cocoa, Florida, conducted pile load testing of W6x9 and W6x12 steel sections at 27 locations across the proposed solar array area(s) between June 2 and 7, 2020. Each test location included two (2) piles installed approximately 10 feet apart; some locations included identical pile sections and embedments to confirm measurements, and other locations included variable pile sections and/or embedments to assess the pile's performance under differing subsurface conditions. The load testing program was overseen and logged by a Mott MacDonald geotechnical representative.

Prior to installing piles, most test locations (excluding LT-17, 20, 21, 23, and 27) were pre-augered to two (2) feet below grade to remove any additional capacity from the upper soil layer to simulate frost impact. Each steel pile was then installed via direct push to significant resistance, then driven to their targeted depths using a Vermeer PD-10 Pile Driver.

6.1 Uplift Load Testing

Once driven to the targeted embedment depth (varying between 5 and 9 feet BGS), an uplift load test was performed on each test pile in accordance with the ASTM D3689 (uplift) test method. The tension load was applied through the hydraulic force of a JCB 510-56 telecoping forklift's extending arm in one-minute, 500-pound increments up to 2,000 pounds. Once achieved, the load was then unloaded in similar increments and timing. After the tension was fully released, the piles were reloaded up to a maximum uplift load of 10,000 pounds, where applicable, to determine the load, if reached, which resulted in 0.25, 0.50 and 1-inch deflection.

6.2 Lateral Load Testing

A lateral load test was performed at each test location, following each uplift load test, in accordance with ASTM D3966 (lateral) test method. Each test load was similarly applied in one-minute, 500-pound increments up to 4,000 pounds, where feasible. Once achieved, the load was immediately released and reloaded up to a maximum deflection of one-inch, if not already achieved. Following completion of testing, piles were removed using the JCB 510-56 telescoping forklift equipment and disposed of off-site by J&B.

6.3 Results

Table 6 presents the summarized results of the pile load testing program at each test location. Complete Load Testing Logs are provided as **Appendix H** and should be referenced for detailed information.

Table 6 – Pile Load Testing Summary

Load Test ID	Pile Section	Embedment Depth (ft.)	Pre-Augered Depth (ft.)	Approx. **Uplift** Load at 0.5-inch Deflection (lbs)	Approx. **Lateral** Load at 0.5-inch Deflection (lbs)
LT-01D	W6x9	9	2	8,300	1,900
LT-01S	W6x12	7	2	> 10,000	1,900
LT-02D	W6x9	8	2	> 10,000	1,800
LT-02S	W6x12	6	2	3,900	1,400
LT-03A	W6x9	7	2	> 10,000	2,800
LT-03B	W6x9	7	2	5,500	2,100
LT-04A	W6x12	6	2	4,400	2,200
LT-04B	W6x12	6	2	4,800	2,800
LT-05A	W6x9	8	2	5,200	1,900
LT-05B	W6x9	8	2	6,900	1,400
LT-06A	W6x12	7	2	4,400	2,200
LT-06B	W6x12	7	2	3,400	1,400
LT-07D	W6x9	7	2	> 10,000	2,300
LT-07S	W6x12	6	2	5,700	2,200
LT-08D	W6x9	9	2	> 10,000	2,400
LT-08S	W6x12	7	2	> 10,000	2,800
LT-09D	W6x9	8	2	> 10,000	1,900
LT-09S	W6x12	6	2	> 10,000	3,100
LT-10D	W6x9	9	2	> 10,000	1,600
LT-10S	W6x12	6	2	2,800	1,300
LT-11D	W6x9	8	2	> 10,000	2,000
LT-11S	W6x12	6	2	8,100	1,800
LT-12D	W6x9	7	2	5,200	1,800
LT-12S	W6x12	7	2	> 10,000	2,100
LT-13A	W6x12	7	2	4,300	1,900
LT-13B	W6x12	7	2	> 5,200	1,500
LT-14D	W6x9	9	2	> 10,000	1,900
LT-14S	W6x12	7	2	4,600	1,900
LT-15A	W6x9	8	2	9,100	1,500
LT-15B	W6x9	8	2	9,600	1,800
LT-16A	W6x9	6	2	9,900	2,000
LT-16B	W6x9	6	2	9,400	2,500

Table 6 – Pile Load Testing Summary (cont.)

Load Test ID	Pile Section	Embedment Depth (ft.)	Pre-Augered Depth (ft.)	Approx. **Uplift** Load at 0.5-inch Deflection (lbs)	Approx. **Lateral** Load at 0.5-inch Deflection (lbs)
LT-17A	W6x12	6	-	10,000	3,300
LT-17B	W6x9	7	-	> 10,000	3,000
LT-18A	W6x12	6	2	> 10,000	3,000
LT-18B	W6x12	6	2	9,000	2,200
LT-19A	W6x12	7	2	> 10,000	2,200
LT-19B	W6x12	7	2	> 10,000	2,500
LT-20A	W6x9	6	-	> 10,000	3,300
LT-20B	W6x9	6	-	> 10,000	3,200
LT-21A	W6x12	5	-	2,500	2,300
LT-21B	W6x12	6	-	2,900	2,400
LT-22A	W6x9	7	2	4,900	2,000
LT-22B	W6x9	7	2	3,800	2,000
LT-23A	W6x12	6	-	8,300	3,000
LT-23B	W6x12	6	-	9,600	2,500
LT-24A	W6x12	6	2	4,500	2,100
LT-24B	W6x12	6	2	8,300	2,000
LT-25A	W6x9	6	2	> 10,000	2,300
LT-25B	W6x9	6	2	> 10,000	2,200
LT-26A	W6x12	6	2	9,300	2,500
LT-26B	W6x12	6	2	4,400	2,500
LT-27A	W6x9	7	-	8,800	3,200
LT-27B	W6x9	7	-	7,600	3,200

Pile load testing results and subsurface observations were evaluated by Mott MacDonald using LPILE software to provide refined soil parameters. Although design loads have not been provided and, to our knowledge, a racking manufacturer has not been selected at the time of this report, design loads of approximately 1,000 pounds of tension, 1,700 pounds of compression, 1,500 pounds of lateral force, and overturning moments of up to 17,000 foot-pounds, per pile, were estimated based on our experience of similar-sized solar facilities.

Assuming three (3) inches of lateral deflection as the serviceability limit (measured at the pile head), four (4) feet of pile reveal, and the above-detailed assumptions, it is our professional opinion that W6x9 piles may achieve adequate capacity, both laterally and axially, embedded between 7 and 10 feet below grade, and W6x12 piles at approximately six (6) inches shallower. It is imperative that detailed structural calculations be performed to confirm these lengths; minimum embedments recommended herein are considered preliminary and are presented for planning purposes only.

Modeled to represent the results of the load testing program, Mott MacDonald recommends that the soil parameters depicted within Table 7 be considered for LPILE input or preliminary pile sizing purposes only. Recommended parameters and capacities for all other foundations or subsurface considerations are provided within Table 8; the calibrated parameters provided in Table 7 should only be used for the design of post foundations

Table 7 – Recommended Soil LPILE Parameters

					Lateral		Axial	
Depth	**Material Model**	**Effective Unit Weight**	**Internal Friction**	**Undrained Shear Strength**	**Modulus of Subgrade Reaction**	**Soil Strain (E_{50})**	**Unfactored End Bearing**	**Unfactored Skin Friction**
0'–2'	Soft Clay (Matlock)	100 lb/ft^3	0°	1 lb/ft^2	0 lb/in^3	1	0 lb/ft^2	0 lb/ft^2
2'–8'	Mod. Stiff Clay w/o free water	115 lb/ft^3	0°	900 lb/ft^2	300 lb/in^3	0.009	5,400 lb/ft^2	600 lb/ft^2
8'–20'	Mod. Stiff Clay w/o free water	120 lb/ft^3	0°	1,800 lb/ft^2	500 lb/in^3	0.007	16,000 lb/ft^2	720 lb/ft^2

Mott MacDonald notes that the soil parameters above represent the average conditions across the array areas considering two (2) feet of frost penetration.

7 Seismic Site Classification

Mott MacDonald utilized data obtained from the soil boring explorations to determine the Seismic Site Class for the proposed Powell Creek Solar Facility. Based on the results of our investigation program, boring B-16 was considered as the "site average" condition for seismic site classification purposes. In accordance with the SPT average N-value method as prescribed in Chapter 20 of the ASCE Standard 7-16 design manual, Site Class D for "Stiff Soil" should be utilized across the project site.

The following Site Class D seismic ground motion values were obtained from the USGS Seismic Hazard Maps, referenced in ASCE 7-16 Standard, for this site:

- 0.2 second spectral response acceleration, S_S= 0.146 g
- 1 second spectral response acceleration, S_1= 0.060 g
- Maximum spectral acceleration for short periods, S_{MS}= 0.234 g
- Maximum spectral acceleration for a 1-second period, S_{M1}= 0.144 g
- 5% damped design spectral acceleration at short periods, S_{DS}= 0.156 g
- 5% damped design spectral acceleration at 1-second period, S_{D1}= 0.096 g

7.1 Preliminary Seismic Evaluation

The seismic site class designated above is based on results from our investigation program. Backup data for the site class determination is provided as **Appendix I**. Based on our observation of subsurface conditions, computed Site Class ratings, and review of USGS's 2014 National Seismic Hazard Map, Mott MacDonald concludes that there is a low risk of significant seismic activity which may impact the proposed solar facility.

8 Foundation Considerations

This section presents geotechnical recommendations and potential constraints relative to the solar array and substation foundations that should be considered during design and construction. The contractor/designer is responsible to confirm the applicability of these recommendations to the design and, as applicable, perform supplemental and confirmatory studies and analyses.

8.1 Foundation Types

Mott MacDonald anticipates that, as typical with solar farm construction, embedded posts such as W6x9 or W6x12 steel H-piles may be used to support the proposed solar panels. Other conventional shallow foundations such as sonotubes, spread footings, or similar systems will likely also be utilized for equipment pads and associated support structures.

8.2 Corrosion Considerations

Given the soil's measured sulfate concentration, resistivity, and Redox potential summarized in Section 5.2 (Table 4), corrosion should be evaluated with respect to embedded steel posts.

In general, the corrosion of zinc in soil is on average considerably greater than in the atmosphere, but can vary greatly, even over short distances. This is essentially because of the varying moisture content and its heterogeneity, particularly along a vertical profile. In general terms, coarse, open-textures (such as gravels and sands) are less corrosive than fine-grained soils (such as silt, clay, and organics) which tend to hold water. Soil mineral content, pH, and oxygen content are also important indicators. Mineral content is easily appraised by measurement of soil resistivity; the lower the resistivity the greater the corrosion rate. If the moisture content of the soil is less than 17.5%, in general, it has been observed by others[1] that there will be minimal accelerated corrosion and the soil chloride ion concentration is reported to not have a significant effect on the corrosion rate of hot dip galvanizing. However, hot dip galvanized steel should not be used in contact with strong acids or strong alkalis (below pH 6 and above pH 12 respectively), which are not expected to be present at this project site.

Based on the subsurface conditions at the site, the site can be classified as Corrosive Category C3 ("Medium Corrosivity"). The rate of corrosion rate is therefore in the magnitude of 1.5 µm/year. Typically, a coating of 1.7 oz/ft^2 is the minimum coating for Grade 75 steel (W6x9) as specified by ASTM A123. For a 30-year life, the expected corrosion loss would be approximately 90 percent of the coating thickness, after which bare steel loss occur at approximately be 0.05 mil/year.

For concrete foundations, slabs, or other buried structures, Mott MacDonald recommends that Type II or V cement be evaluated for additional protection against corrosion and sulfate attack.

8.3 Frost Considerations

Within Putnam County, Ohio, frost depth is mapped to exist at approximately 36 inches below grade. As such, Mott MacDonald recommends that all structural foundations be founded at 36 inches (3 feet) below grade or deeper to ensure adequate protection from frost conditions which may jeopardize the integrity of subgrade soils and associated substructure. Small slab or isolated footing foundations supporting minor housekeeping structures with minimal loads and applied pressures (500 pounds per square foot or less) may be founded at shallower depths; however,

[1] *Guide to the Service Life of Hot-Dipped Galvanized Steel*, Galvanizer's Association of Australia, v. 2.1, June 2018

the contractor should implement measures such as free-draining, granular fill beneath the foundation extending beyond the frost depth.

8.4 Adfreeze Considerations

Given the location of the project and soils encountered, the potential for frost heave against post foundations should be considered. Fine-grained soils, or granular soils with greater than 10 percent are frost-susceptible due to the inability of entrapped moisture from infiltrating or evaporating prior to freezing. Trapped moisture will begin to create ice lenses, which will grip the steel posts or embedded structures, followed by ice-jacking due to frost heave. The phenomenon is more commonly referred to as “adfreeze stress”, which can be considered as an external, upward force applied to the post. The magnitude of the upward force will depend on the depth/thickness of the frost zone, the interface bond stress between embedded structure/material and the surrounding area, and the surface area of the structure/material in contact with this bond stress. As predominantly clayey soils were observed, Mott MacDonald recommends that an unfactored adfreeze (uplift) stress of 1,500 pounds per square foot (10.4 psi) be considered for the upper two (2) feet of overburden soil during panel foundation sizing and design.

8.5 Recommended Geotechnical Parameters for Non-Post Foundation Design

Based on our interpretation of the subsurface conditions observed within our investigation program, supplemented by laboratory results and pile load testing, Mott MacDonald recommends that the soil parameters, as depicted within Table 8, be considered for design purposes within the substation and array areas.

Table 8 – Recommended Design Soil Parameters

Depth	Material	Total Unit Weight	Internal Friction	Cohesion	Allowable Bearing Capacity	Allowable Side Resistance
0’–3’	Topsoil & Clay (frost zone)	100 lb/ft^3	0°	500 lb/ft^2	500 lb/ft^2	-
3’–8’	Upper Clay (CL)	110 lb/ft^3	0°	1,000 lb/ft^2	1,500 lb/ft^2	150 lb/ft^2
8’–12’	Middle Clay (CL)	115 lb/ft^3	0°	1,000 lb/ft^2	2,500 lb/ft^2	150 lb/ft^2
12’–20’	Lower Clay (CH)	120 lb/ft^3	0°	1,500 lb/ft^2	3,000 lb/ft^2	225 lb/ft^2

It should also be noted that the above-depicted capacities assume that foundations are placed below the frost depth, to at least 36 inches (3 feet) below grade. Shallower support elements should follow considerations detailed within **Section 8.3**. Additionally, Mott MacDonald recommends that allowable side resistance within the upper two (2) feet be neglected due to potential frost, disturbance, and erosion influences. These allowable capacities and resistances provided are based on a serviceability limit of one half-inch of maximum deflection. It should also be noted that these parameters have been established based on our engineering judgment and the results of our limited pile load testing program.

9 Construction Recommendations

This section presents geotechnical construction recommendations pertaining to panel and substation foundations that should be considered during final design and construction. The exact sizes of the panels and substation elements are not known at the time of this Report. The contractor/designer is responsible to confirm the applicability of these recommendations to the design and, as applicable, perform supplemental and confirmatory studies and analyses to confirm or revise the preliminary recommendations presented herein.

9.1 Excavation

Prior to foundation excavation work, clearing and grubbing of topsoil and vegetation (including any existing small trees, brush, and roots) within the solar array work areas should be expected. Topsoil, which was generally observed to be an average of approximately six (6) inches thick across the site, should be stripped and stockpiled discretely for the duration of construction. Stripped topsoil should be protected from erosion, managed in accordance with applicable ordinances, and should not be re-used as structural or fill material of any type.

Where shrubs and other vegetation are cleared, cut, grubbed, or ground, the stump and roots, where present, should be removed entirely and properly disposed of and managed on or off-site. Tree removal, if applicable, should include the root system and all surface roots larger than one-half inch in diameter. Voids created from tree clearing and stump and root removal should be completely filled with properly compacted structural fill to minimize future subsidence. General fill may be required to level areas and restore grade following removal of vegetation and compaction. Excavations resulting from tree removal should be cleaned of loose or disturbed material (including all previously-placed backfill) and dish-shaped (with sides sloped 3H:1V or flatter) to permit access for compaction equipment.

Excavations extending deeper than four (4) feet should be sloped, benched, or supported in accordance with OSHA or local governing regulations; the more stringent requirements shall apply. For shallow foundation construction, the base of the soil excavation should extend at least 18 inches horizontally beyond the footing in all directions.

Predominant overburden soils observed at the project site consist of fine-grained clayey soil. For temporary benching and excavation design considerations, overburden soils may be considered as “Type A” material in terms of OSHA’s soil classifications and should be sloped no steeper than ¾H:1V (horizontal to vertical). Classification and maximum permissible temporary excavation slope angles should be confirmed by the contractor’s “competent person” prior to excavation activities. Similarly, any proposed shoring or excavation support systems should be designed by the contractor’s “competent person” and certified by a Professional Engineer licensed in the State of Ohio.

9.2 Dewatering

It should be noted that overburden soils were observed to be generally dry at the time of our investigation program, and therefore dewatering of groundwater is not anticipated. Notwithstanding, the contractor should perform his or her own location-specific investigation prior to construction to confirm static water conditions and be prepared to dewater excavations as needed, of surface water or groundwater, to allow for foundation construction in-the-dry. Mott MacDonald anticipates that localized dewatering can be achieved with traditional sump-and-pump or similar methods. Water should be discharged away from prepared subgrade and compacted

fill surfaces. Grading should be accomplished to intercept and divert runoff away from excavations, prepared subgrade, and compacted fill surfaces.

9.3 Subgrade Preparation

Prior to installation of shallow concrete foundations, Mott MacDonald recommends overexcavating the subgrade by at least six (6) inches, lining the exposed material with a geotextile separation fabric, and bringing the subgrade back up to the design foundation elevation with compacted structural fill as specified within Table 9. Native material beneath the separation fabric should be inspected for unsatisfactory conditions such as standing water, frozen soil, organics, or deleterious materials. Should any unsatisfactory conditions exist within the native subgrade, the excavation should be undercut an additional six (6) inches (12 total inches beneath proposed foundation depth) prior to placement of the geotextile separation fabric.

Table 9 – Recommended Gradation of Structural Fill

Sieve Size	Percent Passing
3-inch	100
1 ½-inch	60 – 100
No. 4	30 – 60
No. 200	0 – 10

Structural fill material should be placed in loose lifts not exceeding eight (8) inches in height and be compacted to at least 95 percent of its Modified Proctor Density in accordance with ASTM D1557.

9.4 Earthwork

Mott MacDonald anticipates that some degree of earthmoving activities, including cut, fill, and grading work, will likely be required to facilitate the construction of the planned solar facility.

9.4.1 Cut

It is anticipated that some solar array locations may require cuts, beyond stripping of topsoil and removal of vegetation. Temporary excavations should follow recommendations presented within **Section 9.1**.

Permanent cut slopes surrounding solar array locations should have water diversion features employed at the top of the surrounding slopes to divert stormwater away from the solar array locations. Surrounding slopes should be located such that any surface gradient greater than two (2) percent is located at least 20 feet from the extent of the foundation footprint and should be limited to 3H:1V (horizontal to vertical) in maximum pitch unless additionally stabilized.

9.4.2 Fill and Backfill

Mott MacDonald notes that native fine-grained soils will likely be difficult to handle, place, and compact without proper moisture conditioning and protection. These soils may be re-used across the project area for fill in landscaped areas; however, it should not be used under or above foundations or load-bearing structures where typically imported structural fill is used. Native material used as backfill for cable trenches should be handled and placed at a moisture content at or above its optimum value to ensure representative thermal properties are maintained.

In areas around and above installed foundations, large utilities, and other buried site features, imported granular material, with less than 15 percent fine-grained content (passing No. 200 Sieve), should be used as general backfill. General backfill material should not be used beneath

any load-bearing structures and should be placed in loose lift thicknesses not exceeding 12 inches and be compacted to at least 95 percent of its Modified Proctor Density (ASTM D1557). Soil used as backfill should not be handled when frozen and should be free of excessive moisture, organics, and deleterious material.

In areas beneath foundations, access roads, and load-bearing structures, Mott MacDonald recommends structural fill as described in **Section 9.3** and Table 9.

9.5 Foundation Post Installation

It is anticipated that steel H-Piles (W6x9 or similar section) will be utilized to support the proposed solar panels. These steel posts are typically installed via direct-push, vibration, and/or percussive hammer methods. It is Mott MacDonald's professional opinion that these installation methods are appropriate at the Powell Creek Solar project site.

9.6 Access Roads

Mott MacDonald understands that an access road will be required to enter and exit the project site as well as provide access to the equipment pad locations. These proposed access roads are expected to be unpaved to accommodate occasional light vehicular traffic such as utility pickup truck or similar vehicle. As such, Mott MacDonald recommends that any additional access roads be constructed with at least eight (8) inches of crushed stone as specified within Table 10.

Table 10 – Recommended Gradation of Densely Graded Aggregate

Sieve Size	Percent Passing
1 ½-inch	100
¾-inch	55 – 90
No. 4	25 – 50
No. 50	5 – 20
No. 200	3 – 10

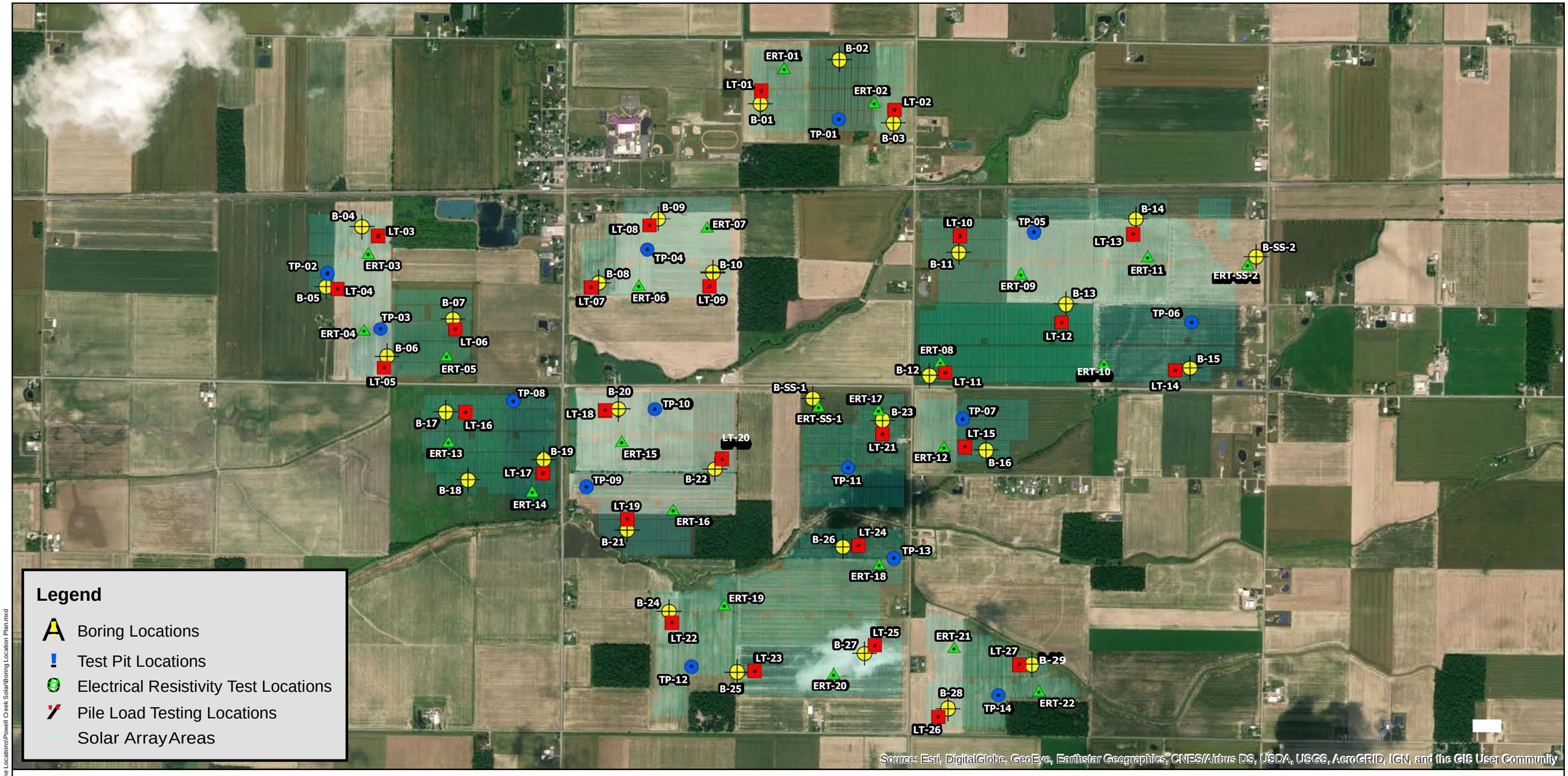
Prior to any additional roadway construction, the subgrade should be stripped of vegetation and topsoil, and be proof-rolled with at least three (3) roundtrip passes of a smooth-drum roller with a minimum operating weight of eight (8) tons. The prepared subgrade should be confirmed to maintain a minimum CBR value of 10. If required, additional stabilization may be obtained if needed through chemical treatment of the subgrade including introduction of lime or cement. Crushed stone should be placed in loose lifts not exceeding eight (8) inches in height and be compacted to at least 95 percent of its Modified Proctor Density (ASTM D1557).

10 Limitations

Mott MacDonald notes that the findings and recommendations presented with this Report are based on a limited investigation program conducted in May and June 2020, laboratory testing, pile load testing, and our engineering judgment. Should further investigations, testing, or revised concept plans reveal new information, Mott MacDonald should be given the opportunity to revise our recommendations as necessary.

Appendices

A. Investigation Location Plan



Legend

- Boring Locations
- Test Pit Locations
- Electrical Resistivity Test Locations
- Pile Load Testing Locations
- Solar Array Areas

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Client

AVANGRID RENEWABLES

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	6/8/2020				

0 500 1,000 2,000 3,000 Feet

Reference Scale:	1:18,000
Absolute Scale:	1 inch = 1,500 feet
Project Number	513385046-071
B/O	1
Total	1

Designed	YN		Eng check		
Drawn	AGW		Coordination		
Dwg Check	EWP		Approved	VAS	

Scale at 11" x 17": AS SHOWN | Status | Rev | Security

Drawing Number: ILP-1

Title

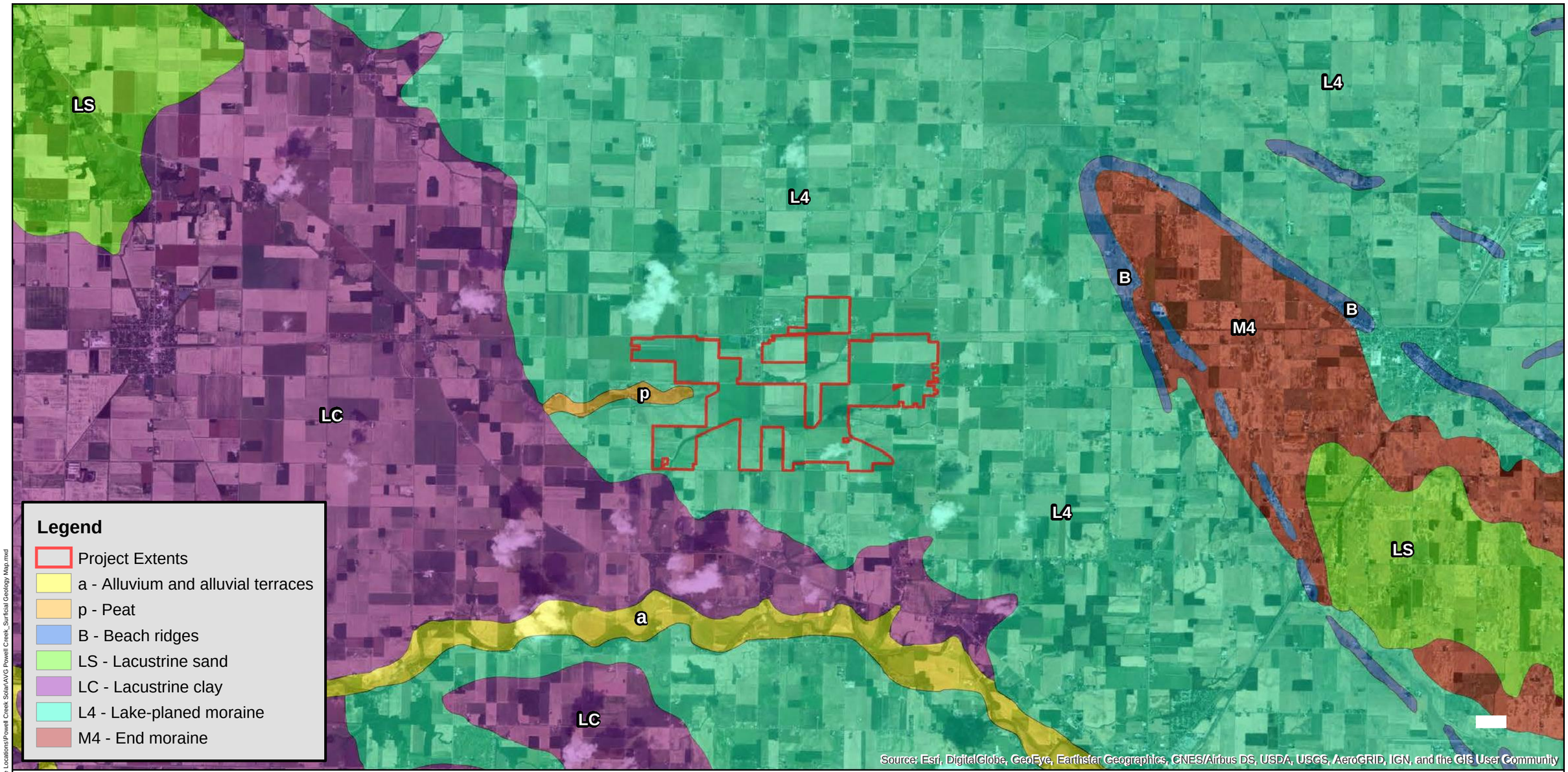
INVESTIGATION LOCATION PLAN

AVANGRID RENEWABLES
POWELL CREEK SOLAR
MILLER CITY, OHIO

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IMAGE SOURCE: OGRIP

B. Geologic References



Legend

- Project Extents
- a - Alluvium and alluvial terraces
- p - Peat
- B - Beach ridges
- LS - Lacustrine sand
- LC - Lacustrine clay
- L4 - Lake-planed moraine
- M4 - End moraine

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AVANGRID RENEWABLES

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	6/8/2020				

0 2,500 5,000 7,500 10,000 12,500 Feet

Reference Scale: 1:72,000

Absolute Scale: 1 inch = 6,000 feet

Project Number: 513385046-071

B/O: 1

Total: 1

Designed	YN		Eng check		
Drawn	AGW		Coordination		
Dwg Check	EWP		Approved	VAS	

Scale at 11" x 17" AS SHOWN | Status | Rev | Security

Drawing Number: SGM-1

Title

SURFICIAL GEOLOGY MAP

AVANGRID RENEWABLES
POWELL CREEK SOLAR
MILLER CITY, OHIO

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IMAGE SOURCE: OGRIP



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AVANGRID RENEWABLES

Rev	Date	Drawn	Description	Ch'k'd	App'd
0	6/8/2020				

0 5,200 10,400 15,600 Feet

Reference Scale:	1:90,000
Absolute Scale:	1 inch = 7,500 feet
Project Number	513385046-071
B/O	1
Total	1

Designed	YN		Eng check		
Drawn	AGW		Coordination		
Dwg Check	EWP		Approved	VAS	
Scale at 11" x 17" AS SHOWN	Status		Rev	Security	

Drawing Number: BGM-1

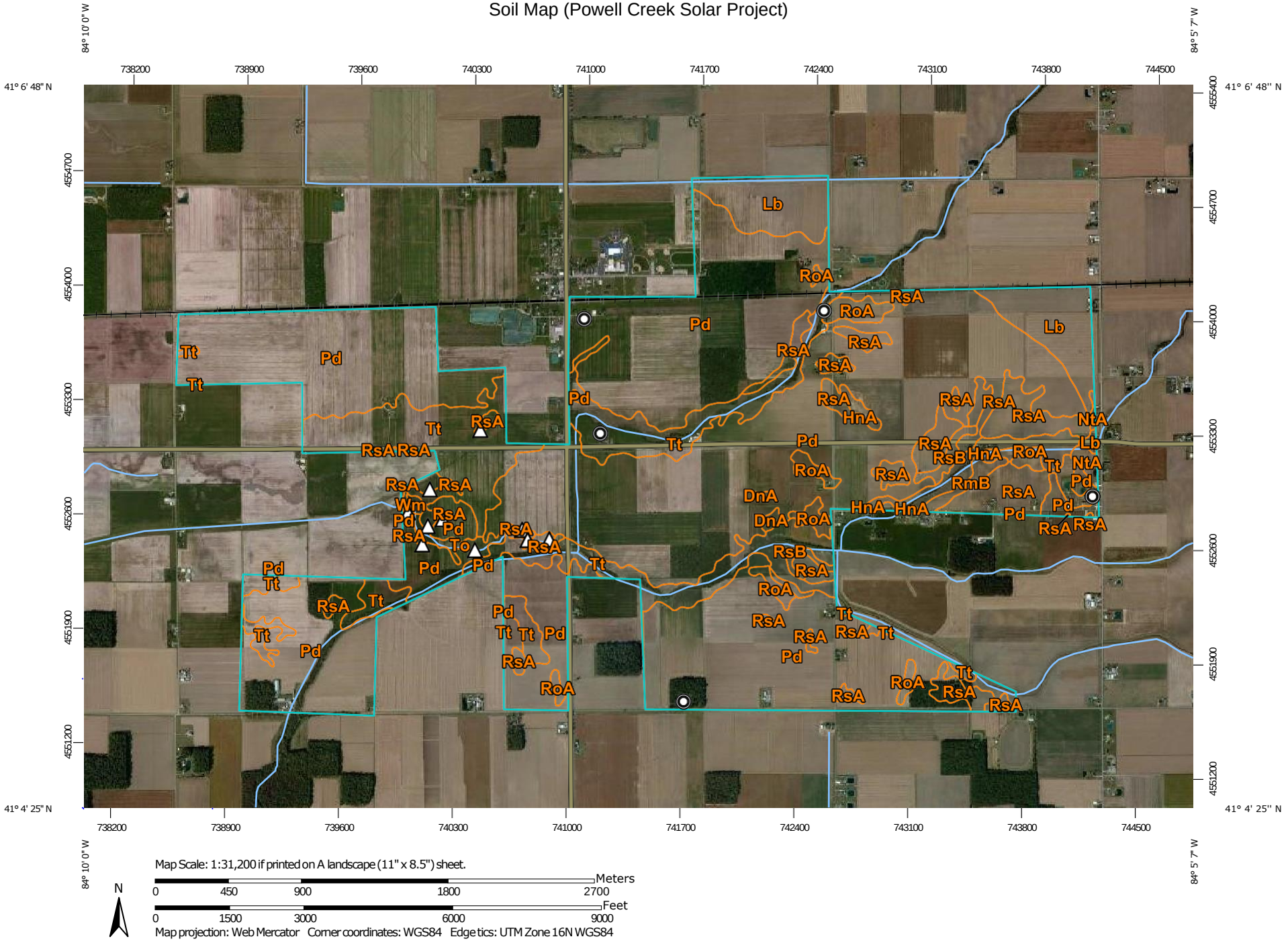
Title

BEDROCK GEOLOGY MAP

AVANGRID RENEWABLES
POWELL CREEK SOLAR
MILLER CITY, OHIO

C:\Users\WIL805411\Desktop\Geotech Projects - Working from Home Locations\Powell Creek Solar\AVG Powell Creek_Bedrock Geology Map.mxd

IMAGE SOURCE: OGRIP


84° 10' 0" W
84° 5' 7" W
41° 6' 48" N
41° 4' 25" N
738200
738900
739600
740300
741000
741700
742400
743100
743800
744500
4555400
4554700
4554000
4553300
4552600
4551900
4551200
Lb
RoA
RsA
Pd
Tt
HnA
NtA
RsB
RmB
DnA
Wm
To
Map Scale: 1:31,200 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 450 900 1800 2700
Feet
0 1500 3000 6000 9000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

Soil Survey Area: Putnam County, Ohio
Survey Area Data: Version 18, Sep 16, 2019

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

Date(s) aerial images were photographed: Jul 11, 2010—Jun 1, 2011

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

Map Unit Legend (Powell Creek Solar Project)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DnA	Digby loam, 0 to 2 percent slopes	3.3	0.1%
HnA	Haskins loam, 0 to 2 percent slopes	11.1	0.4%
HnB	Haskins loam, 2 to 6 percent slopes	2.7	0.1%
Lb	Latty silty clay, till substratum, 0 to 1 percent slopes	124.0	5.0%
NtA	Nappanee silty clay loam, 0 to 2 percent slopes	7.1	0.3%
Pd	Paulding clay, 0 to 1 percent slopes	1,722.2	68.9%
RmB	Rawson loam, 2 to 6 percent slopes	9.7	0.4%
RoA	Roselms silt loam, 0 to 2 percent slopes	44.1	1.8%
RsA	Roselms silty clay loam, 0 to 2 percent slopes	185.8	7.4%
RsB	Roselms silty clay loam, 2 to 6 percent slopes	12.3	0.5%
To	Toledo silty clay loam	14.7	0.6%
Tt	Toledo silty clay, 0 to 1 percent slopes	361.6	14.5%
Wm	Willette muck	2.0	0.1%
Totals for Area of Interest		**2,500.7**	**100.0%**

Map Unit Descriptions (Powell Creek Solar Project)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class.

Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The

pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Putnam County, Ohio

DnA—Digby loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5qk5
Elevation: 780 to 870 feet
Mean annual precipitation: 27 to 37 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 140 to 165 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Digby and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Digby

Setting

Landform: Outwash plains, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Outwash

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 18 inches: sandy clay loam
H3 - 18 to 36 inches: sandy clay loam
H4 - 36 to 60 inches: stratified gravel to sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: Lake Plain Flats (F099XY007MI)
Forage suitability group: Unnamed (G099XYC-1OH)
Hydric soil rating: No

Minor Components

Millgrove
Percent of map unit: 5 percent
Landform: Depressions, drainageways
Hydric soil rating: Yes

Mermill
Percent of map unit: 5 percent
Landform: Depressions, drainageways
Hydric soil rating: Yes

Silt loam surface layer
Percent of map unit:

Slightly coarser surface layer
Percent of map unit:

HnA—Haskins loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 5qkm
Elevation: 600 to 1,300 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Haskins and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haskins

Setting
Landform: Lake plains, till plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Glaciolacustrine deposits over till

Typical profile
H1 - 0 to 16 inches: loam
H2 - 16 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: clay

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D
Ecological site: Lake Plain Flats (F099XY007MI)
Forage suitability group: Unnamed (G099XYC-2OH)
Hydric soil rating: No

Minor Components

Hoytville

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Hydric soil rating: Yes

Mermill

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Hydric soil rating: Yes

Slopes of 2 to 6 percent

Percent of map unit:

Nappanee loam

Percent of map unit:
Landform: Lake plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear

Digby loam

Percent of map unit:
Landform: Outwash plains, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear

Silt loam surface layer

Percent of map unit:

HnB—Haskins loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5qkn
Elevation: 600 to 1,300 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Haskins and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haskins

Setting

Landform: Rises on stream terraces, rises on beach ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Parent material: Glaciolacustrine deposits over basal till

Typical profile

H1 - 0 to 16 inches: loam
H2 - 16 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 30 percent
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: Lake Plain Flats (F099XY007MI)
Forage suitability group: Unnamed (G099XYC-2OH)
Hydric soil rating: No

Minor Components

Hoytville
Percent of map unit: 5 percent
Landform: Drainageways, depressions
Hydric soil rating: Yes

Sloan
Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Pewamo
Percent of map unit: 5 percent
Landform: Drainageways, depressions
Hydric soil rating: Yes

Nearly level areas
Percent of map unit:

Nappanee loam
Percent of map unit:
Landform: Lake plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear

Fine sandy loam surface layer
Percent of map unit:

Digby loam
Percent of map unit:
Landform: Outwash plains, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear

Silt loam surface layer
Percent of map unit:

Lb—Latty silty clay, till substratum, 0 to 1 percent slopes

Map Unit Setting
National map unit symbol: 2vt1k
Elevation: 570 to 780 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 135 to 210 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Latty, till substratum, and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Latty, Till Substratum

Setting

Landform: Wave-worked till plains, till-floored lake plains
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Clayey glaciolacustrine deposits over clayey till

Typical profile

Ap - 0 to 7 inches: silty clay
Bg - 7 to 24 inches: silty clay
BCg - 24 to 37 inches: silty clay
C1 - 37 to 67 inches: silty clay
2C2 - 67 to 80 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 30 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline (0.1 to 1.0 mmhos/cm)
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Wet Lake Plain Flats (F099XY013MI)
Hydric soil rating: Yes

Minor Components

Nappanee

Percent of map unit: 6 percent
Landform: Wave-worked till plains, till-floored lake plains
Microfeatures of landform position: Rises
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Fulton

Percent of map unit: 6 percent
Landform: Wave-worked till plains, till-floored lake plains
Microfeatures of landform position: Rises

Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Haskins

Percent of map unit: 1 percent
Landform: Till-floored lake plains, wave-worked till plains
Microfeatures of landform position: Rises
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

NtA—Nappanee silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5qlc
Elevation: 600 to 800 feet
Mean annual precipitation: 27 to 36 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 170 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Nappanee and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nappanee

Setting

Landform: Lake plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Till

Typical profile

H1 - 0 to 11 inches: silty clay loam
H2 - 11 to 34 inches: clay
H3 - 34 to 60 inches: silty clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None

Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Lake Plain Flats (F099XY007MI)
Hydric soil rating: No

Minor Components

Hoytville

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Hydric soil rating: Yes

Latty

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Hydric soil rating: Yes

Slopes of 2 to 6 percent

Percent of map unit:

Moderately eroded areas

Percent of map unit:

Roselms

Percent of map unit:
Landform: Lake plains, lake plains
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear

Pd—Paulding clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2v13l
Elevation: 570 to 750 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 150 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Paulding and similar soils: 93 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paulding

Setting

Landform: Lakebeds (relict)
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey glaciolacustrine deposits

Typical profile

Ap - 0 to 6 inches: clay
Bg1 - 6 to 9 inches: clay
Bg2 - 9 to 30 inches: clay
BCg - 30 to 48 inches: clay
Cd - 48 to 80 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: 21 to 72 inches to densic material
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 25 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline (0.1 to 0.7 mmhos/cm)
Available water storage in profile: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Wet Lake Plain Flats (F099XY013MI)
Hydric soil rating: Yes

Minor Components

Roselms

Percent of map unit: 4 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Latty

Percent of map unit: 2 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear

Across-slope shape: Linear
Hydric soil rating: Yes

Rimer

Percent of map unit: 1 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

RmB—Rawson loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5qlm
Elevation: 780 to 800 feet
Mean annual precipitation: 27 to 41 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 140 to 208 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Rawson and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rawson

Setting

Landform: Lake plains, outwash plains, till plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Outwash over till

Typical profile

H1 - 0 to 20 inches: loam
H2 - 20 to 32 inches: sandy clay loam
H3 - 32 to 60 inches: clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None

Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Moderate (about 7.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: Lake Plain Flats (F099XY007MI)
Hydric soil rating: No

Minor Components

Moderately eroded areas
Percent of map unit:

Haney
Percent of map unit:
Landform: Outwash terraces, outwash plains, glacial drainage channels
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex

Level areas
Percent of map unit:

Fine sandy loam surface layer
Percent of map unit:

RoA—Roselms silt loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: 5qlr
Elevation: 700 to 710 feet
Mean annual precipitation: 27 to 37 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 140 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition
Roselms and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Roselms

Setting
Landform: Lake plains, lake plains
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear

Parent material: Clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 28 inches: clay
H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Lake Plain Flats (F099XY007MI)
Hydric soil rating: No

Minor Components

Paulding

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Hydric soil rating: Yes

Slightly steeper areas

Percent of map unit:

Fulton

Percent of map unit:
Landform: Lake plains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex

Loam surface layer

Percent of map unit:

RsA—Roselms silty clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 5qlt

Elevation: 700 to 710 feet
Mean annual precipitation: 27 to 37 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 140 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Roselms and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Roselms

Setting

Landform: Lake plains, lake plains
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 28 inches: clay
H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Lake Plain Flats (F099XY007MI)
Hydric soil rating: No

Minor Components

Paulding

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Hydric soil rating: Yes

Darker colored surface layer

Percent of map unit:

Clay surface layer

Percent of map unit:

Slightly steeper areas
Percent of map unit:

Moderately well drained soils
Percent of map unit:

RsB—Roselms silty clay loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 5qlv
Elevation: 700 to 710 feet
Mean annual precipitation: 27 to 37 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 140 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Roselms and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Roselms

Setting

Landform: Lake plains, lake plains
Landform position (two-dimensional): Shoulder, summit, backslope
Landform position (three-dimensional): Side slope, rise
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 6 inches: silty clay loam
H2 - 6 to 28 inches: clay
H3 - 28 to 60 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately low (0.01 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 25 percent
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Lake Plain Flats (F099XY007MI)
Hydric soil rating: No

Minor Components

Paulding
Percent of map unit: 5 percent
Landform: Drainageways, depressions
Hydric soil rating: Yes

Moderately eroded areas
Percent of map unit:

Clay surface layer
Percent of map unit:

Moderately well drained soils
Percent of map unit:

To—Toledo silty clay loam

Map Unit Setting
National map unit symbol: 5qm8
Elevation: 500 to 800 feet
Mean annual precipitation: 27 to 36 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 140 to 165 days
Farmland classification: Prime farmland if drained

Map Unit Composition
Toledo and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Toledo

Setting
Landform: Depressions
Parent material: Glaciolacustrine deposits

Typical profile
H1 - 0 to 8 inches: silty clay loam
H2 - 8 to 55 inches: silty clay
H3 - 55 to 80 inches: silty clay loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 22 percent
Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: Wet Lake Plain Flats (F099XY013MI)
Hydric soil rating: Yes

Minor Components

Silt loam surface layer

Percent of map unit:
Landform: Lake plains
Hydric soil rating: Yes

Lenawee

Percent of map unit:
Landform: Lake plains
Hydric soil rating: Yes

Paulding

Percent of map unit:
Landform: Lake plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Tt—Toledo silty clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2v14z
Elevation: 560 to 990 feet
Mean annual precipitation: 28 to 38 inches
Mean annual air temperature: 45 to 52 degrees F
Frost-free period: 135 to 210 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Toledo and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Toledo

Setting

Landform: Lakebeds (relict)
Down-slope shape: Linear
Across-slope shape: Linear, concave
Parent material: Clayey glaciolacustrine deposits

Typical profile

Ap - 0 to 9 inches: silty clay
Bg - 9 to 34 inches: silty clay
Cg - 34 to 80 inches: silty clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to low (0.00 to 0.01 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 21 percent
Salinity, maximum in profile: Nonsaline (0.0 to 0.6 mmhos/cm)
Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: Wet Lake Plain Flats (F099XY013MI)
Hydric soil rating: Yes

Minor Components

Fulton

Percent of map unit: 6 percent
Landform: Lakebeds (relict)
Microfeatures of landform position: Rises
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Lenawee

Percent of map unit: 3 percent
Landform: Lakebeds (relict)
Microfeatures of landform position: Open depressions
Down-slope shape: Linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Haskins

Percent of map unit: 1 percent
Landform: Lakebeds (relict)
Microfeatures of landform position: Rises
Down-slope shape: Linear

Across-slope shape: Linear, convex
Hydric soil rating: No

Wm—Willette muck

Map Unit Setting

National map unit symbol: 5qml
Elevation: 600 to 1,500 feet
Mean annual precipitation: 27 to 42 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 110 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Willette and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Willette

Setting

Landform: Flats
Parent material: Organic material over glaciolacustrine deposits

Typical profile

O - 0 to 25 inches: muck
H2 - 25 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Ecological site: Mucky Depression (F099XY014MI)
Hydric soil rating: Yes

Minor Components

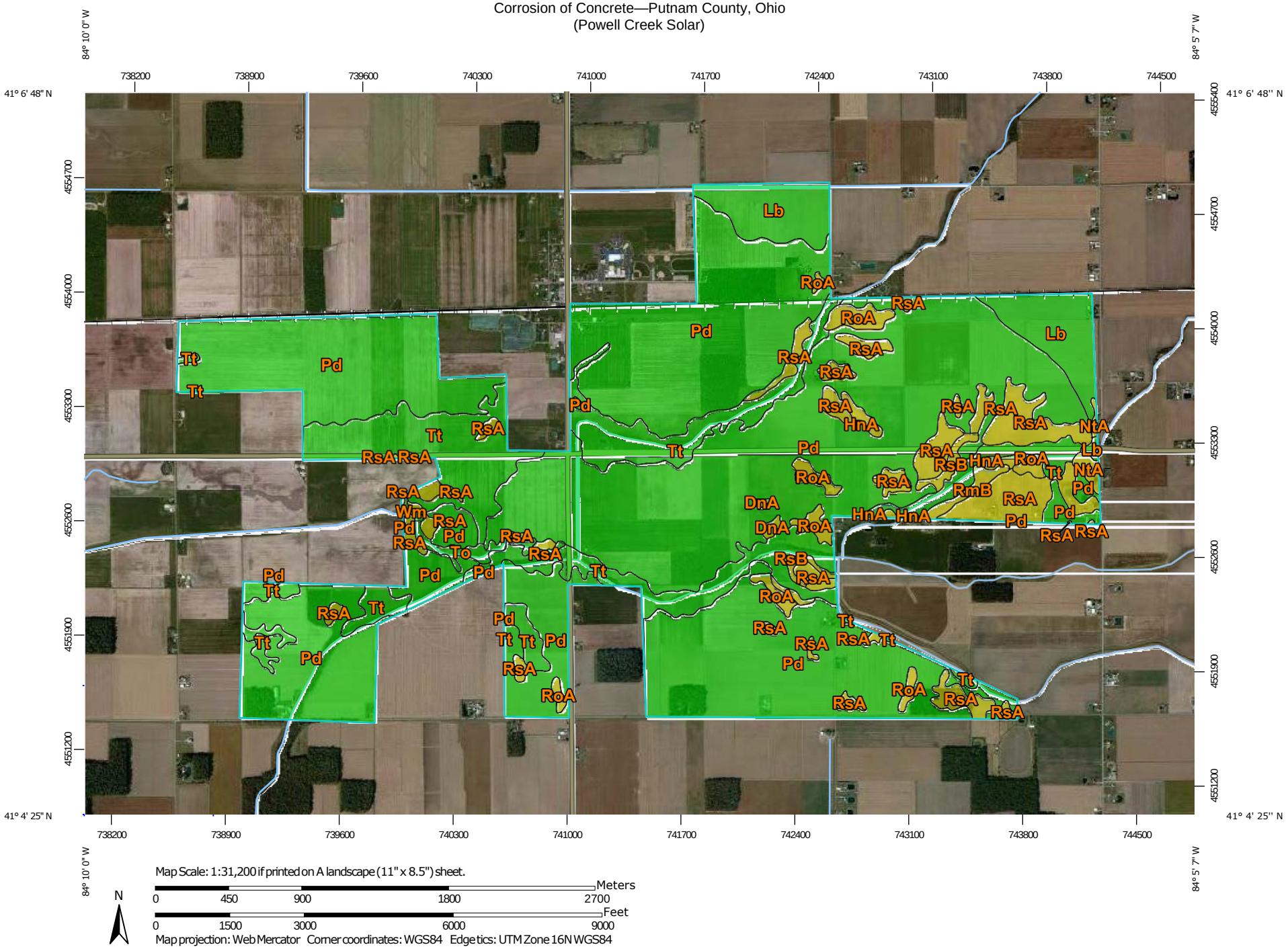
Organic material less than 16 inches thick

Percent of map unit:

Landform: Lake plains
Hydric soil rating: Yes

Toledo

Percent of map unit:
Landform: Lake plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes


84° 10' 0" W
84° 5' 7" W
41° 6' 48" N
41° 4' 25" N
738200
738900
739600
740300
741000
741700
742400
743100
743800
744500
4555400
4554700
4554000
4553300
4552600
4551900
4551200
Lb
RoA
RsA
Pd
Tt
HnA
NtA
RsB
RmB
DnA
Wm
To
Map Scale: 1:31,200 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 450 900 1800 2700
Feet
0 1500 3000 6000 9000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- High
- Moderate
- Low
- Not rated or not available

Soil Rating Lines

- High
- Moderate
- Low
- Not rated or not available

Soil Rating Points

- High
- Moderate
- Low
- Not rated or not available

Water Features

Streams and Canals

Transportation

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

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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Soil Survey Area: Putnam County, Ohio
Survey Area Data: Version 18, Sep 16, 2019

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

Date(s) aerial images were photographed: Jul 11, 2010—Jun 1, 2011

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

Corrosion of Concrete

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DnA	Digby loam, 0 to 2 percent slopes	Moderate	3.3	0.1%
HnA	Haskins loam, 0 to 2 percent slopes	Moderate	11.1	0.4%
HnB	Haskins loam, 2 to 6 percent slopes	Moderate	2.7	0.1%
Lb	Latty silty clay, till substratum, 0 to 1 percent slopes	Low	124.0	5.0%
NtA	Nappanee silty clay loam, 0 to 2 percent slopes	Moderate	7.1	0.3%
Pd	Paulding clay, 0 to 1 percent slopes	Low	1,722.2	68.9%
RmB	Rawson loam, 2 to 6 percent slopes	Moderate	9.7	0.4%
RoA	Roselms silt loam, 0 to 2 percent slopes	Moderate	44.1	1.8%
RsA	Roselms silty clay loam, 0 to 2 percent slopes	Moderate	185.8	7.4%
RsB	Roselms silty clay loam, 2 to 6 percent slopes	Moderate	12.3	0.5%
To	Toledo silty clay loam	Low	14.7	0.6%
Tt	Toledo silty clay, 0 to 1 percent slopes	Low	361.6	14.5%
Wm	Willette muck	Low	2.0	0.1%
Totals for Area of Interest			**2,500.7**	**100.0%**

Description

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

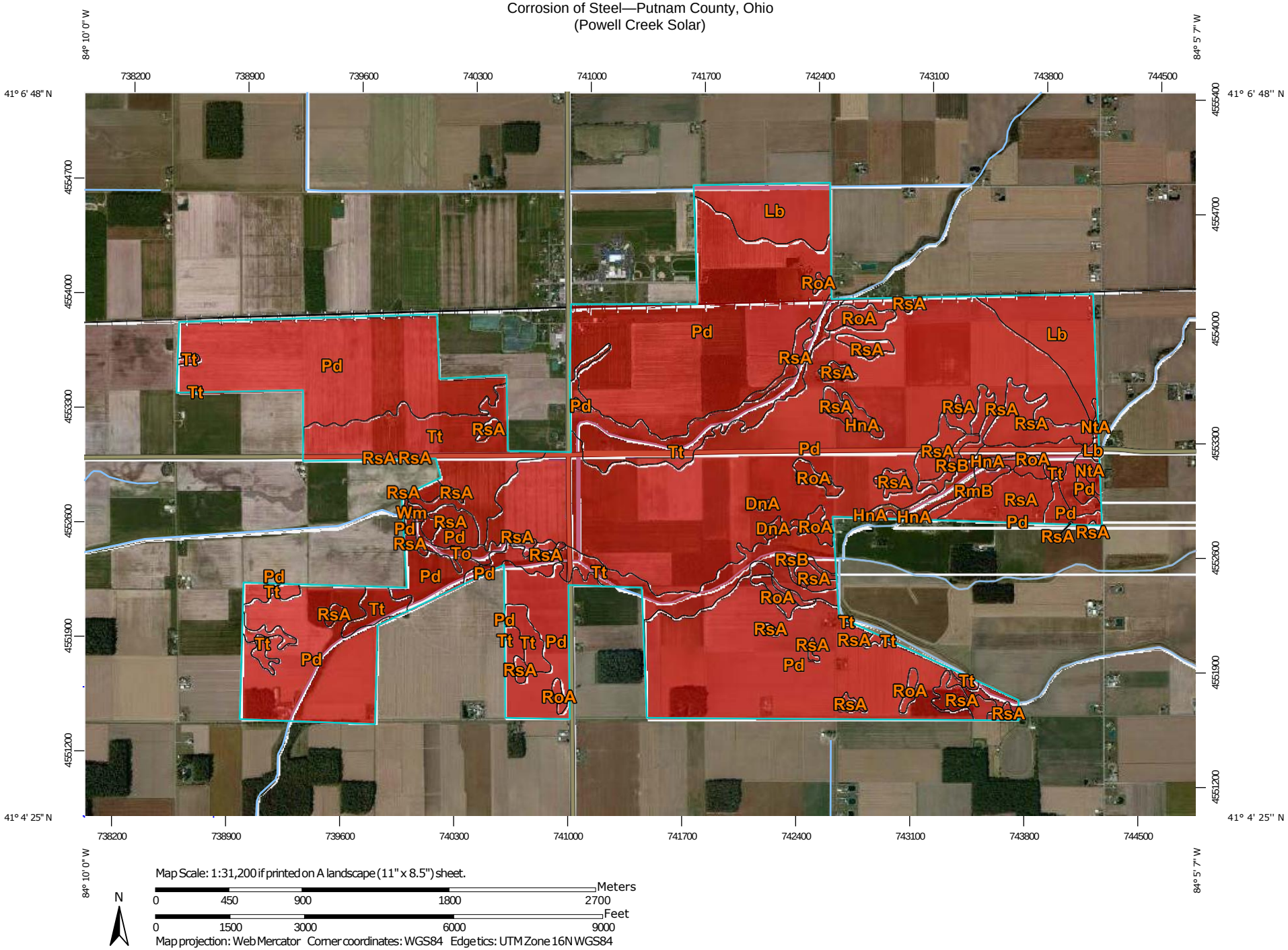
The risk of corrosion is expressed as "low," "moderate," or "high."

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher


84° 10' 0" W
84° 5' 7" W
41° 6' 48" N
41° 4' 25" N
738200
738900
739600
740300
741000
741700
742400
743100
743800
744500
4555400
4554700
4554000
4553300
4552600
4551900
4551200
Lb
RoA
RsA
Pd
Tt
HnA
NtA
RsB
RmB
DnA
Wm
To
Map Scale: 1:31,200 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 450 900 1800 2700
Feet
0 1500 3000 6000 9000
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- High
- Moderate
- Low
- Not rated or not available

Soil Rating Lines
- High
- Moderate
- Low
- Not rated or not available

Soil Rating Points
- High
- Moderate
- Low
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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Date(s) aerial images were photographed: Jul 11, 2010—Jun 1, 2011

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

Corrosion of Steel

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
DnA	Digby loam, 0 to 2 percent slopes	High	3.3	0.1%
HnA	Haskins loam, 0 to 2 percent slopes	High	11.1	0.4%
HnB	Haskins loam, 2 to 6 percent slopes	High	2.7	0.1%
Lb	Latty silty clay, till substratum, 0 to 1 percent slopes	High	124.0	5.0%
NtA	Nappanee silty clay loam, 0 to 2 percent slopes	High	7.1	0.3%
Pd	Paulding clay, 0 to 1 percent slopes	High	1,722.2	68.9%
RmB	Rawson loam, 2 to 6 percent slopes	High	9.7	0.4%
RoA	Roselms silt loam, 0 to 2 percent slopes	High	44.1	1.8%
RsA	Roselms silty clay loam, 0 to 2 percent slopes	High	185.8	7.4%
RsB	Roselms silty clay loam, 2 to 6 percent slopes	High	12.3	0.5%
To	Toledo silty clay loam	High	14.7	0.6%
Tt	Toledo silty clay, 0 to 1 percent slopes	High	361.6	14.5%
Wm	Willette muck	High	2.0	0.1%
Totals for Area of Interest			**2,500.7**	**100.0%**

Description

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

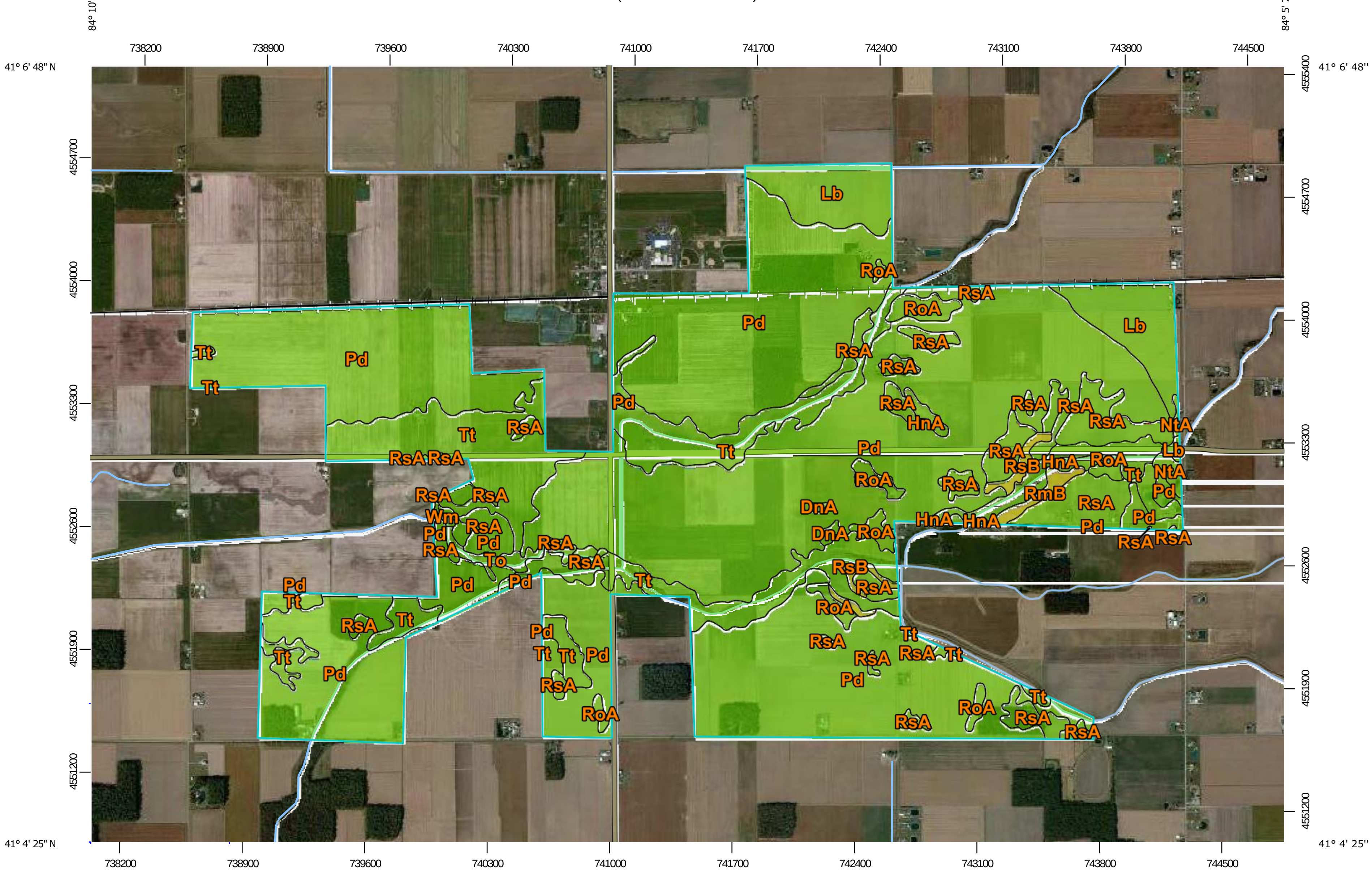
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Erosion Hazard (Off-Road, Off-Trail)—Putnam County, Ohio
(Powell Creek Solar)



84° 10' 0" W

Map Scale: 1:31,200 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 450, 900, 1800, 2700

Feet: 0, 1500, 3000, 6000, 9000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

84° 5' 7" W

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points
- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

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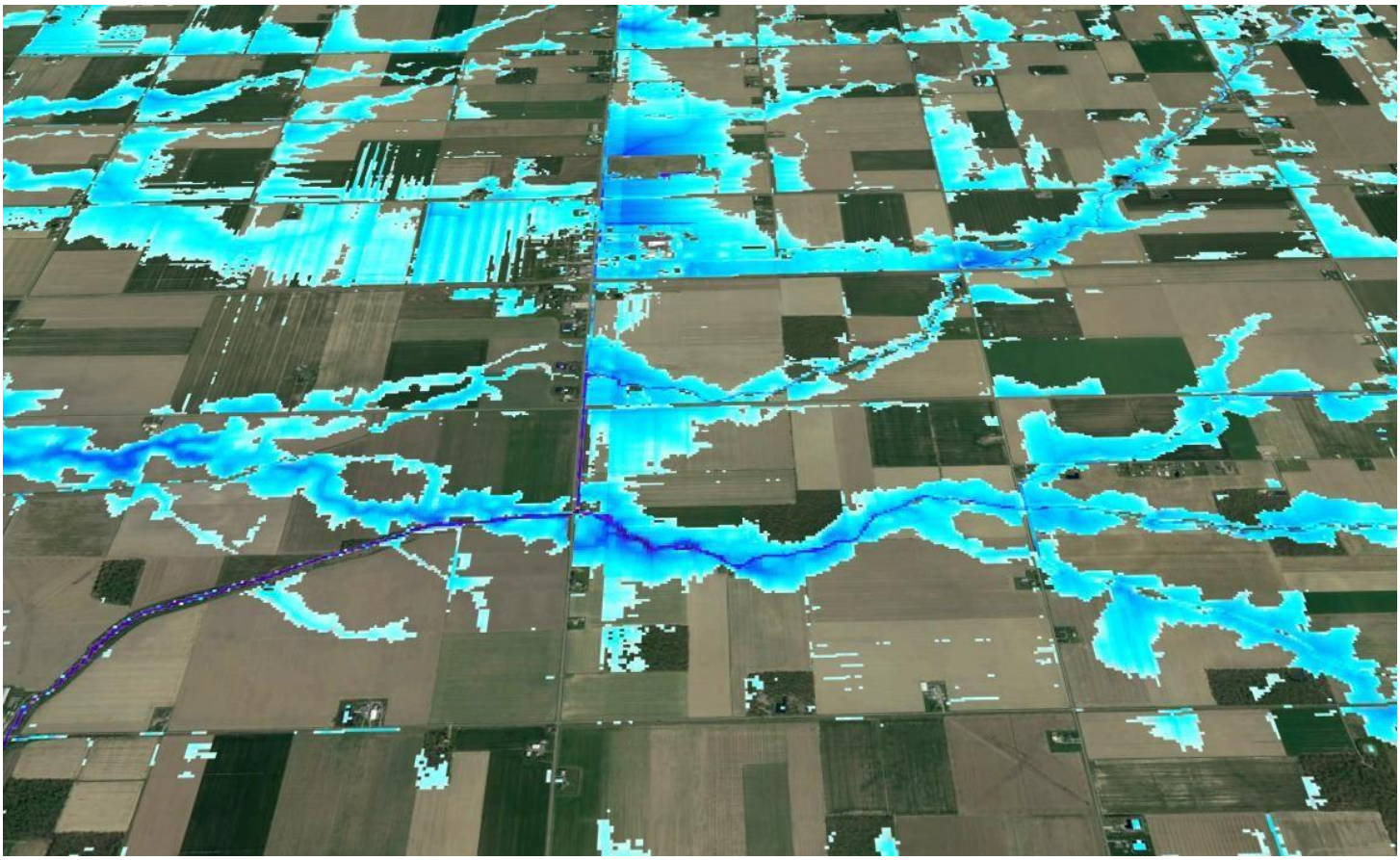
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Erosion Hazard (Off-Road, Off-Trail)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
DnA	Digby loam, 0 to 2 percent slopes	Slight	Digby (90%)		3.3	0.1%
HnA	Haskins loam, 0 to 2 percent slopes	Slight	Haskins (90%)		11.1	0.4%
HnB	Haskins loam, 2 to 6 percent slopes	Moderate	Haskins (85%)	Surface kw times slope times R index (0.09)	2.7	0.1%
Lb	Latty silty clay, till substratum, 0 to 1 percent slopes	Slight	Latty, till substratum (87%)		124.0	5.0%
			Fulton (6%)			
			Nappanee (6%)			
			Haskins (1%)			
NtA	Nappanee silty clay loam, 0 to 2 percent slopes	Slight	Nappanee (90%)		7.1	0.3%
Pd	Paulding clay, 0 to 1 percent slopes	Slight	Paulding (93%)		1,722.2	68.9%
			Roselms (4%)			
			Latty (2%)			
			Rimer (1%)			
RmB	Rawson loam, 2 to 6 percent slopes	Moderate	Rawson (100%)	Surface kw times slope times R index (0.09)	9.7	0.4%
RoA	Roselms silt loam, 0 to 2 percent slopes	Slight	Roselms (95%)		44.1	1.8%
RsA	Roselms silty clay loam, 0 to 2 percent slopes	Slight	Roselms (95%)		185.8	7.4%
RsB	Roselms silty clay loam, 2 to 6 percent slopes	Moderate	Roselms (95%)	Surface kw times slope times R index (0.20)	12.3	0.5%
To	Toledo silty clay loam	Slight	Toledo (100%)		14.7	0.6%
Tt	Toledo silty clay, 0 to 1 percent slopes	Slight	Toledo (90%)		361.6	14.5%
			Fulton (6%)			
			Lenawee (3%)			

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
			Haskins (1%)			
Wm	Willette muck	Slight	Willette (100%)		2.0	0.1%
Totals for Area of Interest					**2,500.7**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Slight	2,475.9	99.0%
Moderate	24.8	1.0%
Totals for Area of Interest	**2,500.7**	**100.0%**



HYDROLOGY STUDY

Powell Creek Solar Project

Putnam County, Ohio

MARCH, 2020

PREPARED FOR:

AVANGRID RENEWABLES

PREPARED BY:

Westwood

Hydrology Study

Powell Creek Solar Project

Putnam County, Ohio

Prepared For:

Avangrid Renewables
1125 NW Couch St., Suite 700
Portland, OR 97209

Prepared By:

Westwood Professional Services
12701 Whitewater Drive, Suite 300
Minnetonka, MN 55343
(952) 937-5150

Project Number: R0026093.00
Date: March 27, 2020

Westwood

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Appendices

Appendix A: NOAA Atlas 14 Precipitation Data
Appendix B: Curve Number Table
Appendix C: FEMA Flood Hazard Boundary Map

Executive Summary

The purpose of the study is to describe the hydrology of the proposed Powell Creek Solar Project ("the project") and any impacts that the hydrology may play in the design of the solar array.

The project area is located approximately 15 miles southeast of the city of Defiance in Putnam County, Ohio (Exhibit 1). The project site is located on extremely flat slopes. The landscape generally slopes to the west towards Powell Creek. The southern portion of the modeled area slopes to the south towards the Blanchard River. The modeled watershed area encompasses approximately 47 square miles.

FEMA has completed a study to determine flood hazards for the selected location, and the project area is covered by FEMA FIRM panels 39137C0135D and 39137C0155D. The modeled area contains a portion of mapped FEMA Zone A and Zone AE flood hazards with a small area of FEMA Zone A within the project boundary. No pending FEMA data was located that will affect the project area.

The hydrologic modeling in this report was created using FLO-2D modeling software. Because of the complex and distributary nature of flow paths upstream and through the project site, FLO-2D hydrologic/hydraulic modeling software was utilized to determine flow depths and velocities throughout the site.

Overall, the analysis shows low to moderate water depths and low velocities (Exhibits 6 - 7A) across the majority of the site. The project location has a moderate amount of rainfall associated with storm events, an overall curve number of 87 and minimally sloping terrain. During a 100-year storm the flood depths across the majority of the project area are less than 1.5 feet with velocities less than 1 foot/second. Larger flood depths occur near areas of concentrated flow. See Exhibits 6 through 16A for areas within the project with higher flood depths, velocities and scour for the 2, 10, 25, 50 and 100-year, 24-hour storms.

Data Sources

TABLE 1: DATA SOURCES

Task	Format	Source	Use
Elevation	2.5-foot Digital Elevation Model (DEM)	2006 Ohio State Imagery Program (OSIP) Lidar: North	Hydrologic Model Elevations (onsite and offsite)
Crop Data	Shapefile	USDA 2013 Crop Data Layer	Landcover
Soils	Shapefile	USGS SSURGO Dataset	Curve Numbers
Precipitation	PDF File	NOAA Atlas 14	Design Storms
HUC-12 Drainage Boundary	Shapefile	USGS Data Gateway	Define Model Extents
Site Boundary	KMZ	Avangrid Renewables	Define Model Extents
2014 Aerial Photography	ArcGIS Map Service	USDA FSA	Reference

Existing Conditions

The project area is located approximately 15 miles southeast of the city of Defiance in Putnam County, Ohio (Exhibit 1). The project site is located on extremely flat slopes. The landscape generally slopes to the west. The southern portion of the modeled area slopes to the south towards the Blanchard River.

Watershed Hydrology

The modeled watershed area encompasses approximately 47 square miles. The landscape has many areas of concentrated flow due to drainage ditches and part of North and South Powell Creek.

Onsite Conditions

Areas directly adjacent to the creeks contain steeper slopes, but in general the slopes throughout the site are less than 1%. The project area is primarily used for agricultural row crops (Exhibit 4) and has soils generally belong to Hydrologic Soil Group D (Exhibit 3). The main potential hydrologic issue on site is flooding and extended periods of standing water with muddy site conditions due to clay soils.

FEMA Flood Zones

FEMA has completed a study to determine flood hazards for the selected location. The project area is covered by FIRM panels 39137C0135D and 39137C0155D. The project area contains FEMA Zone A flood hazards on the western side (Exhibit 2). The modeled area contains a portion of mapped FEMA Zone A and Zone AE flood hazards with a small area of FEMA Zone A within the project boundary. A FEMA Zone A is a 100-year flood hazard with no defined base flood elevation, and FEMA Zone AE is with defined base flood elevations (Exhibit 2). No pending FEMA data was located that will affect the project area.

Proposed Conditions

The majority of the proposed solar facility will consist of above ground mounted solar modules. Meadow grass will be planted below the modules and will make up a majority of the land cover. A small amount of impervious surface will be added from the gravel access roads and electrical equipment pads. The project should be designed to minimize grading and maintain existing drainage patterns. Any existing drain tile onsite should be protected or replaced in order to provide proper drainage to the site.

Post-Construction Stormwater Management

The project will be subject to the State of Ohio's stormwater discharge permit and the Municipal separate storm sewer systems (MS4) permit. Additionally the project will need to follow the Ohio EPA Guidance of Post-Construction Storm Water Controls (Appendix C) for solar panel arrays. Based on this guidance small amounts of storage will be needed to account for the added impervious areas of roadways, buildings, and inverter pads, along with storage for the panels if the soils are not functionally restored.

The typical solar project's low-impact development technique of converting the land cover from a row crop field to a meadow grass will provide post-construction stormwater management to meet most agency requirements. The proposed meadow grass will act as a vegetated filter providing both runoff treatment and reduction when compared to existing conditions. As the

project design advances the post-construction stormwater management should be reviewed in further detail with the County Engineer.

FLO-2D Modeling

FLO-2D is a physical process model that routes rainfall runoff and flood hydrographs over flow surfaces or in channels using the dynamic wave approximation to the momentum equation. FLO-2D offers advantages over 1-D models and unit hydrograph methods by allowing for breakout flows and visualization of flows across a potential site. This is particularly useful on a flat site that receives offsite flows, such as the project site. The primary inputs are a DTM (elevation data), curve numbers and precipitation. Major culverts impacting the site were modeled based on aerial imagery provided by Google Earth.

Because of the complex and distributary nature of flow paths upstream and through the project site, a FLO-2D model with 40' grid cells was utilized to determine flow depths and velocities throughout the site.

Elevation Data

The elevation data input into the FLO-2D model was 2.5-foot DEM data from the Ohio Geographically Referenced Information Program (Exhibit 5), which was incorporated into the DTM using the export to xyz function in Global Mapper. These XYZ files are read directly into FLO-2D.

Watershed Soils and Land Cover

USDA-NRCS SSURGO soil data provides soil types within the project boundary and full coverage of the contributing watershed. Soils in the area are primarily classified as Hydrologic Soil Group D in the project boundary (Exhibit 3). Land cover was obtained from the USDA 2013 Crop Data Layer. Exhibit 4 displays the land cover classes for the entire watershed. Curve numbers were applied to each grid cell in the FLO-2D model based on intersecting the grid with the curve numbers (Exhibit 5).

Precipitation

Precipitation data was downloaded from the NOAA Atlas 14 (Appendix A) and used for the FLO-2D analysis for the 2, 10, 25, 50 and 100-year, 24-hour storm. The rainfall depths of 2.48, 3.53, 4.21, 4.75 and 5.33 inches, respectively, were distributed based on a nested Type II rainfall distribution and input into FLO-2D based on Avangrid requirements for modeling storm events. Using a variety of storm events allows for the results to be bracketed and the worst areas of flooding and erosion to be identified.

Crossing Sizing

Once the final layout of the project area has been determined and prepared, crossing locations should be determined by using the 100-year FLO-2D results and generated drainage streamlines to identify areas of concentrated flow. Based upon field conditions, either a culvert or LWC option will be recommended to help prevent erosion in those locations. Culverts are recommended where an incised channel is crossed or along steep slopes where it is possible to have the optimal amount (1'+) of cover over the culvert crown. Low water crossings are recommended in flat areas of terrain.

Avangrid Drainage Crossing Design Requirements

The following drainage crossing design requirements were received from Avangrid and will be used in future drainage crossing design. Hydraulic sizing of structures including 48" and smaller will be performed using the 25-year 24-hour duration storm event results from the hydrologic analysis. At County and State Right of Way Project engineer shall use the 50-year or 100-year 24-hour duration storm event results for the hydrologic analysis. All culverts are to be the sized 18 inch or larger. Culverts are to be proposed where there is a defined channel or if low-water crossing is not feasible. If access roads are overtopped during any of the storm events noted in section 3.1.2 Project engineer shall use appropriately designed embankment sections with the use of head walls or wing walls. All culvert inlets and outlets should be protected with appropriately designed controls or best management practices to withstand the computed velocity, shear stresses and water depth. All temporary crossings (crane walks and intersections improvements) shall be designed using the above criteria. Proposed bridges and culverts (over 48" diameter) shall be designed to accommodate the 100-year 24-hour duration storm event.

Contractor shall evaluate and analyze each major drainage crossing. Where it is determined that a bridge or large culvert structure is necessary, Contractor shall prepare structural and civil plans using the appropriate design standards, in compliance with agency requirements, whether local and/or state DOT, USACE, etc., for Owner review and comment. Contractor shall review each lease agreement to propose appropriate type of structure at drainage crossings.

Hydraulic sizing of low water crossing structures will be performed using the 25-year 24-hour duration storm event results from the hydrologic analysis. Low-water crossings are to be proposed where there are no defined channels. All low-water crossings should be designed to withstand the computed velocity, shear stresses and water depth with a length derived from the modeling results. Project engineer shall prepare calculations to demonstrate how allowable shear stress was determined.

Flood Analysis Results

Existing Conditions Flood Analysis

The analysis shows low to moderate water depths and low velocities (Exhibits 6 through 16A) across the majority of the site. During a 100-year storm, the flood depths across the majority of the project area are less than 1.5 feet with velocities less than 1 foot/second. See Exhibits 6 through 16A for areas within the project with higher flood depths and velocities. Minimal scour is expected on site (Exhibit 8).

Recommendations

Based on experience on similar projects, the site is suitable for the planned development, and hydrologic concerns can be addressed by either avoiding areas of high flood depths or through detailed engineering design.

Next Steps

1. Final engineering design should account for the flood depths, velocities, and scour presented in Exhibits 6-8 to protect infrastructure.

2. Facilities to be elevated 2' above the 100-year, 24-hour peak flood elevations.

3. Proposed facilities should avoid FEMA Flood Zones located onsite.

4. Stormwater management should be revisited to ensure the final design meets the local and state requirements.

5. Any drain tile found on site should be protected or replaced in order to provide proper drainage to the site.

6. Crossing locations should be identified

7. Depth at infrastructure locations should be identified.

Included Output Files

1. Shapefile of Flow Depth-100-year Rain Event
2020-03-23_PowellCreek_100yrFlowDepth.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Max Flow Depth (Feet)

2. Shapefile of Velocity-100 year Rain Event
2020-03-23_PowellCreek_100yrVelocity.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Velocity (FPS)

3. Shapefile of Flow Depth-50-year Rain Event
2020-03-23_PowellCreek_50yrFlowDepth.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Max Flow Depth (Feet)

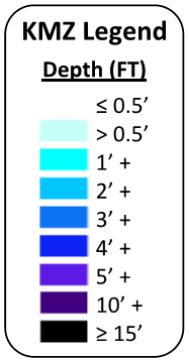
4. Shapefile of Velocity-50 year Rain Event
2020-03-23_PowellCreek_50yrVelocity.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Velocity (FPS)

5. Shapefile of Flow Depth-25-year Rain Event
2020-03-23_PowellCreek_25yrFlowDepth.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Max Flow Depth (Feet)

6. Shapefile of Velocity-25 year Rain Event
2020-03-23_PowellCreek_25yrVelocity.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Velocity (FPS)

7. Shapefile of Flow Depth-10-year Rain Event
2020-03-23_PowellCreek_10yrFlowDepth.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Max Flow Depth (Feet)

8. Shapefile of Velocity-10 year Rain Event
2020-03-23_PowellCreek_10yrVelocity.shp
Attribute "ID" = Grid Cell Number
Attribute "VAR" = Velocity (FPS)





9. Shapefile of Flow Depth-2-year Rain Event
2020-03-23_PowellCreek_2yrFlowDepth.shp
Attribute “ID” = Grid Cell Number
Attribute “VAR” = Max Flow Depth (Feet)

10. Shapefile of Velocity-2 year Rain Event
2020-03-23_PowellCreek_2yrVelocity.shp
Attribute “ID” = Grid Cell Number
Attribute “VAR” = Velocity (FPS)

11. KMZ of Flood Depth- 2, 10, 25, 50, 100-year Rain Event
2020-03-24_PowellCreek_FlowDepth.kmz
Overlay in Google Earth for graphical representation
Attribute “VAR” = Max Flow Depth (Feet)

12. KMZ of Velocity- 2, 10, 25, 50, 100-year Rain Event
2020-03-24_PowellCreek_Velocity.kmz
Overlay in Google Earth for graphical representation
Attribute “VAR” = Velocity (FPS)

References Cited

National Engineering Handbook, Part 630 Hydrology. Chapter 9 Hydrologic Soil-Cover Complexes. USDA. NRCS. 210-VI-NEH, December 2004

NOAA, & Service, N. W. AHPS Precipitation analysis. Retrieved February 2020, from http://water.weather.gov/precip/download.php

Ohio Geographically Referenced Information Program. 2.5-ft DEM, Elevation data, retrieved March 2020, from http://gis5.oit.ohio.gov/geodatadownload/

USGS. USGS water resources: About USGS water resources. Retrieved February 2020, from https://water.usgs.gov/GIS/huc.html

USDA 2013 Crop Data Layer, Landcover data, retrieved February 2020, from https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php

Description

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope, soil erosion factor K, and an index of rainfall erosivity (R). The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

This foregoing document was electronically filed with the Public Utilities

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10/7/2020 10:32:44 AM

in

Case No(s). 20-1084-EL-BGN

Summary: Application Exhibit H - Geotechnical Report (Part 1 of 3) electronically filed by Teresa Orahood on behalf of Dylan F. Borchers

This foregoing document was electronically filed with the Public Utilities

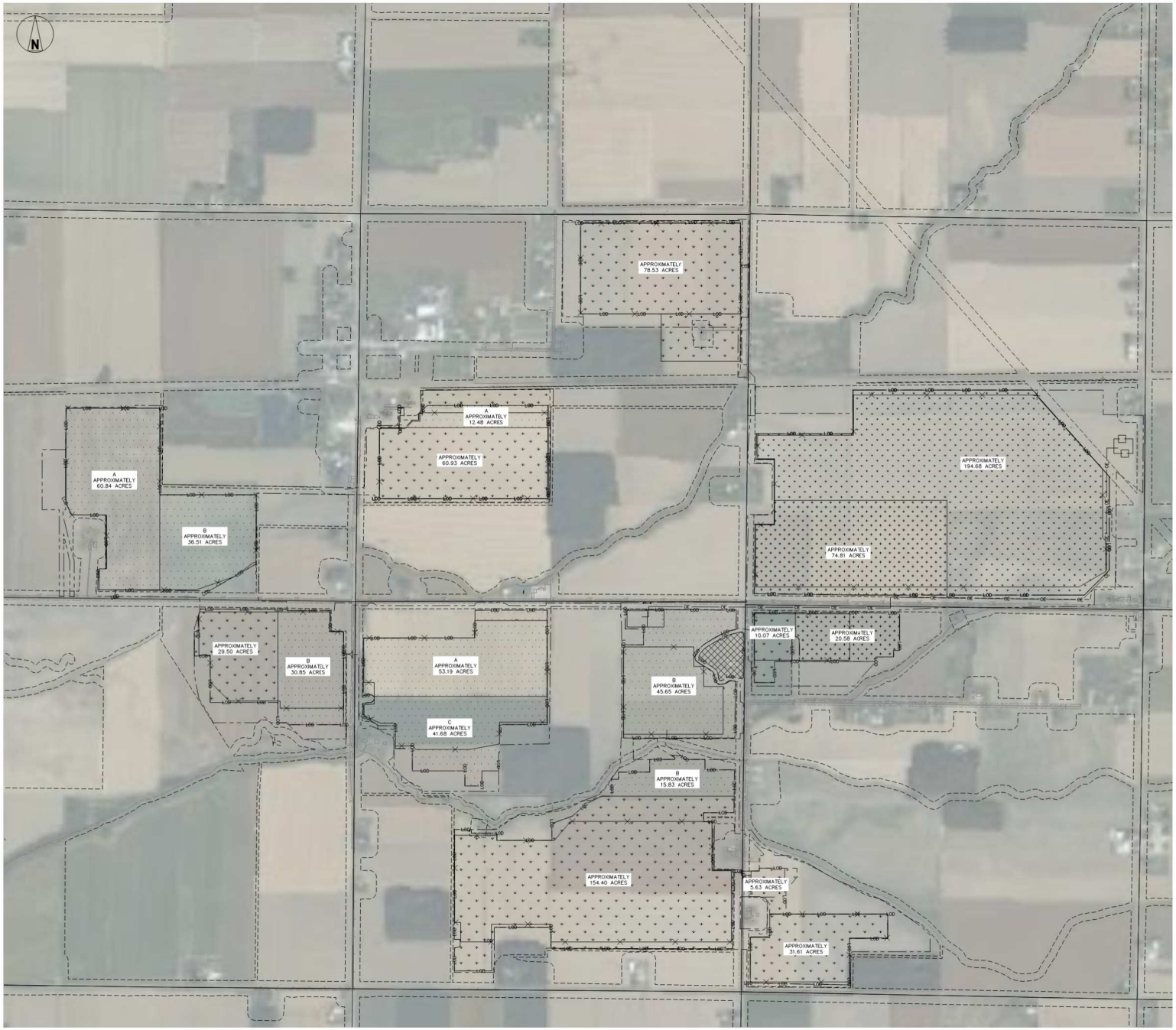
Commission of Ohio Docketing Information System on

10/7/2020 10:25:56 AM

in

Case No(s). 20-1084-EL-BGN

Summary: Application Exhibit G - Hydrology Study (Part 1 of 4) electronically filed by Teresa Orahood on behalf of Dylan F. Borchers



NOTES

1. SEE DRAWING PCS-C-180-01 FOR CIVIL COVER SHEET, SHEET INDEX, AND STANDARD ABBREVIATIONS.
2. SEE PCS-C-830 SERIES DRAWINGS FOR EROSION AND SEDIMENT CONTROL PLANS.

GENERAL SEEDING NOTES:

3. ODOT SEEDING SPECIFICATIONS FOR ODOT RIGHT OF WAY AREAS ONLY. THE TABLES IN THE NOTES ARE IN ACCORDANCE WITH OHIO POWER SITING BOARD-APPROVED SEEDING SPECIFICATIONS.
4. DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED, WITH TWO EXCEPTIONS: WHEN SNOW COVER PRECLUDES CONSTRUCTION OR WHEN CONSTRUCTION WILL RESUME WITHIN 21 DAYS.

SITE PREPARATION NOTES:

5. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
6. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA PRIOR TO SEEDING.
7. TILLAGE SHOULD ACHIEVE A REASONABLY UNIFORM LOOSE SEEDBED.

ESTABLISHMENT NOTES:

8. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING.
9. UNLESS HYDROSEEDED, COVER SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL USING SUITABLE EQUIPMENT.
10. MULCH IMMEDIATELY AFTER SEEDING AS REQUIRED. APPLY STRAW OR HAY MULCH AND ANCHOR TO SLOPES GREATER THAN 3% OR WHERE CONCENTRATED FLOW WILL OCCUR.

11.1 WHEAT (A, B, C) – APPROXIMATELY 297.03 ACRES

AREA A: APPROXIMATELY 126.51 ACRES

AREA B: APPROXIMATELY 128.84 ACRES

AREA C: APPROXIMATELY 41.68 ACRES

WHEAT FIELDS WERE OVERSEEDED WITH CLOVER IN APRIL 2023 BUT SEEDS WERE MOLDY AND MAY NOT GERMINATE. AGR/MEC WILL RE-SEED WITH ADDITIONAL CLOVER AND INCLUDE FESCUE + KENTUCKY BLUEGRASS (TO BE PROVIDED BY EPC CONTRACTOR) SOMETIME AFTER WHEAT IS HARVESTED IN LATE JUNE/EARLY JULY. CLOVER SEEDS TO BE PROVIDED BY AGR/MEC. EPC CONTRACTOR TO PROVIDE FESCUE & BLUEGRASS SEEDS TO BE MIXED WITH THE CLOVER SEEDS.

11.2 CLOVER – APPROXIMATELY 95.35 ACRES

FARMERS WILL TAKE FIRST CUTTING IN LATE MAY/EARLY JUNE. EPC CONTRACTOR TO PROVIDE AND INSTALL SEEDS WITH OPSB-APPROVED SEED MIX OF WHITE CLOVER, FESCUE, & BLUEGRASS SOMETIME AFTER HARVEST.

11.3 BARE LAND – APPROXIMATELY 565.35 ACRES

PRE-SEEDED IN APRIL 2023 WITH OPSB-APPROVED SEED MIX OF WHITE CLOVER, FESCUE, AND BLUEGRASS. AT LEAST 1 MOWING BEFORE MAY 15 FOR WEED CONTROL AND AVOID VEGETATION FROM GROWING ABOVE 6", WHEN IT WOULD BE CONSIDERED NORTHERN HARRIER NESTING GROUNDS.

CLASS TYPE	SEEDS	WEIGHT	
		LBS/1000 SF	LB/AC
PERMANENT SEEDING	KENTUCKY BLUEGRASS	0.18	8.0
	FINE FESCUE	0.84	37.0
	WHITE CLOVER	0.11	5.0

NOTE: STANDARD SOIL ANALYSIS TO MEASURE SOIL ACIDITY OR ALKALINITY (pH) PER ODOT ITEM 659 SEEDING AND MULCHING SHALL BE COMPLETED PRIOR TO SEEDING AND SOIL AMENDMENTS.

LEGEND

- GRASS/SEEDING
- CLOVER/SEEDING
- A/B/C WHEAT/SEEDING
- PROPERTY LINE
- SETBACK LINE
- ARRAY BOUNDARY
- EXISTING ROAD
- EXISTING STREAM
- LOD — LOD — LIMIT OF DISTRURBANCE

STATE OF OHIO
ANDY NGUYEN
E-89364
REGISTERED PROFESSIONAL ENGINEER

Nguyen, Andy

NOT TO BE USED FOR CONSTRUCTION

THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

NO.	REVISIONS	DATE	BY	CHK	APR
0	ISSUED FOR PERMITTING	08/25/23	MBN	AVN	AJG
1	ISSUED FOR PERMITTING	09/18/23	MBN	AVN	AJG

NO.	REVISIONS	DATE	BY	CHK	APR

BLACK & VEATCH
11401 LAMAR AVENUE
OVERLAND PARK, KANSAS 66211
OHIO ENGINEERING CREDENTIAL
NUMBER COA:01645

500' 250' 0 500' 1000'
1"=500'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF OHIO

SIGNED ANDY NGUYEN
DATE 09/18/23 REG NO. PE-89364

AVANGRID RENEWABLES

ENGINEERING RECORD	DATE
DRAWN: MBN	09/18/23
DESIGNED: CBA	09/18/23
CHECKED: AVN	09/18/23
APPROVED: AJG	09/18/23

POWELL CREEK SOLAR, LLC
POWELL CREEK PV SOLAR PROJECT
SOLAR SEEDING PLAN

CADFILE: PCS-C-862-01 | SCALE: 500'=1" | DWG NO. PCS-C-862 | SHEET 01 | REV 1

Vegetation Management and Protection Plan

Powell Creek Solar Project

September 4, 2020



Document Infomation

Prepared for	Avangrid Renewables, LLC
Project Name	Powell Creek Solar Project
Project Number	E319302900
Project Manager	Ryan Rupprecht
Date	September 2020

Prepared for:

Avangrid Renewables, LLC

AVANGKID
RENEWABLES

Prepared by:

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Appendices

Appendix A Vegetation Protection Measures

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1 Project Introduction

This vegetation management and protection plan (Plan) will be used during the construction and operational phases of the Powell Creek Solar Project (Project), as required per Ohio Administrative Code 4906-4-08. The Plan identifies all areas proposed for vegetation clearing, describes the extent of the clearing, and discusses the methods of clearing. Additionally, the plan includes methods of disposal for all downed trees, brush, and other vegetation. Finally, the Plan describes measures to protect trees and other woody vegetation from damage and removal during the various phases of the Project.

The Project will be owned and operated by Powell Creek, LLC (Powell Creek) an affiliate of Avangrid Renewables, LLC. The Project is a proposed 150 megawatt (MW) solar project within an area of approximately 2,014 acres within Liberty and Palmer Townships, Putnam County, Ohio. A desktop analysis and field verification of the land use within the Project area indicates a high percentage of Project land (over 93%) is agricultural, with smaller land use categories for developed spaces, deciduous forests, grasslands, and woody wetlands. The agricultural lands include cultivated corn and soybean crops, as well as open land for pasture. The developed areas are described as residences or farms with lawns and landscaped areas, and driveways and unpaved roads. During the field surveys, the forestlands were discovered to be of moderate quality with isolated occurrences of large high quality trees, surrounded by younger second growth forest and saplings. Forest canopy included oaks (*Quercus* sp.), maples (*Acer* sp), Hickories (*Carya* sp.), and Elms (*Ulmus* sp.), and a shrub layer of buckthorn (*Rhamnus cathartica*). Grasslands consisted mostly of grassy swales, along cultivated areas and roadsides, which help maintain drainage for proper growing conditions. These swales often had a mix of herbaceous species including reed canary grass (*Phalaris arundinacea*) and various other grasses (*Festuca* sp. and *Fescue* sp.) and sedges (*Carex* sp.). Woody wetlands canopy consisted of swamp Spanish oak (*Quercus palustris*), swamp white oak (*Quercus bicolor*), American elm (*Ulmus americana*), red maple (*Acer rubrum*), sugar maple (*Acer saccharinum*) and a shrub/sapling stratum which consisted of shellbark hickory (*Carya laciniosa*), slippery elm (*Ulmus rubra*), buckthorn (*Rhamnus catherartica*), and green ash (*Fraxinus pennsylvanica*).

2 Vegetation Protection

The Project has been sited in a way to minimize impacts to the forested lands, shrublands, wetlands, and streams within the Project area, thereby minimizing impacts to trees and woody vegetation. Project infrastructure and the maintained buffers around them will be located primarily on agriculture and open lands. In order to protect vegetation from unauthorized removal, Project drawings will clearly illustrate the limits of construction. Prior to any ground disturbing activities, the limits for clearing will be adequately flagged or staked in the field.

For the protection of vegetation in sensitive areas, like wetlands and tree lots, the Project will utilize the Vegetation Protection Measures, as outlined in Appendix A.

3 Vegetation Management

3.1 Construction

Construction activities for solar infrastructure have the potential to impact vegetation through cutting and clearing, removal of stumps and roots, and increased ground disturbance and soil exposure. In order to limit the impacts to vegetation, all clearing will be confined to the Project infrastructure footprint. Typical footprints include:

- 15 feet on either side of access road centerline (26.02 acres)
- 15 feet on either side of buried collection line centerline (34.21 acres)
- 25 feet on either side of overhead collection line centerline (0.07 acrs)7.17 acres for Substation, O&M Facility, and other supporting facilities
- 9.83 acres for laydown yard

Facility construction will be require a total of 1,015.2 acres of clearing or permanent disturbance of vegetation. The majority of disturbance activities will occur in agricultural lands, and efforts to retain desirable vegetation growth will be maximized to the extent practicable. The Project will require the clearing of less than 1 acre of tree stands within various fence row communities. No trees greater than 3 inches in diameter at breast height (DBH) will be cut outside of the approved cutting season of October 1 through March 31. Any trees and limbs removed, with approval, will be logged, and/or chipped, and either removed or left to remain on the land, per the land owners request and as allowed under federal, state, and local regulations. Authorization to leave cleared vegetation on the land (either chipped or utilized by landowners) reduces the need to for further equipment mobilization, reducing further impacts to the site, but if removal is required, all equipment will utilize existing travel lanes to the extent practicable to reduce overland travel.

After construction, disturbed areas not used for Facility infrastructure will be returned to approximate pre-construction use and capability via reclamation and revegetation. This involves the treatment of soil as necessary to preserve approximate pre-construction capability and the stabilization of the work surface in a manner consistent with the initial land use. Disturbed soils within the Facility's fence line will be re-seeded with low-growth turf grasses to stabilize exposed soils and control sedimentation and erosion.

3.2 Operation

During Facility operation, on-site vegetation within the fence line of the Project will be regularly maintained through mowing. The Facility area will also be inspected for the growth of noxious weeds, to guard against their establishment. If noxious weeds do become established, a licensed professional will be enlisted to apply an appropriate herbicide treatment. All vegetation monitoring and maintenance will be conducted by an experienced and qualified contractor.

0BPowell Creek Solar Project

APPENDIX A

VEGETATION PROTECTION MEASURES

Appendix A
Vegetation Protection Measures

A.1 General

A.1.1 Pre-Construction Meeting

Prior to the commencement of any construction activities, a Project kick-off meeting will be conducted to review the methods for vegetation protection outlined in this document. This includes:

- The establishment and importance of vegetation protection zones;
- Review of the applicable seasonal cutting dates for trees greater than 3 inches DBH;
- The establishment of construction pathways for movement near protection zones;
- Trenching by hand or air spade within protection areas; and
- Oversight by qualified individuals to ensure proper adherence to established protection measures during construction activities, near protection zones.

A.1.2 Document Existing Conditions

Qualified personnel will document the existing trees and other plants that are to remain and require protection measures designed to prevent their removal. Such documentation will also be used to establish the pre-construction condition, in case it becomes necessary to replace any vegetation due to any damage during construction. Documentation includes:

- Detailed site photographs or video recordings of trees within the protection zones; and
- Detailed notes and photographs documenting any pre-existing damage or injury to the vegetation within the protection zones.

A.1.3 Quality Control Program

A written Quality Control Plan (QC Plan) will be developed that describes the purpose of the QC Plan, and provides for proper procedures, materials, handling, and equipment operation that are necessary to prevent damage to vegetation within the protection zones. The QC Plan will also provide detailed diagrams illustrating dimensions for the placement of fencing to ensure trees and root systems are protected, and defined equipment movement pathways. The QC Plan will include how these vegetation protection measures will be enforced.

A.1.4 Prohibited Actions in Protection Zones

The following activities are prohibited within the protection zones, as they can lead to damage or injury to vegetation, and degradation of habitat:

- Storage of construction materials, debris, and any excavated material;
- Construction of sheds or any temporary or permanent structure;
- Any ground disturbing activities, unless otherwise noted;
- Water impoundment;
- Attachment of signs or wraps around trees, unless otherwise noted;
- Movement of any equipment;
- Foot traffic; and
- Placement of heat and ignition sources, including smoking, near protection zones.

A.2 Materials

Plastic construction fencing will be installed to delineate the vegetation protection zones within the Project area. Typical orange, high visibility construction fencing will used, constructed of high-density polyethylene fabric with 2-inch maximum opening, measuring approximately 48 inches in height.

A.3 Implementation

A.3.1 Sediment and Erosion Control

Prior to installation of the construction fencing, qualified personnel will ensure all temporary sediment and erosion control measures are in place, and verify that any water flows are diverted away from the protection zones.

A.3.2 Site Preparation

To assist with the delineation of protection zones to be cordoned off with construction fencing, all trees, shrubs, and other vegetation identified for preservation will be located and flagged with 1-inch vinyl tape, at a height of approximately 5 feet, or at the highest point, as to be visible to pedestrian traffic and equipment operators.

A.3.3 Protection Zones

The protection zone fencing will be installed in the pre-determined areas, prior to any materials or equipment are brought to the site, and prior to the commencement of any construction activities. All fencing will be kept in good condition for the duration of construction activities, repaired if damaged or fallen, and kept free of weeds and trash. Protection zone fencing will not be removed during construction, for even temporary activities, including the delivery of materials or equipment. Vehicles will need to seek an alternate route.

A.3.4 Repair and Replacement

Any trees, shrubs, or other vegetation that had been identified as requiring protection that may have been damaged during construction activities, or needed to be relocated, shall be repaired or replaced, as necessary. Any repairs or replacements will be submitted for approval to Avangrid and to a certified arborist. Repair or replacement should include the following steps:

- Submit details of the damage and any proposed replacement or proposed pruning and repairs;
- Perform the repairs within 24 hours of arborist approval;
- Replace vegetation that cannot be repaired and restored to full-growth status as determined by Avangrid.
    - For small trees, measured 4 inches or less diameter at breast height (DBH), provide a replacement of the damaged tree, the same size and species.
    - For larger trees, measured more than 4 inches DBH, provide two trees per damaged tree, of which the species and location will be determined by the land owner.

A.3.5 Disposal

At the end of construction, all excess excavated material, displaced trees, vegetative debris, and trash will be removed from the land owner's property and legally disposed of, following municipal guidelines.

About Cardno

Ca rdno is an ASX-200 orofessional infrastructure and environmental scrviccs comDany, with expertise in th e development and improvemen t of physica l and social infrastructure fo r communities around th e wo rld Cardn o s tea m inclu des leading profess iona ls who Dlan ces+gn┐ mannge and deliver s ustainable projects and communit} progra ms Cardn o is an internation at co mpany listed on the Austra fun Securities Exchange [ASX CDD].

Cardno Zero Harm

ZERC HARM

At Cardno, our Drimary concern is to deve to p and ma inta in safe and healthy conditions for anyone involved at our protect works itch. We require full comp lien ce with o ur Health and Safety Policy Manual and established work procedures and exDect the same protocol from our s ubcontractors We a re committed to achicvin g our Zo ro Ha rm gonl by continually improving o ur safety systems, education , and vigilancc at the workDlace and in the lie Id Safety is a Ca rdno core value and through strong leadership and activc cmuloyco garticiuation, we sock to imulcmont and reinforce th ese leading actions on every job, every day

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in

Case No(s). 20-1084-EL-BGN

Summary: Application Exhibit B - Vegetation Management Plan electronically filed by Teresa Orahood on behalf of Dylan F. Borchers

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

2/16/2024 12:17:41 PM

in

Case No(s). 20-1084-EL-BGN

Summary: Notice of Compliance - Part 3 electronically filed by Teresa Orahood on behalf of Herrnstein, Kara.