Appendix 10.4

Environmental Resource Permit

10.4 Environmental Resource Permit

This appendix provides the environmental resource permit (ERP) application for the Seminole Electric Cooperative, Inc. (SECI), Seminole Combined-Cycle Facility (SCCF). As indicated in the application, the construction and operation of SCCF will not impact wetlands. Therefore, the ERP application information primarily addresses the stormwater management system for SCCF.

Environmental Resource Permit
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JOINT APPLICATION FOR INDIVIDUAL ENVIRONMENTAL RESOURCE PERMIT/ AUTHORIZATION TO USE STATE-OWNED SUBMERGED LANDS/ FEDERAL DREDGE AND FILL PERMIT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/
WATER MANAGEMENT DISTRICTS/
U.S. ARMY CORPS OF ENGINEERS

Effective October 1, 2013

US Army Corps of Engineers®

Section A: General Information for All Activities

PART 1: NAME, APPLICATION TYPE, LOCATION, AND DESCRIPTION OF ACTIVITY

A. Name of project, including phase if applicable: **Seminole Combined-Cycle Facility (SCCF)**

B. This is for (check all that apply):

☐ Construction or operation of ***new*** works, activities and/ or a stormwater management system

☐ ***Conceptual Approval*** of proposed works, activities and/ or a stormwater management system

☒ Modification or Alteration of ***existing*** works activities and / or a stormwater management system. Provide the existing DEP or WMD permit #, if known: **Site Certification PA78-10** Note: Minor modifications do not require completion of this form, and may instead be requested by letter.

☐ ***Maintenance or repair*** of works, activities and/ or stormwater management system previously permitted by the DEP or WMD Provide existing permit #, if known: _____

☐ Abandonment or removal of works, activities and/ or stormwater management system Provide existing DEP or WMD permit #, if known: _____

☐ Operation of an ***existing unpermitted*** stormwater management system.

☐ Construction of additional phases of a permitted work, activity and/ or stormwater management system.

Provide the existing DEP or WMD permit #, if known: _____

C. ***List the type of activities proposed. Check all that apply, and provide the supplemental information requested in each of the referenced application sections.*** *Please also reference Applicant's Handbooks I and II for the type of information that may be needed.*

☐ Activities associated with one single-family residence, duplex, triplex, or quadruplex that do not qualify for an exemption or a General Permit: ***Provide the information requested in Section B. Do not complete Section C.***

☐ Activities within wetlands or surface waters, or within 25 feet of a wetland or surface water, (not including the activities associated with an individual residence). *Examples include dredging, filling, outfall structures, docks, piers, over-water structures, shoreline stabilization, mitigation, reclamation, restoration/enhancement.* ***Provide the information requested in Section C.***

☐ Activities within navigable or flowing surface waters such as a multi-slip dock or marina, dry storage facility, dredging, bridge, breakwaters, reefs, or other offshore structures: ***In addition to Section C, also provide the information requested in Section D.***

☐ Activities that are (or may be) located within, on or over state-owned submerged lands (*See Chapter 18-21, F.A.C. https://www.flrules.org/gateway/ChapterHome.asp?Chapter=18-21*): ***In addition to Section B or C, also provide the information requested in Section F***

☒ Construction or alteration of a stormwater management system serving residential, commercial, transportation, industrial, agricultural, or other land uses, or a solid waste facility (excluding mines that are regulated by DEP). ***Provide the information requested in Section E.***

☐ Creation or modification of Mitigation Bank (refer to Chapter 62-342, F.A.C. https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-342): ***Provide the information requested in Section G.***

☐ Mines (as defined in Section 2.0 of Applicant's Handbook Volume I) that are regulated by the DEP: ***Provide the information requested in Section H.***

☐ Other, describe: Please contact the Agency to determine which additional sections of the application are needed. See Attachment 1 for Agency contacts.

D. Describe in general terms the proposed project, system, works, or other activities. For permit modifications, please briefly describe the changes requested to the permit: **Seminole Electric Cooperative, Inc. (SECI), proposes construction and operation of a new natural gas-fired generation facility on currently wooded and undeveloped portions of the Seminole Generating Station (SGS) site immediately south of the Existing SGS Units in Palatka, Putnam County, Florida. The new facility will be configured and designed as a two-on-one, combined-cycle generating plant utilizing two advanced combustion turbine generators (CTGs), two heat recovery steam generators (HRSGs), one steam turbine generator (STG), and directly associated onsite facilities. SCCF will have a nominal net generating capacity of approximately 1,050 megawatts (MW) (net nominal). Coincident with the declared commercial operation of SCCF as detailed throughout the site certification application, SECI intends to permanently remove from service one of the two Existing SGS Units.**

The existing SGS property is currently approximately 1,996 acres (1,917 acres in the current certified site boundary). The proposed SCCF will be located within an approximately 32-acre portion of the existing SGS site. An additional 23 acres of land will be temporarily used for construction laydown and craft personnel parking. The project has been sited within the SGS site to avoid wetland impacts. SCCF will be designed with appropriate stormwater management systems, including retention ponds to provide flood control and treatment of stormwater runoff from the project area.

E. For activities in, on, or over wetlands or other surface waters, check the type of federal dredge and fill permit requested (if known): ☐Individual ☐Programmatic General permit #: SAJ ☐General ☐Nationwide permit #: NWP ☒Not Applicable ☐Not sure

F. Project/Activity Street/Road Address or other location (if applicable):
City: **Unincorporated** County(ies): **Putnam** Zip: **32177**

Note: For utility, road, or ditch/canal activities, provide a starting and ending point using street names and nearest house numbers or provide length of project in miles along named streets or highways.

G. Project location map and Section, Township, and Range information (use additional sheets if needed): ***Please attach a location map showing the location and boundaries of the proposed activity in relation to major intersections or other landmarks. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.***

Refer to Figure 1.
All or portions of Section(s): **5, 6, 7, 8, 17, and 18** Township: **9 South** Range: **27 East**
Section(s): **31** Township: **8 South** Range: **27 east** Land Grant name, if applicable:
Section(s): **1 and 2** Township: **9 South** Range: **26 east**

H. Latitude (DMS) **29**° **43**' **40**" Longitude (DMS) **81**° **37**' **47**" (Taken from central location of the activity). Explain source for obtaining latitude and longitude (i.e. U.S.G.S. Quadrangle Map, GPS, online resource): **Geographic Information System (GIS)**

I. Tax Parcel Identification Number(s):
01-09-26-0000-0000-0001, 07-09-27-0000-0030-0000, and 18-09-27-0000-0020-0030

[Number may be obtained from property tax bill or from the county property appraiser's office; if on multiple parcels, provide multiple Tax Parcel Identification Numbers]

J. Directions to Site (from major roads; include distances and landmarks as applicable): **Nine miles north of downtown Palatka off U.S. Highway 17**

K. Project area or phase area: **55** acres

L. Name of waterbody(ies) (if known) in which activities will occur or into which the system will discharge: **Wetlands adjacent to the site that ultimately discharge to the St. Johns River**

The following questions (M-O) are not applicable to activities related to a single-family residence, including private single-family residential docks, piers, seawalls or boat ramps.

M. Is it part of a larger plan of development or sale? ☒ yes ☐ no

N. Impervious or semi-impervious area excluding wetlands and other surface waters (if applicable):
29.45 acres or **1,282,842** square feet

O. Volume of water the system is capable of impounding (if applicable): acre-feet.

PART 2: SUPPLEMENTAL INFORMATION, AND PERMIT HISTORY

A. Is this an application to modify an existing Environmental Resource Permit, or to construct or implement part of a multi-phase project, such as a project with a Conceptual Approval permit? ☒ Yes ☐ No *If you answered "yes", please provide permit numbers below:*

AGENCY	DATE	PERMIT/APPLICATION NO.	PROJECT NAME
FDEP	**1978**	**Site Certification Application PA78-10M Conditions of Certification Part B, Surface Water Management Systems**	**Seminole Generating Station Units 1 and 2**

B. Indicate if there have been any ***pre-application meeting(s)*** or other discussions about the proposed project, system or activity. If so, please provide the date(s), location(s) of the meeting, and the name(s) of Agency staff that attended the meeting(s):

AGENCY	DATE	LOCATION	MEETING ATTENDEES
FDEP Siting Coordination	**12/16/16**	**Tallahassee**	**Cindy Mulkey, Ann Seiler, Ben Melnick, Janet Tasner, Rich Racahl, John Davis, Jeff Martin, Junhong Shi, Robert Martin, Julie Hudson, Ashwin Patel**
FDEP Northeast District	**01/12/17**	**Jacksonville**	**Tom Kallemeyn, Junhong Shi**

C. ***Attach a depiction (plan and section views), which clearly shows the works or other activities proposed to be constructed.*** Use multiple sheets, if necessary, a scale sufficient to show the location and type of works, and include a north arrow and a key to any symbols used. ***Specific information to be included in the plans is based on the activities proposed and is further described in Sections B-H.*** However, supplemental information may be required based on the specific circumstances or location of the proposed works or other activities.

Please refer to the construction drawings provided in Appendix A:

- **190285-DS-1101 Pre-Development Stormwater Management Plan**
- **190285-DS-1102 Proposed Stormwater Management Plan**
- **190285-DS-1103 Contact Stormwater Management Plan**
- **190285-DS-1104 Proposed Stormwater Management Plan – Sections and Details**
- **190285-DS-1105 Stormwater Pollution Prevention Plan - Construction**
- **190285-DS-1106 Erosion Control Details - Misc Sections and Details**

D. Processing Fee: ***Please submit the application processing fee along with this application form and supplemental information*****.** Processing fees vary based on the size of the activity, the type of permit applied for, and the reviewing Agency. Please reference Attachment 3 to determine the appropriate fee.

PART 3: APPLICANT AND ASSOCIATED PARTIES INFORMATION

Instructions: Permits are only issued to entities having sufficient real property interest as described in Section 4.2.3 (d) of Applicant's Handbook Volume I. Please attach evidence of sufficient real property interest over the land upon which the activities subject to the application will be conducted, including mitigation (if applicable). Refer to Section 4.2.3 (d) for acceptable ownership or real property interest documentation. For corporations, list a person who is a registered agent or officer of the corporation who has the legal authority to bind the corporation.

A. APPLICANT (ENTITY MUST HAVE SUFFICIENT REAL PROPERTY INTEREST) ☒ **THIS IS A CONTACT PERSON FOR ADDITIONAL INFORMATION**		
Name: Last: **Frauen**	First: **James**	Middle: **R**
Title: **Vice President, Power Delivery and Technical Services**	Company: **Seminole Electric Cooperative, Inc.**	
Address: **16313 North Dale Mabry Highway**		
City: **Tampa**	State: **Florida**	Zip: **33688**
Home Telephone:	Work Telephone: **(813) 739-1213**	
Cell Phone:	Fax:	
E-mail Address: **jfrauen@seminole-electric.com**		
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐		

B. LAND OWNER(S) (IF DIFFERENT OR IN ADDITION TO APPLICANT) ☐ **CHECK HERE IF LAND OWNER IS ALSO A CO-APPLICANT**		
Name: Last:	First:	Middle:
Title:	Company:	
Address:		
City:	State:	Zip:
Home Telephone:	Work Telephone:	
Cell Phone:	Fax:	
E-mail Address:		
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐		

C. OPERATION AND MAINTENANCE ENTITY (see Applicant's Handbook I, Section 12.3)			
Entity Name:	Contact: Last:	First:	Middle:
Title:	Company:		
Address:			
City:	State:		Zip:
Home Telephone:	Work Telephone:		
Cell Phone:	Fax:		
E-mail Address:			
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐			

D. CO-APPLICANT (IF DIFFERENT OR IN ADDITION TO APPLICANT AND OWNER)		
Name: Last:	First:	Middle:
Title:	Company:	
Address:		
City:	State:	Zip:
Home Telephone:	Work Telephone:	
Cell Phone:	Fax:	
E-mail Address:		
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐		

E. ENGINEERING CONSULTANT ☐ THIS IS A CONTACT PERSON FOR ADDITIONAL INFORMATION		
Name: Last: **Barranco**	First: **John**	Middle: **C**
Title: **Civil/Structural Section Lead**	Company: **Black & Veatch**	
Address: **12740 Gran Bay Parkway West, Suite 2140**		
City: **Jacksonville**	State: **Florida**	Zip: **32258**
Home Telephone:	Work Telephone: **(913) 458-9913**	
Cell Phone:	Fax: **(913) 458-9913**	
E-mail Address: **barrancojc@bv.com**		
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐		

F. ENVIRONMENTAL CONSULTANT ☒ THIS IS A CONTACT PERSON FOR ADDITIONAL INFORMATION		
Name: Last: **Fagerstrom**	First: **Chris**	Middle:
Title: **Principal Engineer**	Company: **Environmental Consulting & Technology, Inc.**	
Address: **707 East Third Avenue**		
City: **New Smyrna Beach**	State: **Florida**	Zip: **32169**
Home Telephone:	Work Telephone: **(386) 427-0694**	
Cell Phone: **(386) 852-0387**	Fax: **(386) 427-0889**	
E-mail Address: **cfagerstrom@ectinc.com**		
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐		

G. AGENT AUTHORIZED TO SECURE PERMIT (IF DIFFERENT FROM CONSULTANT) ☐ THIS IS A CONTACT PERSON FOR ADDITIONAL INFORMATION		
Name: Last:	First:	Middle:
Title:	Company:	
Address:		
City:	State:	Zip:
Home Telephone:	Work Telephone:	
Cell Phone:	Fax:	
E-mail Address:		
Correspondence will be sent via email. Check here to receive correspondence via US Mail: ☐		

If necessary, please add additional pages for other contacts and property owners related to this project.

PART 4: SIGNATURES AND AUTHORIZATION TO ACCESS PROPERTY

Instructions: For multiple applicants please provide a separate Part 4 for each applicant. For corporations, the application must be signed by a person authorized to bind the corporation. A person who has sufficient real property interest (see Section 4.2.3 (d) of Applicant's Handbook Volume I) is required in (B) to authorize access to the property, except when the applicant has the power of eminent domain.

A. By signing this application form, I am applying for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relieve of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a different responsible operation and maintenance entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

James R. Frauen		12-7-17
Typed/Printed Name of Applicant or Applicant's Authorized Agent	Signature of Applicant or Applicant's Authorized Agent	Date

Vice President, Power Delivery and Technical Services

(Corporate Title if applicable)

B. CERTIFICATION OF SUFFICIENT REAL PROPERTY INTEREST AND AUTHORIZATION FOR STAFF TO ACCESS THE PROPERTY:
I certify that:

☒ ***I possess sufficient real property interest in or control, as defined in Section 4.2.3 (d) of Applicant's Handbook Volume I,*** over the land upon which the activities described in this application are proposed and I have legal authority to grant permission to access those lands. I hereby grant permission, evidenced by my signature below, for staff of the Agency and the U.S. Army Corps of Engineers to access, inspect, and sample the lands and waters of the property as necessary for the review of the proposed works and other activities specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review, inspection, and/ or sampling. Further, I agree to provide entry to the project site for such agents or personnel to monitor and inspect permitted work if a permit is granted.

OR

☐ I represent an entity having ***the power of eminent domain and condemnation authority***, and I/we shall make appropriate arrangements to enable staff of the Agency and the U.S. Army Corps of Engineers to access, inspect, and sample the property as described above.

James R. Frauen		12-7-17
Typed/Printed Name	Signature	Date

Vice President, Power Delivery and Technical Services

(Corporate Title if applicable)

C. DESIGNATION OF AUTHORIZED AGENT (IF APPLICABLE):

I hereby designate and authorize _____ to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant	Signature of Applicant	Date

(Corporate Title if applicable)

(9.25.13)

SECTION E: SUPPLEMENTAL INFORMATION REQUIRED FOR WORKS OR OTHER ACTIVITIES INVOLVING A STORMWATER MANAGEMENT SYSTEM
(OTHER THAN A SINGLE-FAMILY PROJECT)

Instructions: The information listed in the checklists below represents the level of information that is usually required to evaluate an application. Information can be provided within reports, plans and documents. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. The supplemental information required by this section is in addition to the information required by Section A of the ERP application.

PART 1: STORMWATER MANAGEMENT SYSTEM SUMMARY

Provide drainage calculations, signed and sealed by an appropriate registered professional, and supporting documentation demonstrating that the proposed project meets the conditions for issuance under 62-330.301(1)(a),(b),(c),(e), F.A.C. The drainage calculations should include, but not necessarily be limited to, the following:

1. General Site Information:
   Appendix A, Construction Drawings, and Appendix C, Stormwater Management Report

   a. ☒ Provide pre-development and post-development drainage map(s), as appropriate, that include drainage patterns and basin boundaries with acreage served by each hydraulically separate system, showing the direction of flows, including any off-site runoff being routed through or around the system; topographic information; and connections between wetlands and other surface waters.
   Within Appendix C, see Predevelopment Stormwater Analysis, Attachment 2, and Postdevelopment Stormwater Analysis, Attachment 2, for pre- and postdevelopment drainage maps, respectively. The temporary craft parking area basin map is shown in Attachment 2 of the Temporary Craft Area Pond Treatment Volume Analysis calculations.

   b. ☒ Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions. Identify the wet season high water table elevations, soil profiles, and hydraulic conductivity. Include dates, datum, and methods used to determine these soil parameters.
   Appendix B contains a copy of the site geotechnical report.

   c. ☒ Identify the onsite hydrologic soil classification (e.g. Type A, B/D, D). Reference the source, such as the USDA/NRCS Soil Survey, used in estimating the onsite hydrologic soil classification. Provide maps, as appropriate, with the project limits delineated.
   As stated in the geotechnical report (Appendix B), the Putnam County Soils Survey shows the soils within the proposed project area have a hydrologic soil classification of Type A.

   d. ☒ Identify the seasonal high water or mean high tide elevation for receiving waters/wetlands into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.
   As shown in the geotechnical report (Appendix B), the seasonal high-water table is approximately 6 feet below land surface in the area of the proposed pond.

e. ☒ Identify the name of each receiving waterbody to which the proposed stormwater management system will discharge:
Stormwater discharges offsite via overland flow to Fish Creek and ultimately the St. Johns River.

f. ☒ Indicate the existing land use and land cover.
The existing land use and land cover is undeveloped forest.

g. ☒ Provide the acreage, and percentages of the total project, of the following:
1. Impervious surfaces, excluding buildings, wetlands and other surface waters;
2. Buildings; Pervious surfaces (green areas not including wetlands);
4. Lakes, canals, retention areas, other open water areas; and
5. Wetlands (Please refer to Section C to ensure consistency in wetland acreages).
Within Appendix C, see Postdevelopment Stormwater Analysis, pages 6 and 7.

h. ☒ Provide the location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.
See Figure 1, Aerial Photograph of the project site and surrounding area.

2. Water Quality Analysis:

a. ☒ Provide a description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis.
The proposed treatment methodology is dry retention. The proposed dry retention pond has been designed to retain 10.69 acre-feet (ac-ft); the required treatment volume is 5.11 ac-ft (see Appendix G, Postdevelopment Stormwater Analysis, page 10). The proposed pond is designed to recover in 50.5 hours (see Appendix G, Postdevelopment Stormwater Analysis, page 10).

b. ☒ Is the receiving waterbody known to be impaired, and/or has an established Total Maximum Daily Load (TMDL) or Basin Management Action Plan (BMAP)? If so, please provide specific descriptions of all water quality parameters for which the waterbody is known to be impaired? For more information about water quality, impaired waters, and to determine whether a TMDL has been adopted in your project area, refer to: http://waterwebprod.dep.state.fl.us/basin411/downloads/Florida-Adopted-TMDLs.pdf. To determine whether a BMAP exists, or is being developed in your project area, refer to: *http://www.dep.state.fl.us/water/watersheds/bmap.htm#rad*.
☒ yes ☐ no ☐ don't know

The St. Johns River (segment 2213L), the receiving waters for the project, is listed as impaired with nutrients as the causative agents (i.e., total nitrogen and total phosphorus). All runoff from the facility, including both pervious and impervious surfaces, will be routed to the dry retention stormwater pond and adequately treated prior to discharge. In addition, the dry retention pond is designed to retain greater than the required treatment volume and, as such, will cause a net improvement to the receiving water quality for nutrients.

If yes, provide calculations demonstrating that the proposed project will not contribute to violations of state water quality standards in accordance with the applicable Applicant's Handbook, Vol. II.
All runoff from the facility, including both pervious and impervious surfaces, will be routed to the dry retention stormwater pond and adequately treated prior to discharge. Therefore, the project will not adversely impact the attainment of state water quality criteria in the receiving waters.

c. ☒ Does the project have a direct discharge to a Class I, Class II, Outstanding Florida Waters or Class III waters, which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting? *To determine whether your project is within, or will discharge to an OFW, or for more information about OFWs in general, refer to: http://www.dep.state.fl.us/water/wqssp/ofw.htm.*
☐ yes ☒ no ☐ don't know
If yes, additional treatment in accordance with the applicable Applicant's Handbook, Vol. II, may be required.

d. ☒ Provide construction plans and calculations that address the required treatment volume and recovery, as well as stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria in the applicable Applicant's Handbook, Vol. II.
See the construction drawings included in Appendix A and stormwater calculation included in Appendix C.

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Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, and justification for model selection.

3. Water Quantity Analysis:

Provide calculations and documentations demonstrating that the project, as proposed, meets the applicable design criteria as indicated in the applicable Applicant's Handbook, Vol. II. Typically, the information would include, at a minimum, but is not necessarily be limited to, the following:

a. ☒ For projects requiring pre-development analysis, provide an analysis of the pre-development peak rate of discharge and / or volume of runoff, for all design storm events. Account for all onsite depressional storage and offsite contributing area. Please refer to the applicable Applicant's Handbook, Vol. II for the design storm event(s) that apply to your project.
Within Appendix C, see Predevelopment Stormwater Analysis

b. ☒ Provide an analysis of the post-development peak rate of discharge and / or volume of runoff for all applicable design storm events. Account for all onsite storage and offsite contributing area. Please refer to the applicable Applicant's Handbook, Vol. II for the design storm event(s) and criteria that apply to your project.
Within Appendix C, see Postdevelopment Stormwater Analysis

These analyses should include:
Within Appendix C, see Postdevelopment Stormwater Analysis

☒ Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basins in the pre-development and post-development condition;

☒ Design storms used including rainfall depth, duration, frequency, and distribution;

☒ Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);

☒ Stage-storage computations for any area such as a reservoir, closed basin, detention area, or channel, used in storage routing;

☒ Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;

☒ Flood routings through on-site conveyance and storage areas;

☒ Water surface profiles in the primary drainage system for each required design storm event(s);

☒ Runoff peak rates and volumes discharged from the site for each required design storm event(s);

☒ Design tailwater elevation(s) for each storm event at all points of discharge (include source or method of estimate); and

☐ Pump specifications and operating curves for range of possible operating conditions (if used in system).

Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, input and output data, justification for model selection, and, if necessary, a description of the program.
Within Appendix C, see Pre- and Postdevelopment Stormwater Analyses

4. Floodplain Analysis (where applicable).

a. ☒ If the project is in a known floodplain of a stream or other water course, identify the appropriate floodplain boundary and approximate flooding elevations of any lake, stream or other watercourse located on or adjacent to the site.
The project site is not located within a 100-year riverine floodplain per Federal Emergency Management Agency (FEMA) Panel 12107C0185C.

b. ☐ For traversing works, in accordance with the applicable Applicant's Handbook, Vol. II, provide:
Not applicable

☐ Hydraulic calculations for all proposed traversing works; and

☐ Water surface profiles showing upstream impact of traversing works.

c. ☐ For impacts to regulated floodplains, in accordance with the applicable Applicant's Handbook, Vol. II, provide:
Not applicable

☐ Location and volume of encroachment within regulated floodplain(s); and

☐ Plans and calculations for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.

PART 2: CONSTRUCTION PLANS

1. Provide clear, construction level detailed plans for the system. The plans must be signed and sealed by an appropriate registered professional as required by law. These plans should include cumulative information from all applicable sections; as well as the following:
See Appendix A.

a. ☒ Project area boundary and total area, including distances and orientation from roads or other landmark.
See Appendix A; Sheet 190285-DS-1101 – Predevelopment Stormwater Plan

b. ☒. Existing topography extending at least 100 feet off the project area. All topography shall include location and description of benchmarks, reference to NGVD 1929 or NAVD 1988 along with the conversion factor.
See Appendix A; Sheet 190285-DS-1101 – Predevelopment Stormwater Plan

c. ☒ Proposed site plan with acreage, including the following:
See Appendix A; Sheet 190285-DS-1102 – Postdevelopment Stormwater Plan

- ☒ plan view of proposed development, including impervious surfaces and water management areas;
- ☒ land cover and natural communities*;
- ☐ wetlands and other surface waters*; **Not applicable**
- ☒ undisturbed uplands*;
- ☐ aquatic communities*; **Not applicable**
- ☐ proposed buffers*; **Not applicable**
- ☐ proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands, (if applicable); and☐ onsite wetland mitigation areas*. **Not applicable**

*Please refer to Section C.

- ☐ For phased projects, provide a master development plan clearing delineating the limits of each phase of construction. **Not applicable**

d. ☒ Paving, Grading, and Drainage Information, which includes, but not necessarily limited to, the following:
See Appendix A; Sheet 190285-DS-1102 – Postdevelopment Stormwater Plan

- ☒ Existing topography;
- ☐ Boundaries of wetlands and other surface waters and upland buffers (see Section C); **Not applicable**
- ☒ Plan view of proposed development;
- ☒ Proposed elevations and/or profiles, including:
  - ☒ roadway, parking, and pavement grades;
  - ☒ floor slabs, walkways, and other paved surfaces;
  - ☒ earthwork grades for pervious landscaped areas; and
  - ☒ perimeter site grading, tying back into existing grades.
- ☒ Location of all water management areas, including elevations, dimensions, side slopes, and design water depths;
- ☒ Location, size, and invert elevations of existing and proposed stormwater conveyance systems;
- ☒ Vegetative cover plan for all on-site and off-site earth surfaces disturbed by construction; and
- ☐ Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes (including access), and rights-of-way and easements for the existing drainage system, if any. **Not applicable**

e. ☒ Stormwater detail information, including but not necessarily limited to, the following:
See Appendix A; Sheet 190285-DS-1104 and 1106 – Postdevelopment Stormwater Plan Sections and Details

- ☒ Cross section of all stormwater management areas, including elevations, dimensions, side slopes, and proposed stabilization measures (with location of the cross section(s) shown on the corresponding plan view);

☒ Detail of all proposed control structures, including elevations, dimensions, and skimmer, where applicable; and
☒ Details of proposed stormwater management systems, such as underdrains, exfiltration trenches, vaults, and other proposed Best Management Practices (BMPs).

f. ☒ Location and description of any nearby existing offsite features (such as wetland and other surface waters, stormwater management ponds, and building or other structures) which might be affected by or affect the proposed construction or development.
No offsite feature will be affected by the proposed development. Access to the site will be through the existing Seminole Generating Station.

PART 3: CONSTRUCTION SCHEDULE AND TECHNIQUES

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should include, as applicable, the following.

Construction is anticipated to begin between mid-2019 and early 2020. The construction phase will last for approximately 33 months, followed by a three-month testing period.

a. ☒ Access and staging of equipment;
Access to the site will be through the existing Seminole Generating Station. Existing upland areas of the plant will be used for equipment staging.

b. ☒ Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions.
See Appendix A; Sheet 190285-DS-1105 and 1106 – Stormwater Pollution Prevention Plan

c. ☒ The location of disposal site(s) for any excavated material, including temporary and permanent disposal sites.
Excavated materials will be used as backfill; therefore, temporary storage piles may be used during construction, but no permanent disposal sites are proposed.

d. ☐ A demolition plan for any existing structures to be removed.
Not applicable

e. ☒ Dewatering plan details. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place;
Note: If required, dewatering plans will be provided prior to construction in accordance with any applicable conditions of certification.

f. ☒ Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge;
Equipment and material will be transported by truck or railroad.

PART 4: OPERATION AND MAINTENANCE AND LEGAL DOCUMENTATION:

a. ☒ Describe the overall maintenance and operation schedule for the proposed system.
Site drainage structures will be inspected regularly and will be maintained free of debris and/or sediment. Site vegetation will be mowed or trimmed as needed. The project's surface water management system is gravity operated and requires no operator action.

b. ☒ Identify the entity (or entities) that will be responsible for operating and maintaining the system (or parts of the system) to demonstrate that the entity (or entities) meet(s) the requirements of section 12.3 of the Applicant's Handbook, Vol. I.
All onsite structures will be owned and maintained by the applicant. A property owners association will not be required.

☐ If different from the permittee, provide a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long-term maintenance.
☐ If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system.

c. ☐ Provide drafts of all proposed conservation easements, stormwater management system easements, draft property owner's association documents, and plats for the property containing the proposed system. **Not applicable**

d. ☐ Provide legal reservations for access to the treatment system for maintenance and operation by future maintenance entities for subdivided projects. **Not applicable**

e. ☒ Provide indication of how water and wastewater service will be supplied.
Potable water will be supplied through an onsite well and treatment facility and sanitary wastewater will be treated in an onsite treatment facility.

f. ☒ Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled the applicant.
See Figure 1 for property boundary.

PART 5: WATER USE

a. ☒ Describe how irrigation will be provided to the project. Will the surface water system be used for water supply, including landscape irrigation, or recreation?
As needed, irrigation water will be provided through onsite service water wells. The surface water system is not technologically feasible for water supply.

b. ☐ If a Consumptive Use or Water Use permit has been issued for the project, state the permit number:

c. ☒ If a Consumptive Use or Water Use permit has not been issued for the project, indicate if such a permit will be required. ☐ yes ☒ no ☐ don't know
If yes, please indicate when the application for a permit will be submitted:
Consumptive water use for the project will be approved through the Power Plant Siting Act (PPSA) process, Chapter 403, Part II, Florida Statutes.

d. ☐ Indicate how any existing wells located within the project site will be utilized or abandoned.
There are no existing wells in the SCCF area. New wells will be installed to provide service and potable water.

PART 6: SPECIAL BASIN INFORMATION

Is your project within a special basin as described in the applicable Applicant's Handbook, Vol. II?

☐ yes ☒ no ☐ don't know

If yes, please demonstrate that the project will meet the applicable special basin criteria.

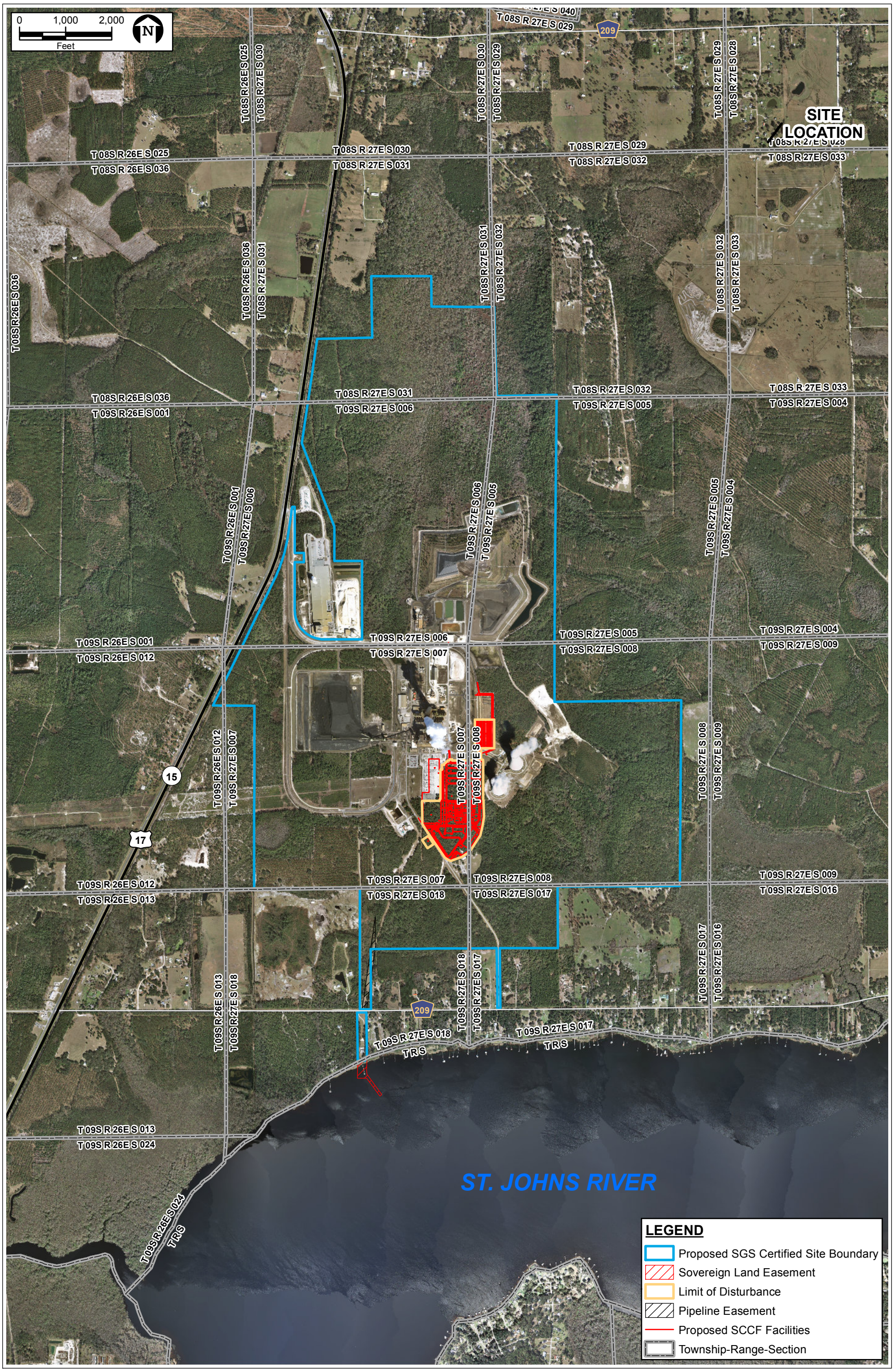


FIGURE 1.

PUBLIC LAND SURVEY SYSTEM MAP OF SGS SITE AND GENERAL VICINITY

Sources: Putnam Co PA, 2016; FDOT, 2017; USGS, 2016; ECT, 2017.

Seminole Electric COOPERATIVE, INC.

APPENDIX A

CONSTRUCTION DRAWINGS



GENERAL NOTES

Pre Development Phase Site Acreage & Surfacing

Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	5.69	0%	5.69	0	0	0
SB-2	26.64	0%	26.64	0	0	0
SB-3	16.9	2%	16.64	0.26	0	0
SB-4	0.83	0%	0.83	0	0	0
OSB-1**	5.63	100%	0	5.63	0	0
Total Site	55.69	11%	49.8	5.89	0	0

*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.

**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing will be unchanged from pre-development condition.

NOTES

1. ELEVATIONS ARE REPORTED AS NAVD88.
2. WETLANDS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY.

LEGEND

- BASIN DIVIDE
- DISTURBED AREA LIMITS
- EXISTING WETLANDS
- EXISTING SWITCH YARD
- EXISTING WOODED AREA

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ENGINEER: OJ	DRAWN: KED
CHECKED:	DATE:

SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
PRE-DEVELOPMENT STORMWATER PLAN

PROJECT NUMBER:	DRAWING NUMBER:	REV
190285-DS-1101		0
CODE:	REFERENCE DWG NUMBER:	
AREA:		

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GENERAL NOTES

Operation Phase Site Acreage & Surfacing

Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	18.31	52%	8.86	8.72	0.00	0.73
SB-2	6.53	83%	1.08	5.45	0.00	0.00
SB-3	6.46	100%	0.00	6.46	0.00	0.00
SB-4	4.11	77%	0.95	3.06	0.10	0.00
SB-5	13.82	61%	5.41	3.84	0.47	4.10
SB-6	0.83	100%	0.00	0.83	0.00	0.00
OSB-1**	5.63	95%	0.28	5.35	0.00	0.00
Total Site	55.69	70%	16.58	33.71	0.57	4.83

*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.
**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from pre-development condition.

Dry Retention Pond (P-1) Stage Data

Elevation (ft-NAVD88)	Surface Area (acres)	Remarks
68.50	3.24	The bottom of retention pond
69.50	3.41	The bottom of affective storage (See Note 1)
70.50	3.58	
71.50	3.75	
72.50	3.93	Elevation of emergency overflow weir
73.50	4.11	Top of Bank

Note 1: The bottom 1 foot of the pond is reserved for sediment storage and is not considered in stormwater capacity evaluation.

Temporary Craft Parking Area Pond Stage Data

Elevation (ft-NAVD88)	Surface Area (acres)	Remarks
77.00	0.26	The bottom of temporary craft parking retention pond
78.00	0.37	
79.00	0.48	
79.50	0.54	Elevation of emergency overflow weir
80.00	0.60	Top of Bank

NOTES

1. ELEVATIONS ARE REPORTED AS NAVD88.
2. TOP OF CONCRETE/FINISHED FLOOR ELEVATION IS 75.00 NAVD 88. UNLESS NOTED OTHERWISE.
3. WETLANDS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY.
4. ALL AREAS WITHIN LOOP ROAD OF EQUIPMENT AND BUILDING AREAS TO BE AGGREGATE SURFACED. ALL OTHER AREAS NOT INDICATED WITH SURFACING SHALL BE SEEDED/SODDED WITH BAHIA.
5. ENERGY DISSIPATORS TO BE DESIGNED BY EPC CONTRACTOR TO NON-ERODIBLE DISCHARGE VELOCITIES.
6. TEMPORARY CRAFT PARKING WILL BE AGGREGATE SURFACED DURING CONSTRUCTION AND WILL BE RESTORED TO A PRE-DEVELOPMENT CONDITION (GRASS / AGGREGATE) AFTER CONSTRUCTION.
7. TEMPORARY VISUAL BARRIER SYSTEM SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR TO PROTECT THE FLORIDA OUTSTANDING WETLANDS AS REQUIRED BY THE SITE CERTIFICATION APPLICATION.
8. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE ALL SEDIMENT BUILDUP FROM THE STORMWATER RETENTION POND. IN ADDITION, THE CONTRACTOR SHALL TEST THE POND TO CONFIRM THE FINAL INFILTRATION RATE.

LEGEND

- SB-X — STORM WATER SUB BASIN AREA
- WETLAND BUFFER
- DISTURBED AREA LIMITS
- BASIN DIVIDE
- TEMPORARY CONSTRUCTION FENCE
- SECURITY FENCE
- CATCH BASIN
- MANHOLE
- OVERFLOW CONTROL STRUCTURE
- STORM SEWER SYSTEM
- SURFACE FLOW INDICATOR
- DITCH FLOW INDICATOR
- CULVERT
- CONTAINMENT AREA W/GEOMEMBRANE LINER (SEE NOTE 2)
- WETLANDS
- ASPHALT
- AGGREGATE
- GRASS
- RIP-RAP
- EXISTING VEGETATION
- SLOPE INDICATOR

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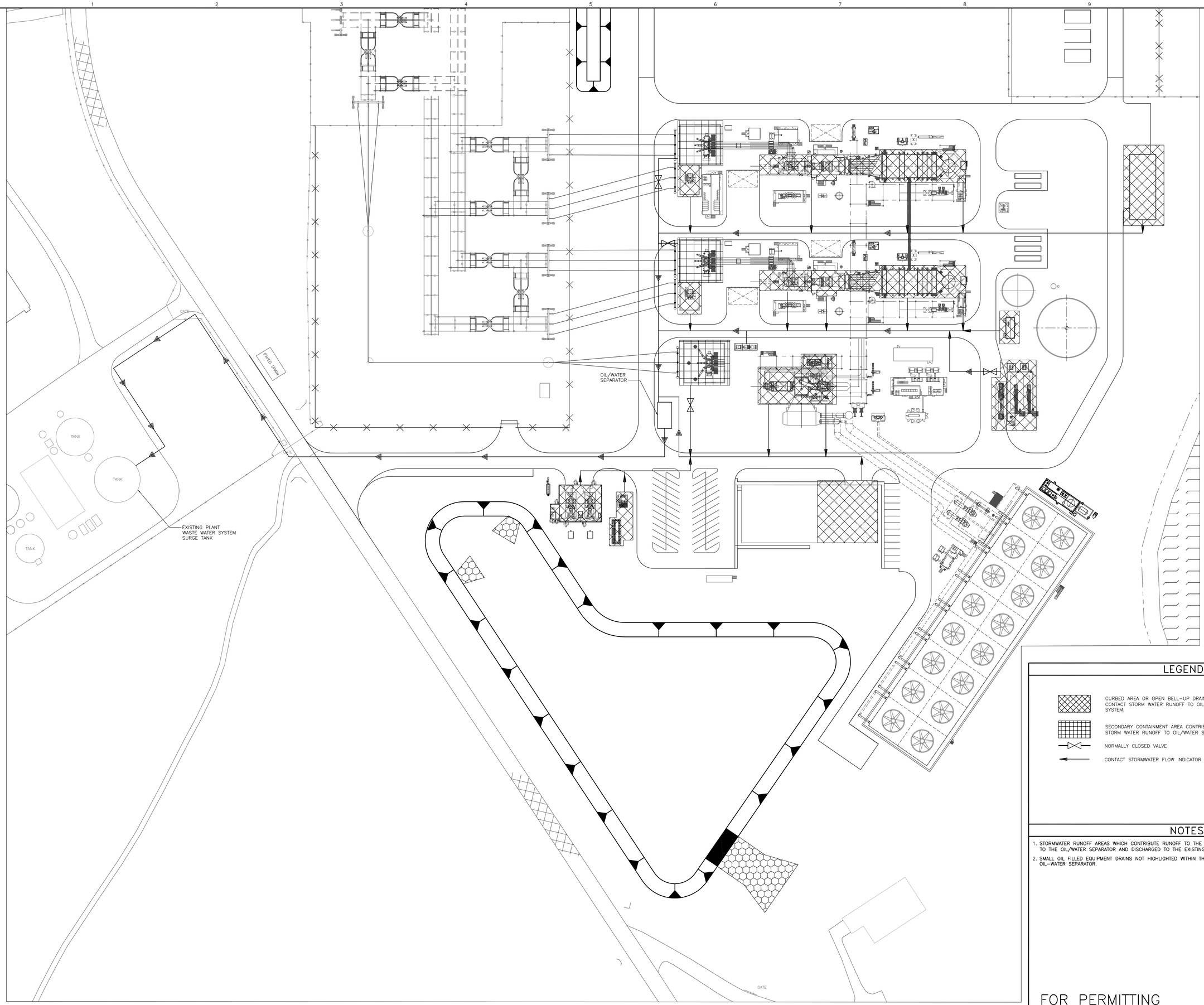
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SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
PROPOSED STORMWATER MANAGEMENT PLAN
PLAN

PROJECT NUMBER: 190285-DS-1102 | DRAWING NUMBER: | REV 0
CODE: | REFERENCE DWG NUMBER:
AREA:

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LEGEND

- CURBED AREA OR OPEN BELL-UP DRAIN CONTRIBUTING CONTACT STORM WATER RUNOFF TO OIL/WATER SEPARATOR SYSTEM.
- SECONDARY CONTAINMENT AREA CONTRIBUTING CONTACT STORM WATER RUNOFF TO OIL/WATER SEPARATOR SYSTEM.
- NORMALLY CLOSED VALVE
- CONTACT STORMWATER FLOW INDICATOR

NOTES

1. STORMWATER RUNOFF AREAS WHICH CONTRIBUTE RUNOFF TO THE CONTACT WATER SYSTEM SHALL BE CONVEYED TO THE OIL/WATER SEPARATOR AND DISCHARGED TO THE EXISTING SURGE TANK.
2. SMALL OIL FILLED EQUIPMENT DRAINS NOT HIGHLIGHTED WITHIN THIS DRAWING, SHOULD BE ALSO ROUTED TO THE OIL-WATER SEPARATOR.

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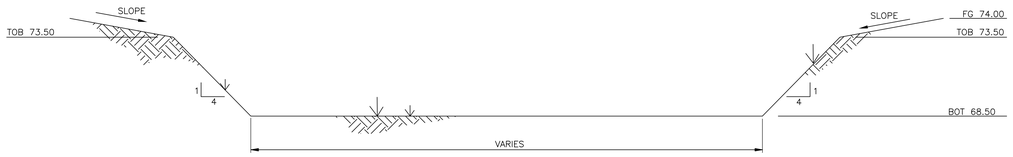
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SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
CONTACT STORM WATER PLAN
POWER BLOCK

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CODE: | REFERENCE DWG NUMBER:
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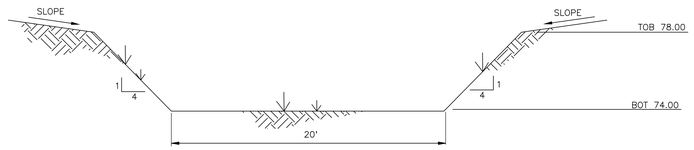
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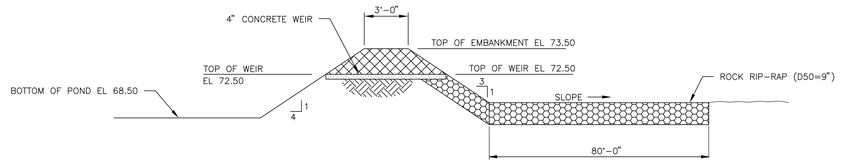
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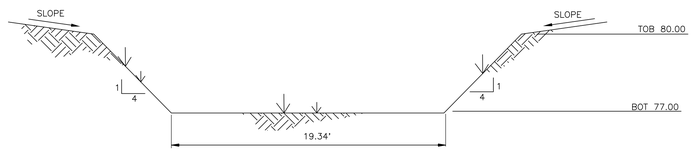
EMERGENCY OVERFLOW WEIR – PROFILE
NO SCALE



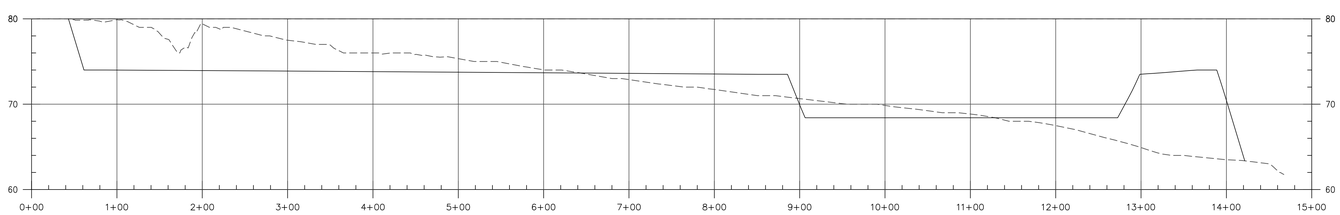
SB-1 STORMWATER MANAGEMENT DITCH – SECTION 2
NO SCALE



EMERGENCY OVERFLOW WEIR – CROSS SECTION
NO SCALE



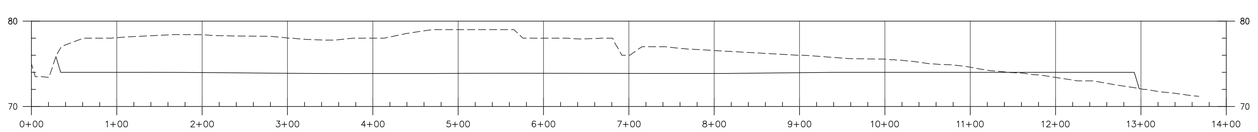
TEMPORARY CRAFT PARKING AREA POND – SECTION 3
NO SCALE



LINE	SURFACE	OFFSET
– –	Existing	
——	Nominal grade EL 74	

Scaled 10.0000 Times Ver.
Scaled 1.0000 Times Hor.

POND 1 – SECTION 4



LINE	SURFACE	OFFSET
– –	Existing	
——	Nominal grade EL 74	

Scaled 10.0000 Times Ver.
Scaled 1.0000 Times Hor.

POND 1 – SECTION 5

GENERAL NOTES

1. SEE DWG DS-1102 FOR PROPOSED STORM WATER MANAGEMENT PLAN.
2. SEE DWGS DS-1105 FOR EROSION CONTROL PLANS.

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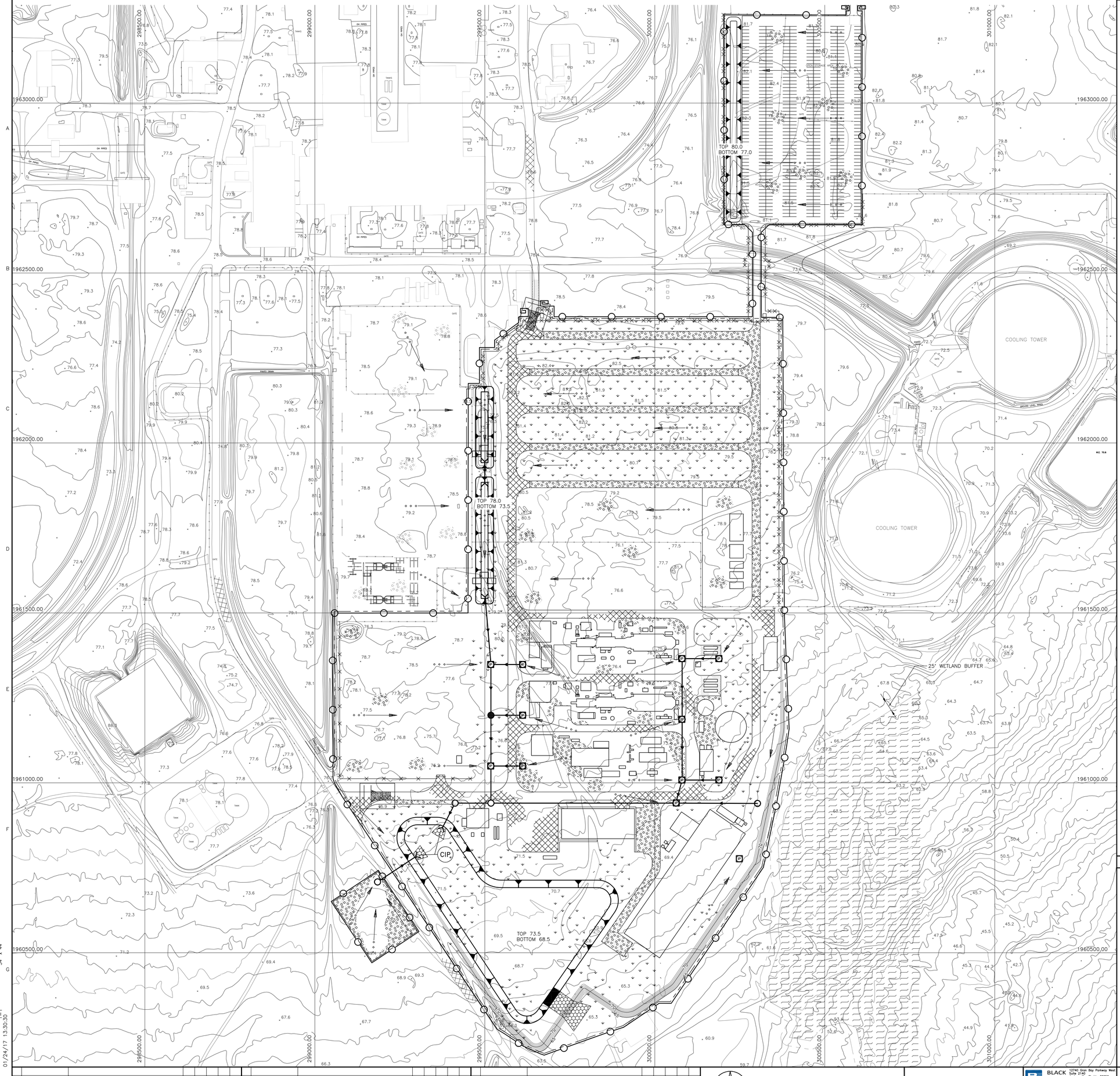
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PROPOSED STORMWATER MANAGEMENT PLAN
SECTIONS & DETAILS

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EROSION CONTROL NOTES

TEMPORARY VEGATIVE COVER

GENERAL:

1. TEMPORARY VEGETATIVE COVER SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES – ITEM 164.
2. 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:

1. INSTALL REQUIRED SURFACE WATER CONTROL MEASURES.
2. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
3. TILLAGE SHOULD ACHIEVE A REASONABLY UNIFORM LOOSE SEEDBED. WORK ON CONTOUR IF SITE IS SLOPING.

ESTABLISHMENT:

1. SELECT APPROPRIATE SPECIES FOR THE SITUATION. NOTE RATES AND SEEDING DATES AS SPECIFIED BY SEEDING SUPPLIER.
2. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC
3. APPLICATION.
4. UNLESS HYDROSEEDED, COVER SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL USING SUITABLE EQUIPMENT.

MULCH IMMEDIATELY AFTER SEEDING IF REQUIRED. APPLY STRAW OR HAY MULCH AND ANCHOR TO SLOPES GREATER THAN 3% OR WHERE CONCENTRATED FLOW WILL OCCUR.

PERMANENT VEGATIVE COVER

1. PERMANENT VEGETATIVE COVER SHALL BE IN ACCORDANCE WITH THE GENERAL CONSTRUCTION SPECIFICATION, 71.0203 SITE FINISHING.

EROSION CHECKS

GENERAL:

1. TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR STRAW, HELD IN PLACE WITH STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND OR SEDIMENT FILTER FABRIC FASTENED TO A FENCE POST AND BURIED INTO THE GROUND, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

CONSTRUCTION:

1. BALES SHOULD BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF FOUR (4") INCHES.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY WOOD STAKES OR REINFORCEMENT BARS DRIVEN THROUGH THE BALES AND INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD THE PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. FILTER FABRIC SHALL BE SECURELY ANCHORED AT THE TOP OF A THREE FOOT (3') HIGH FENCE AND BURIED A MINIMUM OF SIX INCHES (6") TO THE SOIL. SEAMS BETWEEN SECTIONS OF FILTER FABRIC SHALL OVERLAP A MINIMUM OF THREE FEET (3').

INSTALLATION AND MAINTENANCE:

1. SILT FENCE SHALL BE INSTALLED AT ALL CULVERT AND TRENCH DRAIN INLETS, AND WHERE INDICATED ON DRAWINGS.
2. AN INLET SEDIMENT FILTER SHALL BE INSTALLED AT ALL CATCH BASIN INLETS. SEE DWG CSTF-S3920 FOR DETAILS.
3. BALED HAY EROSION BARRIERS AND SILT FENCE SHALL BE INSTALLED IN AREAS AS MAY BE DEEMED APPROPRIATE DURING CONSTRUCTION.
4. ALL EROSION CHECKS SHALL BE MAINTAINED UNTIL ADJACENT AREAS ARE STABILIZED.
5. INSPECTION SHALL BE FREQUENT (AT MINIMUM WEEKLY AND BEFORE AND AFTER ANY RAINFALL THAT EXCEEDS 1/2") AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. EROSION CHECKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.

SEDIMENT & EROSION CONTROL PLAN NOTES:

GENERAL:

1. THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.
2. IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE.
3. BEST MANAGEMENT PRACTICES FOR EROSION CONTROL SHALL BE IMPLEMENTED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION TO PREVENT SILTATION AND TURBID DISCHARGES IN EXCESS OF THE APPLICABLE PROVISIONS OF THE SITE CERTIFICATION APPLICATION AND THE CONDITIONS OF CERTIFICATION. METHODS SHALL INCLUDE, BUT ARE NOT LIMITED TO THE USE OF STAKED HAY BALES, STAKED FILTER CLOTH, SODDING, SEEDING, AND MULCHING; STAGED CONSTRUCTION; AND THE INSTALLATION OF TURBIDITY SCREENS AROUND THE IMMEDIATE PROJECT SITE.

SITE GRADING:

GENERAL:

1. THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
   a. THE PERMANENT CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1), UNO.
   b. THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1), UNO.
   c. TEMPORARY CONSTRUCTION FACES OF FILLS AND EXCAVATION CUTS SHALL NOT BE STEEPER THAN ONE AND A HALF HORIZONTAL TO ONE VERTICAL (1.5:1).
   d. PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO DRAINAGE DITCHES TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
   e. EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY FROM EROSION, SLIDING, SETTLING, OR CRACKING.
   f. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS, WATERCOURSES, OR WATERBODIES.
   g. PRIOR TO ANY REGRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.

LEGEND

- SILT FENCING
- CATCH BASIN INLET SEDIMENT FILTER
- SYNTHETIC STRAW BALE CHECK DAM
- RIPRAP
- WETLANDS
- MITIGATION AREA
- GRADE SURFACE FLOW INDICATOR
- WATTLES
- DISTURBED AREA LIMITS
- IP — INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE / EXIT
- CIP — CULVERT INLET PROTECTION

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100' 50' 0 100' 200' — 1"=100'

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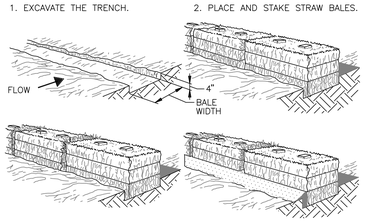
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CHECKED:	DATE:

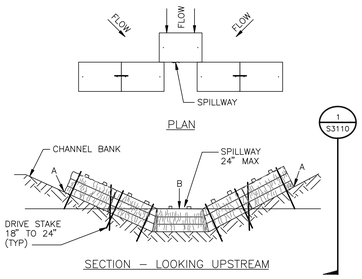
SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
STORMWATER POLLUTION PREVENTION PLAN
CONSTRUCTION

PROJECT NUMBER:	DRAWING NUMBER:	REV
190285-DS-1105		0
CODE:	REFERENCE DWG NUMBER:	
AREA:		

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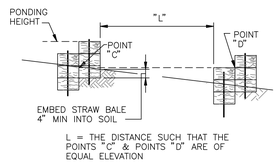


SYNTHETIC BALE BARRIER CONSTRUCTION DETAIL
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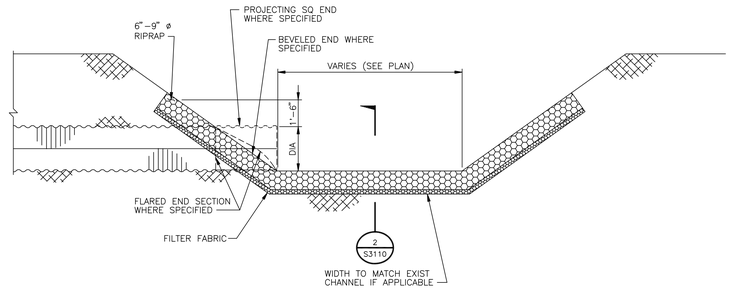


NOTES:
1. EMBED BALES 4" INTO SOIL AND "KEY" BALES INTO CHANNEL BANKS.
2. POINT "A" MUST BE HIGHER THAN POINT "B" (SPILLWAY HEIGHT)
3. PLACE BALES PERPENDICULAR TO THE FLOW WITH ENDS TIGHTLY ABUTTING.
4. SPILLWAY HEIGHT SHALL NOT EXCEED 24".
5. INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

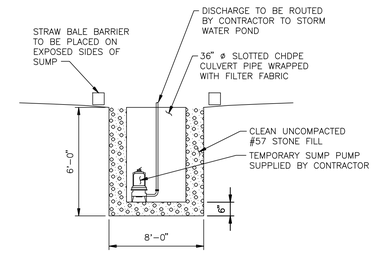
STRAW BALE CHECK DAM IN DRAINAGE WAY
NO SCALE



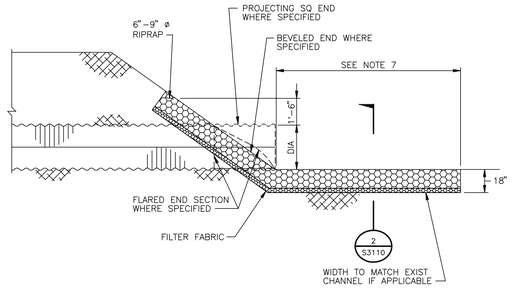
SPACING BETWEEN CHECK DAMS
NO SCALE



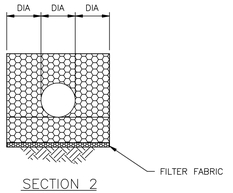
OUTLET END (PERPENDICULAR WITH DITCH)



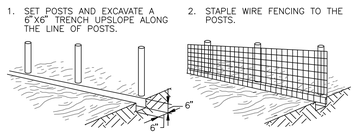
TYPICAL TEMPORARY STORMWATER SUMP
NO SCALE

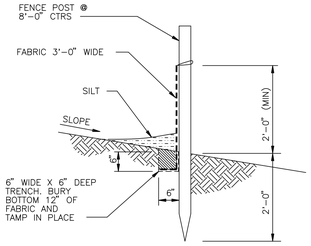


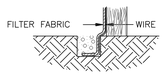
OUTLET END (IN–LINE WITH DITCH)



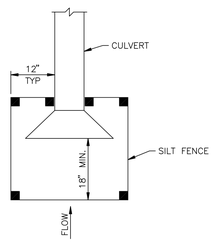
SECTION 2
NO SCALE
SEE THIS DWG



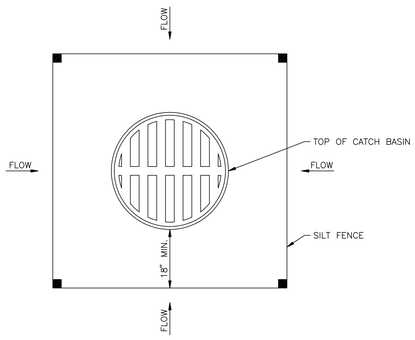




SILT FENCE CONSTRUCTION DETAIL
NO SCALE



SILT FENCE
CULVERT
INLET PROTECTION
NO SCALE



SILT FENCE
CATCH BASIN
INLET PROTECTION
NO SCALE

GENERAL NOTES

1. SEE DWG DS–1XXX FOR PLOT PLAN.
2. SEE DWGS DS–XXXX FOR EROSION CONTROL PLANS.
3. TEMPORARY BARRIER SYSTEM SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR TO PROTECT THE FLORIDA OUTSTANDING WETLANDS AS REQUIRED BY THE SITE CERTIFICATION APPLICATION.
4. FINAL SIZING OF RIP–RAP INCLUDING APRON LENGTH & WIDTH TO BE DETERMINED BY EPC CONTRACTOR DURING DETAIL DESIGN TO NON–ERODIBLE DISCHARGE VELOCITIES.

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JOHN C. BARRANCOR, LICENSE No 72091, 09/MAR/2017, STATE OF FLORIDA, PROFESSIONAL ENGINEER

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SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
EROSION CONTROL DETAILS
MISC. SECTIONS & DETAILS

PROJECT NUMBER:	DRAWING NUMBER:	REV
190285-DS-1106		0
CODE:	REFERENCE DWG NUMBER:	
AREA:		

DVAB0885 12/05/16 09:53:00 ACAD LAT 1 18.2s (LMS Tech) 34" x 44"



GENERAL NOTES

1. SEE 1GAU-G1001A FOR SITE ARRANGEMENT.
2. SEE DWG CCFI-S3801 FOR CONSTRUCTION FACILITY PLAN.

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0	19/JAN/2017	INITIAL ISSUE	KED	OJ		JCB	LTN

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

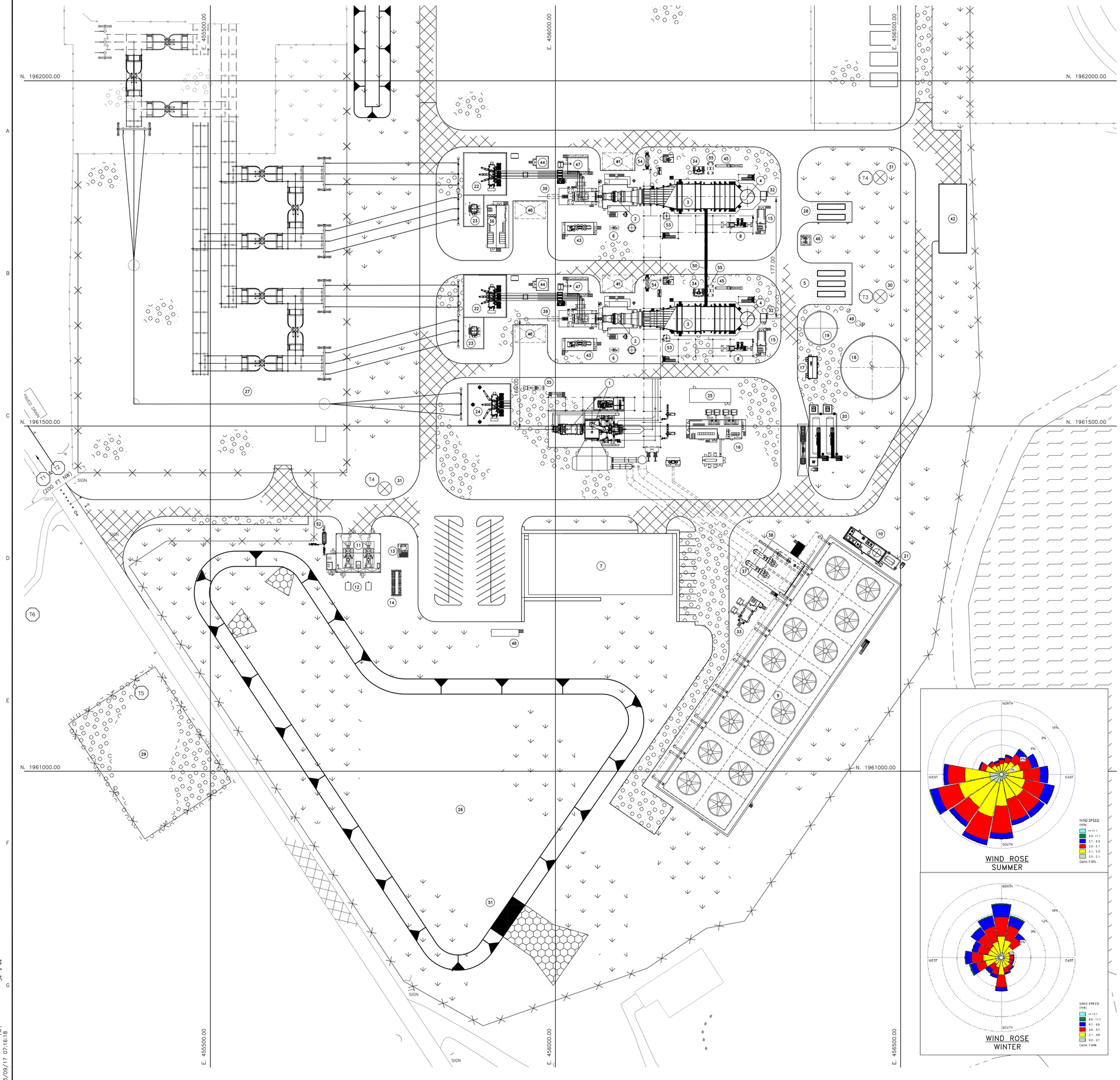
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ENGINEER: JCB | DRAWN: KED | CHECKED: | DATE:

SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
PLOT PLAN
SGS 2X1 - WET COOLING

PROJECT NUMBER: 190285-1GAU-G1000A | DRAWING NUMBER: | REV 1
CODE: | REFERENCE DWG NUMBER:
AREA:

DY480885 01/19/17 13:38:24 ACAD 18.2s (LMS Tech) JA, 4, 44"



FACILITY ID

ID	DESCRIPTION
1	STEAM TURBINE
2	COMBUSTION TURBINE
3	HEAT RECOVERY STEAM GENERATOR (HRSG)
4	HEAT RECOVERY STEAM GENERATOR STACK
5	PORTABLE DEMIN WATER TREATMENT AREA
6	WASH WATER DRAINS TANK / FALSE START DRAINS TANK
7	ADMIN/CONTROL/WAREHOUSE/MAINT BUILDING
8	BOILER FEED PUMPS
9	COOLING TOWER
10	COOLING TOWER CHEMICAL FEED BUILDING
11	GAS COMPRESSOR ENCLOSURES
12	FUEL GAS COMPRESSOR GAS AFTERCOOLER
13	FUEL GAS SKID (KNOCKOUT DRUM)
14	FUEL GAS REGULATOR STATION
15	POWER DISTRIBUTION CENTER
16	STEAM TURBINE ELECTRICAL EQUIPMENT ENCLOSURE
17	FIRE PUMP ENCLOSURE
18	SERVICE FIRE WATER STORAGE TANK
19	DEMIN WATER STORAGE TANK
20	AMMONIA UNLOADING/STORAGE TANK AREA
21	ACID STORAGE TANK
22	COMBUSTION TURBINE STEP-UP TRANSFORMER
23	COMBUSTION TURBINE AUX TRANSFORMER
24	STEAM TURBINE STEP-UP TRANSFORMER
25	CYCLE CHEM FEED AND SAMPLE PANEL ENCLOSURE
26	STORM WATER RUNOFF POND
27	SWITCH YARD
28	BULK HYDROGEN TUBE TRAILERS
29	PIPELINE LATERAL GAS YARD
30	POTABLE WATER WELL
31	SERVICE WATER WELL
32	CONTINUOUS EMISSIONS MONITORING SYSTEM
33	COOLING TOWER MCC ENCLOSURE
34	AMMONIA VAPORIZATION SKID
35	OIL/WATER SEPARATOR
36	MEDIUM VOLTAGE SWITCHGEAR
37	CIRCULATING WATER PUMPS
38	AUXILIARY COOLING WATER PUMPS
39	GENERATOR REMOVAL AREA
40	GENERATOR REMOVAL CRANE PAD
41	CT MAINTENANCE CRANE PAD
42	WAREHOUSE
43	CT ELECTRICAL PACKAGE (PEECC)
44	CT BATTERY COMPARTMENT
45	CT PERFORMANCE GAS HEATERS
46	WASTE WATER COLLECTION SUMP
47	LOAD COMMUTATED INVERTER
48	PRE-PACKAGED SANITARY TREATMENT SYSTEM
49	POTABLE WATER STORAGE TANK AND SKID
50	CATWALK
51	STORM WATER POND EMERGENCY OVERFLOW WEIR
52	FUEL GAS DEW POINT HEATER W/METERING
53	HRSG BLOW DOWN TANK
54	HRSG PDC
55	SCR BASKET REMOVAL AREA

TERMINAL POINT LIST

T1 WASTE WATER DISCHARGE
T2 MAKE UP WATER INTERCONNECT
T3 POTABLE WATER
T4 SERVICE WATER
T5 FUEL GAS
T6 STORM WATER DISCHARGE

LEGEND

PLANT FENCING
CONSTRUCTION FENCING
WETLANDS
CONCRETE SURFACING
ASPHALT ROAD
AGGREGATE SURFACING

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0	19/JAN/2017	INITIAL ISSUE	KED	OJ		JCB	LTN

50' 25' 0 50' 100'
1"=50'

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SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
SITE ARRANGEMENT
SGS 2X1 - WET COOLING

PROJECT NUMBER: 190285 | DRAWING NUMBER: 1GAU-G1001A | REV 1
CODE: | REFERENCE DWG NUMBER:
AREA:

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APPENDIX B

GEOTECHNICAL REPORT

Ellis & Associates inc.
ECS Group of Companies
Geotechnical ▪ Construction Materials ▪ Environmental ▪ Facilities

FINAL REPORT OF GEOTECHNICAL EXPLORATION SEMINOLE ELECTRIC – COMBINED CYCLE STUDY PUTNAM COUNTY, FLORIDA E&A PROJECT NO. 35-22956 CLIENT ID: 2593

Prepared for:

Mr. Robert Willis
Seminole Electric Cooperative, Inc.
16313 North Dale Mabry Highway
Tampa, Florida 33618

Prepared by:

Ellis & Associates, Inc.
7064 Davis Creek Road
Jacksonville, Florida 32256

July 14, 2016
Revised August 19, 2016

Ellis & Associates inc.
ECS Group of Companies
Geotechnical ▪ Construction Materials ▪ Environmental ▪ Facilities

July 14, 2016
Revised August 19, 2016

Mr. Robert Willis
Seminole Electric Cooperative, Inc.
16313 North Dale Mabry Highway
Tampa, Florida 33618

Reference: Final Report of Geotechnical Exploration
Seminole Electric – Combined Cycle Study
Putnam County, Florida
E&A Project No. 35-22956 ***(Revised)***
Client ID: 2593

Dear Mr. Willis:

Ellis & Associates, Inc. has completed the requested geotechnical exploration in general accordance with our proposal dated April 21, 2016. The exploration was performed to evaluate the general subsurface conditions within the proposed structures and pond areas and to provide recommendations for site preparation and foundation.

We appreciate the opportunity to be your geotechnical consultant on this phase of the project and look forward to providing the materials testing and observation that will be required during the construction phase. If you have any questions, or if we may be of any further service, please contact us.

Very truly yours,
ELLIS & ASSOCIATES, INC.

_____
Colin A. Shaw, E.I.
Staff Engineer

_____
David W. Spangler, P.E.
Senior Project Engineer
Registered, Florida No. 58770

Distribution: Mr. Robert Willis – Seminole Electric Cooperative, Inc. 1 pdf; 8 Hard Copies
Mr. John C. Barranco, Jr., P.E.- Black & Ventch 1 pdf

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Table 1	Design Soil Properties
Table 2	Example Soil Parameter Equation Sheet

PLATES

Plate 1	Allowable Compressive Capacity Curve – HRSG and Stack
Plate 2	Allowable Compressive Capacity Curve –Tank
Plate 3	Allowable Uplift Capacity Curves – HRSG Stack
Plate 4	Allowable Uplift Capacity Curves –Tank

FIGURES

Figure 1	Site Location Plan
Figure 2	Field Exploration Plan
Figures 3-6	Generalized Subsurface Profiles

APPENDICES

Appendix A	Soil Boring Logs Monitoring Well Logs Field Exploration Procedures Key to Soil Classification
Appendix B	Laboratory Data Laboratory Test Procedures Consolidation Test Results
Appendix C	Double Ring Infiltrometer (DRI) test Calc. sheets.
Appendix D	Survey Report
Appendix E	Settlement Calculation

EXECUTIVE SUMMARY

We understand the proposed construction will include a natural gas fired combined cycle power plant. Based on the provided information we understand the plant will include 2 Combustion Turbine Generators (CTG), one Steam Turbine Generator (STG), two Heat Recovery Steam Generators (HRSG) and stacks, a Generator Step Up, a 100 foot diameter gas tank, and other plant structures. It is anticipated that loads will range between 9,897 to 19,600 kips. Based on the surrounding conditions, we anticipate that fills and cuts will be on the order of approximately 5 feet.

A field exploration was performed between May 6 through 26, 2016. Based on the results of our borings at the site, in general the borings encountered approximately very loose to very dense fine sand, fine sand with silt, fine sand with clay, silty fine sand and clayey fine sand (SP, SP-SM, SP-SC, SM, SC), very soft to firm clay (CH) to depths of approximately 87 feet below the existing ground surface. The borings then encountered medium dense to very dense Marl and Weathered limestone (SC, SM, CH, and ML, Marl) to the boring termination depths of 90 to 100 feet below the existing ground surface. Groundwater was encountered in the borings at depths ranging between 7 to 11.5 feet below the existing ground surface.

We note a loss of drilling fluid circulation was encountered at Borings SB12 and SB13 between 72 to 87 feet. We also note, Weight-Of-Rod (WOR) and Weight-Of-Hammer (WHO) resistances were encountered at these depths. This could indicate a void or very soft soil condition within this zone. Casing was installed at these borings to 85 feet below the existing ground and drilling continued to the boring termination depths of 90 and 100 feet below the existing ground surface. Also, losses of drilling fluid circulation were noted at Borings SB15 and SB9 at a depth of approximately 95 and 97 feet below existing ground surface. The borings were terminated at this depth.

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structures with loading conditions of 1.5 ksf or less on a rigid mat/or properly designed conventional shallow foundation system. The maximum allowable net soil bearing pressure for use in shallow foundation design should not exceed 3,000 psf. Net bearing pressure is defined as the soil bearing pressure at the foundation bearing level in excess of the natural overburden pressure at that level. For mat design a subgrade modulus (ks) of 30 pci may be used. If the estimated settlements provided below are considered intolerable or the loading conditions exceed 1.5 ksf, the proposed structure may be supported on a deep foundation system consisting of driven concrete piles or Auger Cast In Place (ACIP) Piles. Based on the encountered subsurface conditions, we consider driving concrete piles or Auger Cast In-Place (ACIP) piles can be used to support the proposed structures. We recommend the piles be embedded into the limestone as encountered at a depth of approximately 85 feet below the existing ground.

1.0 PROJECT INFORMATION

1.1 Site Location and Project Description

The project site is located east of US Highway 17 and north of State Highway S-209 in Putnam County, Florida. The general site location is shown on Figure 1.

At the time of our exploration, the site was undeveloped and heavily wooded, with surface cover consisting of brush and trees. The site was rolling with a slight slope downward to the south and east toward the St. Johns River. The site is surrounded with the existing electric plant to the north and wooded areas to the east, south and west.

You provided project information via our meeting and the bid document dated March 31, 2016. We were provided with a copy of a site plan for the subject site, prepared by Black and Veatch, emailed to us on May 3rd, 2016. This plan indicates the boundary limits for the property, the existing roadways adjacent to the site, the layout of the proposed construction, and the requested boring locations.

We understand the proposed construction will include a natural gas fired combined cycle power plant. The plant will include multiple structures, tank and a pond. Based on the provided information we understand the plant will include 2 Combustion Turbine Generators (CTG), one Steam Turbine Generator (STG), two Heat Recovery Steam Generators (HRSG) and stacks, a Generator Step Up, a 100 feet diameter gas tank, and other plant structures. Based on the provided information the following loads and structure dimensions were provided:

- CTG: Approximately foundation foot print of 46’-0” by 141’-4”. Weight of foundation and equipment sustained dead load is 9,897 Kips.
- STG: Approximately foundation foot print of 58’-6” by 130’-9”. Weight of foundation, pedestal legs and table top and equipment sustained dead load is 10,490 Kips.
- HRSG and Stacks: Approximately foundation foot print of 56’-0” by 172’-0”. Weight of foundation and structures is 15,813 Kips.
- Tank: Approximately 100ft diameter and 40ft high. We estimated the bearing pressure at tank to be 2,500 psf.

We understand the CTG and STG will be dynamic equipment and the foundation will be subjected to dynamic loading.

We also understand the plant elevation will be at approximately EL. 74.0. Therefore, a maximum of approximately 6-7 feet of cut and 5 feet of fill will be required at different parts of the site as current site elevations range between about El.69 to El.81..

If actual structural loads or fill/cut heights vary from these conditions, then the recommendations in this report may need to be re-evaluated. We should be contacted if any of the above project information is incorrect so that we may reevaluate our recommendations.

1.2 Soil Survey

Based on the Soil Survey of Putnam County, Florida as prepared by the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS), the following are the characteristics of the soil types encountered at the site:

Soil Type	Constituents	Hydrologic Group	Natural Drainage	Seasonal High Water Table
Tavares Fine Sand (6)	0-5" Fine sand 5-80" Fine sand	A	Moderately well Drained	3.5-6.0
Centenary Fine Sand (28)	0-8" Fine sand 8-65" Fine sand 65-80" Fine sand	A	Moderately well Drained	3.5-5.0

2.0 FIELD EXPLORATION

We performed a field exploration on May 6 through 26, 2016. The approximate boring locations are indicated on the attached Field Exploration Plan (Figure 2). Our personnel determined the boring locations using our hand held Global Positioning System. The boring locations on the referenced Field Exploration Plan should be considered accurate only to the degree implied by the method of measurement used. Some of the borings had to move to avoid tortoise boroughs. The boring locations were then surveyed by a professional surveyor. The coordinates and the elevation of the performed borings are included in Appendix D.

2.1 SPT Borings

We located and performed 15 Standard Penetration Test (SPT) borings, drilled to depths of approximately 90 to 100 feet below the existing ground surface, in general accordance with the methodology outlined in ASTM D 1586 to explore the subsurface conditions within the area of the proposed plant structures and pond areas. Split-spoon soil samples recovered during performance of the borings were visually classified in the field and representative portions of the samples were transported to our laboratory for further evaluation.

2.2 Groundwater Observation Wells

We installed 3 groundwater observation wells on May 12 and 13, 2016 adjacent to the 3 SPT boring locations (SB15, SB12 and SB11) to observe the stabilized groundwater depth across the site area. The groundwater observation wells were constructed by installing a slotted PVC well casing snugly fit into a 3-inch diameter borehole installed below the groundwater level at each location. A ten (10) foot screen was used with filter sand pack to 2 feet above the screen. Then, 2.5 feet of cement grout and 2 feet of bentonite chip sand was used. The 1.5 feet stickup with 2 inch casing diameter was used. The monitoring well logs are attached in Appendix A. Three groundwater measurements were recorded at the observation wells between the periods of June 5 through May 23, 2016.

2.3 Double Ring Infiltrometer Test

We performed two (2) Double-Ring Infiltrometer (DRI) tests within the proposed pond area. The tests were performed in general accordance with the procedures outlined in the latest revision of ASTMD 3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers." The test location was initially cleared of all surface vegetation and topsoil, excavated to the desired test depth (5 feet below the existing ground surface), and then leveled. The outer ring, approximately 24 inches in diameter, was driven to a depth of 6 inches below the test depth. The inner ring, approximately 12 inches in diameter, was inserted inside the outer ring, centered, and driven to a depth of approximately 2 inches below the test depth. A thin layer of gravel was placed on the exposed soils inside the rings at the test level. The 2 rings were filled simultaneously with 4 inches of water.

The water level was maintained throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of 5 minutes. After reaching a stabilized inflow volume of water, the test was continued for approximately 60 minutes.

3.0 LABORATORY TESTING

A geotechnical engineer classified representative soil samples obtained during our field exploration using the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. A Key to the Soil Classification System is included in Appendix A.

Selected samples of the soils encountered during the field exploration were subjected to quantitative laboratory testing to better define the composition of the soils encountered and to provide data for correlation to their anticipated strength and compressibility characteristics. The laboratory testing determined the Atterberg limits, hydrometer, gradation, percent fines, and moisture contents of selected soil samples. The results of the laboratory testing are shown in the Summary of Laboratory Test Data included in Appendix B. Also, these results are shown on the Generalized Subsurface Profiles on Figures 3 through 6 and on the Log of Boring records at the respective depths from which the tested samples were recovered.

In addition one dimension consolidation test was performed on an undisturbed Shelby tube clay sample collected at Boring SB1.

4.0 GENERAL SUBSURFACE CONDITIONS

4.1 General Soil Profile

A graphical presentation of the generalized subsurface conditions is presented on Figures 3 through 6. Detailed boring records are included in Appendix A. It should be understood that the soil conditions will vary between the boring locations. The following table summarizes the soil conditions encountered.

GENERAL SOIL PROFILE			
TYPICAL DEPTH (ft)			
FROM	**TO**	**SOIL DESCRIPTION**	**USCS(1)**
Ground surface	0.5	Topsoil	
0.5	5.0	Very loose to loose fine sand, fine sand with silt, and fine sand with clay	(SP, SP-SM, & SP-SC)
5.0	32.0	Loose to dense fine sand, fine sand with silt, and fine sand with clay, silty fine sand, and clayey fine sand	(SP, SP-SM, SP-SC, SM, & SC)
32.0	47.0	Very Soft to Firm Clay Very loose to dense fine sand, fine sand with silt, and fine sand with clay, silty fine sand, and clayey fine sand	(CH, SP, SP-SM, SP-SC, SM, & SC)
47.0	72.0	Loose to dense fine sand, fine sand with silt, and fine sand with clay, silty fine sand, and clayey fine sand	(SP, SP-SM, SP-SC, SM, & SC)
72.0	87.0	Very loose to very dense fine sand, fine sand with silt, and fine sand with clay, silty fine sand, clayey fine sand, and weathered limestone	(SP, SP-SM, SP-SC, SM, & SC)
87	90 - 100	Medium dense to very dense Marl and weathered limestone	(SC, SM, CH, and ML, Marl)
(1) Unified Soil Classification System			

We note loss of drilling fluid circulation was encountered at Borings SB12 and SB13 between 72 to 87 feet. We also note, Weight Of Rod (WOR) and Weight Of Hammer (WHO) were encountered at these depths. This could indicate a void or very soft soil condition within this zone. Casing was installed at these borings to 85 feet below the existing ground and drilling continued to the boring termination depths of 90 and 100 feet below the existing ground surface. Also, losses of drilling fluid circulation were noted at

Borings SB15 and SB9 at a depth of approximately 95 and 97 feet below existing ground surface. The borings were terminated at this depth.

4.2 REGIONAL GEOLOGY

The study area is located within Putnam County, Florida. The near-surface geology consists of Plio-Pleistocene unconsolidated sands overlying Pliocene undifferentiated sandy clays and clayey sands. The thickness of this layer varies from approximately 60 to 75 feet at the project area. Below the undifferentiated sediments; sands, silts and clays of the Hawthorn Group are present. The Ocala Group (limestone) underlies the Hawthorn Group, and contains the Floridian aquifer. The Hawthorn Group acts as an aquiclude and separates the shallow water table from the artesian Floridian aquifer within the Ocala Group and lower units. The published potentiometric level for the Floridian aquifer within the site area is about El. 26.

The Hawthorn Group consists of a highly variable mixture of quartz sand, silt, clay, carbonates and phosphates, and is approximately 300-feet thick in the study area. The Hawthorn Group can be divided into three generalized units. The upper Hawthorn is primarily poorly consolidated dolomites and dolosilts with a mixture of clastics and phosphate. The middle unit is mostly clastic, and the lower unit is predominately dolomite. Occasionally, a lower unit of the Hawthorn will act as part of the Floridan aquifer. Beds of a single component (pure clay) do occur in the Hawthorn but are the exception to a widely varying lithology. Phosphate is nearly always present in the Hawthorn Group.

An unconformity exists between the Miocene Hawthorn Group and the overlying undifferentiated sandy clays and clayey sands from the Pliocene. These undifferentiated sediments often contain reworked phosphate from the Hawthorn near the contact. Shell beds and limestone were deposited on top of the Hawthorn in some areas of Northeast Florida prior to the major regression that occurred during late Miocene Period. The shell beds are primarily in eastern Clay County, and reworked phosphate from the Hawthorn is commonly present.

4.3 Groundwater Level

Groundwater was encountered at each boring location and recorded at the time of drilling at depths varying from 7 to 11.5 feet below the existing ground surface at the boring locations. The following table contains the groundwater measurement at the observation wells.

Measured Groundwater Depth at Groundwater Observation Wells

Groundwater Observation Well No.	Measured Groundwater Depth (feet below existing grade)				
	May 6, 2016	May 10, 2016	May 11, 2016	May 16, 2016	May 23, 2016
SB11	-	-	9.3	10.0	9.75
SB12	-	10.5	-	11.2	11.0
SB15	9	-	-	9.9	9.5

Measured Groundwater Elevation at Groundwater Observation Wells					
Groundwater Observation Well No.	Measured Groundwater Elevation				
	May 6, 2016	May 10, 2016	May 11, 2016	May 16, 2016	May 23, 2016
SB11	-	-	65.1	64.4	64.7
SB12	-	68.3	-	67.6	67.8
SB15	60	-	-	59.1	59.5

We note that groundwater levels will fluctuate due to seasonal climatic variations, surface water runoff patterns, construction operations, and other interrelated factors. The groundwater depth at each boring location is noted on the Generalized Subsurface Profiles and on the Log of Boring records.

4.4 Normal Seasonal High Groundwater Level

The normal seasonal high groundwater level is affected by a number of factors. The drainage characteristics of the soils, land surface elevation, relief points such as drainage ditches, lakes, rivers, swamp areas, etc., and distance to relief points are some of the more important factors influencing the seasonal high groundwater level.

Based on our interpretation of the site conditions, including the boring logs and Putnam County Soil Survey, we estimate the normal seasonal high groundwater level at the site at the boring areas to be approximately as shown on Figures 3 through 6. It is possible that groundwater levels may exceed the estimated normal seasonal high groundwater level as a result of significant or prolonged rains.

4.5 Soil Permeability

Double Ring Infiltrometer (DRI) tests were performed at 2 locations at a depth of 5.0 feet below the existing ground surface. The calculation sheets are included in Appendix C. The results of the DRI tests indicated the following vertical infiltration rates:

Test Location	Test Depth (feet)	Vertical Infiltration Rate (ft/day)
DRI 1	5.0	52.9
DRI 2	5.0	44.1

The measured vertical infiltration rates should not be construed to represent the actual pond exfiltration rate. For pond drawdown calculations, we recommend a factor of safety of 2 be applied to the above permeability/vertical infiltration rate values.

4.6 Seismic Information

4.6.1 Seismic Site Classification

Based on the IBC Section 1613, the results of our borings, and our knowledge of local geologic conditions, it is our opinion that the subject site has a Site Classification of D which correlates to a stiff soil profile within the upper 100 feet of the ground surface.

4.6.2 Liquefaction and Lateral Spread Hazard

Liquefaction is a condition when saturated deposits of loose cohesionless fine-grained sandy soils experience an applied stress such as earthquake shaking or other strong vibration sources such as sheet pile installation. If the shaking is a high enough magnitude and duration and to a degree that pore water pressures increase to an extent where they exceed the contact stresses between the grains of soil that keep them in contact with each other the effective stress of the soil becomes zero. As the shear strength of a cohesionless soil is dependent on the internal soil friction angle and effective stress; as a reduction of effective stresses to zero also leads to a total loss of shear strength in the soil where the soil behaves in a liquid manner (as in quicksand). Liquefaction induced by earthquakes can cause bearing capacity failures, quick settlements, and lateral spreading of a soil matrix.

Based on the boring results, relatively level site conditions and project site distance to the St. Johns River, we do not expect that liquefaction or unsuitable factors of safety for slope stability would occur in the upper sands at this site as the result of the design earthquake event.

4.6.3 Probabilistic Seismic Hazard Analysis (PSHA)

A Probabilistic Seismic Hazard Analysis (PSHA) produces a seismic response spectrum that is based on the probability that a given ground motion will be exceeded in a defined interval from to earthquakes at numerous location (both near and far).

Seismic deaggregations were performed for the site using the USGS 2008 NSHMP PSHA Interactive Deaggregation website. Deaggregations were performed for 2% and 10% exceedance probabilities during a period of 50 years. The estimated ground surface PGA at the site is about 0.0445g and 0.0150g for the 2% and 10% exceedance probabilities, respectively, during a period of 50 years.

5.0 DESIGN RECOMMENDATIONS

5.1 General

Our geotechnical engineering evaluation of the site and subsurface conditions at the property, with respect to the planned construction and our recommendations for site preparation and foundation support, are based on (1) our site observations, (2) the field and laboratory test data obtained, (3) our understanding of the project information and structural conditions as presented in this report, and (4) our experience with similar soil and loading conditions.

If the stated structural or grading conditions are incorrect, or should the location of the structure or pond areas be changed, please contact us so that we can review our recommendations. Also, the discovery of any site or subsurface conditions during construction that deviate from the data obtained during this geotechnical exploration should also be reported to us for our evaluation.

The recommendations in the subsequent sections of this report present design and construction techniques that are appropriate for the planned construction. We recommend that E&A be provided the opportunity to review the foundation plans and earthwork specifications to verify that our recommendations have been properly interpreted and implemented.

5.2 Recommended Design Soil Parameters

Based on our evaluation of the soil conditions encountered at the site, the soil parameters shown on the attached Table 1 can be used for the structures design. These soil parameters were based on empirical relationships. Examples of empirical equations are shown on the attached Table 2. In addition we recommend the following lateral earth pressure parameters be used in the design of below grade walls if

required. These parameters are based on a clean sand backfill (SP, SP-SM) with an average internal friction angle of 30 degrees, a total unit weight of 115 pcf and a buoyant unit weight of 53 pcf. A coefficient of friction for poured in place concrete of 0.4 may be used for wall design.

Recommended Earth Pressure Parameters at Tank

Earth Pressure Condition	Fluid Density Above the Groundwater Table (pcf)	Fluid Density Below the Groundwater Table* (pcf)	Earth Pressure Coefficient
At-Rest (k_o)	58	89	0.5
Active (k_a)	35	78	0.3
Passive (k_p)	345	220	3.0

*Includes Hydrostatic Pressure

A safety factor of 2.0 is recommended for the design of passive of fluid densities. We anticipate the buried structures may exert little or no net downward pressure on the soils; rather, the structure may be subject to hydrostatic uplift pressure when empty. Below grade structures should be designed to resist hydrostatic uplift pressures appropriate for their depth below existing grade and seasonal high groundwater table.

5.3 Foundation Design Recommendations

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structures with net soil bearing pressure loading conditions of 1.5 ksf (kips per square foot) or less on a rigid mat or properly designed conventional shallow foundation system. For mat design, we recommend using a subgrade modulus (ks) of 30 pci. If the estimated settlements provided below in Section 5.3.5 are considered intolerable or the net soil bearing pressure exceeds 1.5 ksf, the proposed structure may be supported on a deep foundation system consisting of driven concrete piles or Auger Cast In Place (ACIP) Piles. Provided the site preparation and earthwork construction recommendations outlined in Section 6.0 of this report are performed, the following parameters may be used for foundation design.

5.3.1 Shallow Foundation Bearing Pressure

The maximum allowable net soil bearing pressure for use in shallow foundation design should not exceed 1.5 ksf. Net bearing pressure is defined as the soil bearing pressure at the foundation bearing level in excess of the natural overburden pressure at that level. The foundations should be designed based on the maximum load that could be imposed by all loading conditions.

5.3.2 Foundation Size

The minimum widths recommended for any isolated column footing and continuous wall footing are 24 inches and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these width recommendations should control the size of the foundations.

5.3.3 Bearing Depth

The exterior foundations should bear at a depth of at least 12 inches below the exterior final grades, and the interior foundations should bear at a depth of at least 12 inches below the finish floor elevation to provide confinement to the bearing level soils. It is recommended that stormwater be diverted away from the building exterior to reduce the possibility of erosion beneath the exterior footings.

5.3.4 Bearing Material

The foundations may bear in either the compacted suitable natural soils or compacted structural fill. The bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the modified Proctor maximum dry density (ASTM D 1557) to a depth of at least one foot below foundation bearing levels.

5.3.5 Settlement Estimates

Post-construction settlements of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the contractor. Our settlement estimates for the structure are based on the use of site preparation/earthwork construction techniques as recommended in Section 6.0 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Due to the sandy nature of the near-surface soils, we expect the majority of settlement to occur in an elastic manner and fairly rapidly during construction. Using the recommended maximum bearing pressure, the supplied maximum structural loads, and the field and laboratory test data that we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, we estimate that total settlements of the structures to be as follow:

Estimated Settlement – Shallow Foundation Systems or Rigid Mat Foundation System				
Structure Type	**Foundation Type**	**Bearing Pressure (psf)**	**Estimated Size**	**Estimated Settlement**
Lightly Loaded Structures	Conventional Shallow Foundation	1,500	Up to 5 ft X 5 ft	0.5 inch or less
CTG Structure	Mat Foundation	1,530	46ft X 140 ft	On the order of 1 inch or less
STG Structures		1,370	60 ft X 130 ft	
GSU Structures		1,500	51 ft X 69 ft	
HRSG and Stack structures		1,640	56 ft X 172 ft	Approximately 1.1 inch
Tank Structure		2,500	100 ft X 100 ft	Approximately 1.5 inches

The settlement analysis was performed using our SettlG program. Our estimated settlement calculations are included in Appendix E. We note refined settlement calculations can be determined if additional field testing, including use of a flat plate dilatometer (DMT) or pressure meter is used.

Differential settlements result from variations in applied bearing pressures and compressibility characteristics of the subsurface soils. Because of the general uniformity of the subsurface conditions and the recommended site preparation and earthwork construction techniques outlined in Section 6.0, we anticipate that differential settlements of the structure should be within tolerable magnitudes.

5.4 Deep Foundation Design Alternative Recommendations

Based on the provided loads, it is our opinion the structures such as the stack and tank structures could be supported on deep foundations as an alternative to the proposed shallow foundations if the estimated settlement are considered intolerable. Based on the encountered subsurface conditions, driven concrete piles or Auger Cast In-Place (ACIP) piles can be used to support the proposed structures.

5.4.1 Driven Piles Recommendations

Based on the results of our borings, it is our opinion driven piles consisting of precast/prestressed concrete piles can be considered as a foundation system. We recommend the piles be embedded into the limestone as encountered at a depth of approximately 85 feet below the existing ground. We note driven precast/prestressed (PC/PS) concrete piles are a widely used deep foundation alternative in the Northeast Florida area. The capacity of driven piles can be easily verified using the Pile Driving Analyzer (PDA) and confirmed for each pile by observing the blow count during pile installation. However, once the pile has encountered a very dense soil layer further driving of the pile to achieve additional capacity can become impractical.

Plates 1 to 4 present our estimates of allowable pile compressive and uplift capacities as a function of pile embedment depth for 18- inch and 24- inch PC/PS concrete piles. A review of these plates indicates that if the piles are placed to bear below approximately 85 feet below existing grade, allowable compressive and uplift pile capacities can be achieved as shown in the following tables.

Driven Piles – HRSG and Stacks			
Pile Type	**Size/Diameter (in)**	**Allowable Compressive Capacity (Tons)**	**Allowable Uplift Capacity[(1)] (Tons)**
Square Concrete Driven Piles	18	278	143
	24	404	190

Driven Piles – Tank Structure			
Pile Type	**Size/Diameter (in)**	**Allowable Compressive Capacity (Tons)**	**Allowable Uplift Capacity [(1)] (Tons)**
Square Concrete Driven Piles	18	279	143
	24	405	187

(1) Allowable capacities include a factor of safety of 3 for bearing and 2 for side friction.
(2) The maximum axial loads which can be applied to the pile will be governed by the structural capacity of the pile.

5.4.2 Auger Cast In Place Piles Recommendation

Based on the results of the borings, it is our opinion that Auger Cast-In-Place (ACIP) piles can be used to support the proposed structures when embedded into the encountered very dense fine sand and limestone layer encountered in the borings. Plates 1 to 4 present our estimates of allowable pile compressive and uplift capacities as a function of pile embedment depth for 18-, and 24-inch ACIP piles. A review of these plates indicates that if the piles are placed to bear below approximately 85 feet below existing grade, allowable compressive and uplift pile capacities can be achieved as shown in the following tables.

ACIP Piles – HRSG and Stacks		
Pile Type	**Allowable Compressive Capacity[(1)] (tons)**	**Allowable Uplift Capacity[(1)] (tons)**
18-inch ACIP	177	83
24-inch ACIP	263	110

(1) Allowable capacities include a factor of safety of 3 for bearing and 2 for side friction.
(2) The maximum axial loads which can be applied to the pile will be governed by the structural capacity of the pile.

ACIP Piles – Tank		
Pile Type	**Allowable Compressive Capacity[(1)] (tons)**	**Allowable Uplift Capacity[(1)] (tons)**
18-inch ACIP	167	83
24-inch ACIP	250	111

(1) Allowable capacities include a factor of safety of 3 for bearing and 2 for side friction.
(2) The maximum axial loads which can be applied to the pile will be governed by the structural capacity of the pile.

The allowable pile capacity is a function of the structural strength of the grout and the strength of the supporting soil. We recommend the auger cast piles to be constructed with a minimum grout strength of 5,000 psi. The design pile compressive capacity should not exceed the allowable capacity of the structural member as governed by appropriate codes. We note the estimated seasonal high groundwater level provided in section 4.3 of this report may be used for the ACIP pile design.

5.4.3 Group Effects

We recommend a minimum pile spacing to pile diameter ratio (S/D) of 3.0. Using this minimum S/D ratio, we anticipate that any capacity reductions due to group effects of individual piles which are installed within a group of piles should be small and therefore should be considered insignificant in the design of the foundation system.

5.4.4 Pile Settlement

With the deep foundation system properly installed to bear at the minimum depths and spacings noted above, at the design load, we estimate that the settlement of an individual pile will be on the order of 0.5 inches or less. This settlement estimate is based upon the use of (1) the field test data obtained during our geotechnical exploration, which has been correlated to geotechnical strength and compressibility characteristics of the subsurface soils beneath the site, and (2) published theoretical and empirical methods of settlement analysis for deep foundations bearing on soils similar to those at this site.

The elastic compression of the pile is usually small compared to the tip movement and in most cases, can be ignored. For pile groups, the total settlement can be calculated by placing the total load supported by the pile group at a depth of 2/3 of the length of the pile group and creating an equivalent mat "raft" foundation. The total settlement of the pile group is the summation of the immediate and consolidation settlements of the soil layers below the equivalent mat foundation. Based on the results of our exploration, it is our opinion that the soils at this site will have small immediate and long term consolidation settlements. Once detailed structural loading information is provided, we can provide the estimated settlement of the chosen pile.

5.5 Pond Considerations

Based on the boring results and classification of the soil samples, the fine sands, fine sand with clay and fine sands with silt (SP, SP_SM, SP-SC), and silty fine sand (SM) encountered in the borings are considered suitable for use as fill soil. The soils containing surficial organic material will require removal and are unsuitable as structural fill. The organic soils could be used in landscape berms. In addition we do not recommend using the encountered clayey fine sand and clay (SC, CH) as a structural fill material.

The fine sand with silt to silty fine sands, and fine sands with clay encountered at the boring locations may also be used as structural fill; however, we note that these soils will be more difficult to compact due to their tendency to retain soil moisture and will require drying. Depending on the anticipated time for completing the site work portion of the project and the drying time required to reduce the potential for pumping and yielding of these soils during placement and compaction operations, these soils may not be feasible for use as fill material.

The soils in the proposed pond area that are below the groundwater level will have moisture contents in excess of the modified Proctor optimum moisture content and will require spreading and aeration to bring the moisture content within 2 percent of the soil's optimum moisture content corresponding to the required degree of compaction.

6.0 SHALLOW FOUNDATION SITE PREPARATION AND EARTHWORK RECOMMENDATIONS

Site preparation as outlined in this section should be performed to provide more uniform foundation bearing conditions, and to reduce the potential for post-construction settlements of the planned structure(s) and to maintain the integrity of a flexible pavement section.

6.1 Clearing and Stripping

Prior to construction, the location of existing underground utilities within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. Underground pipes that are not properly removed or plugged may serve as conduits for subsurface erosion, which may subsequently lead to excessive settlement of overlying structures.

The "footprint" of the proposed structures plus a minimum additional margin of 5 feet, and of the hardscape areas (parking/driveway) plus a minimum additional margin of 3 feet, should be stripped of all surface vegetation, stumps, debris, organic topsoil, or other deleterious materials. During grubbing operations, roots with a diameter greater than 0.5-inch, stumps, or small roots in a concentrated state, should be grubbed and completely removed.

Based on the results of our field exploration, it should be anticipated that 6 to 12 inches of topsoil and soils containing significant amounts of organic materials may be encountered across the site. The actual depths of unsuitable soils and materials should be determined by Ellis & Associates, Inc. using visual observation and judgment during earthwork operations. Any topsoils removed from the building and parking/drive areas can be stockpiled and used subsequently in areas to be grassed.

6.2 Temporary Groundwater Control

The borings encountered groundwater at depths varying from 7 to 11.5 feet below the existing ground surface at the time of our exploration. Temporary groundwater control measures may be required if the groundwater level is within 2 feet below the stripped and grubbed surface at the time of construction. Should groundwater control measures become necessary, dewatering methods should be determined by the contractor. We recommend the groundwater control measures, if necessary, remain in place until compaction of the existing soils is completed. The dewatering method should be maintained until

backfilling has reached a height of 2 feet above the groundwater level at the time of construction. The site should be graded to direct surface water runoff from the construction area.

Note that discharge of produced groundwater to surface waters of the state from dewatering operations or other site activities is regulated and requires a permit from the State of Florida Department of Environmental Protection (FDEP). This permit is termed a *Generic Permit for the Discharge of Produced Groundwater From Any Non-Contaminated Site Activity*. If discharge of produced groundwater is anticipated, we recommend sampling and testing of the groundwater early in the site design phase to prevent project delays during construction. E&A can provide the sampling, testing, and professional consulting required to evaluate compliance with the regulations.

6.3 Compaction

We understand the site will be undercut to the bottom of the footing level. After completing the clearing and stripping operations and installing the temporary groundwater control measures (if required), and cutting to the bottom of the footing elevations, the exposed surface should be compacted with a vibratory drum roller having a minimum static, at-drum weight, on the order of 6 to 8 tons. Typically, the material should exhibit moisture contents within ±2 percent of the modified Proctor optimum moisture content (ASTM D 1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D 1557) have been achieved within the upper 2 feet of the compacted natural soils at the site.

Should the bearing level soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated, and (1) the disturbed soils should be removed and backfilled with compacted structural fill, or (2) the excess moisture content within the disturbed soils should be allowed to dissipate before recompacting.

Care should be exercised to avoid damaging any nearby structures while the compaction operation is underway. Prior to commencing compaction, occupants of adjacent structures should be notified, and the existing conditions of the structures should be documented with photographs and survey (if deemed necessary). Compaction should cease if deemed detrimental to adjacent structures, and Ellis & Associates, Inc. should be contacted immediately. We recommend the vibratory roller remain a minimum of 50 feet from existing structures. Within this zone, use of a track-mounted bulldozer, or a vibratory roller operating in the static mode, is recommended.

6.4 Structural Backfill and Fill Soils

Structural backfill or fill required for site development should be placed in loose lifts not exceeding 12 inches in thickness when compacted by the use of the above described vibratory drum roller. The lift thickness should be reduced to 8 inches if the roller operates in the static mode or if track-mounted compaction equipment is used. If hand-held compaction equipment is used, the lift thickness should be further reduced to 6 inches.

Structural fill is defined as a non-plastic, inorganic, granular soil having less than 10 percent material passing the No. 200 mesh sieve and containing less than 4 percent organic material. The fine sand and fine sand with silt or fine sand with clay, without roots, as encountered in the borings, are suitable as fill materials and, with proper moisture control, should densify using conventional compaction methods. Soils with more than 10 to 12 percent passing the No. 200 sieve will be more difficult to compact, due to their nature to retain soil moisture, and may require drying. Typically, the material should exhibit moisture contents within ±2 percent of the modified Proctor optimum moisture content (ASTM D 1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D 1557) have been achieved within each lift of the compacted structural fill.

6.5 Foundation Areas

After satisfactory placement and compaction of the required structural fill, the foundation areas may be excavated to the planned bearing levels. The foundation bearing level soils, after compaction, should exhibit densities equivalent to 95 percent of the modified Proctor maximum dry density (ASTM D 1557) to a depth of one foot below the bearing level. For confined areas, such as the footing excavations, any compactive effort should be provided by a lightweight vibratory sled or roller having a total weight on the order of 500 to 2,000 pounds.

7.0 DEEP FOUNDATION CONSTRUCTION CONSIDERATIONS

7.1 Auger-Grouted Pile Considerations

Construction Techniques - Auger-grouted concrete piles should be formed by rotating a continuous, hollow-flight auger to the desired pile tip level followed by slow withdrawal of the auger while pumping a mortar grout under pressure through the auger. The pressure of the pumped mortar grout at the auger tip or injection point should be sufficient to (1) fill the pile shaft created by the auguring process and withdrawal, (2) prevent "necking" or shaft area reductions due to lateral inward squeezing of any adjacent soft soils, and (3) cause an outward flow of mortar into the adjacent soils. A pressure head within the hollow auger stem equivalent to approximately 10 feet of mortar above the adjacent ground surface should be maintained to help verify that a proper mortar pressure exists at the injection point. A sudden drop in the sustained pressure head often indicates that a soft zone or void has been encountered and therefore continued mortar injection at this level should be performed until the pressure head has been re-established. Preauguring and withdrawal of the auger before concreting may result in a reduction of the in-place shear strength characteristics of the adjacent soils and thus may require additional pile embedment upon re-auguring and concreting.

Installation Sequences - Construction of auger-grouted piles located within 6 pile diameters, center-to-center, should not be performed until the adjacent pile has achieved its initial set, which typically occurs approximately 12 hours after pile construction. This time delay allows the "green" cement grout in the adjacent recently constructed pile to harden, and helps reduce (if not completely eliminate) the possible loss of grout into the adjacent pile during its auguring process.

Steel Placement - Due to the uplift and/or lateral loads which will be exerted upon the piles, a certain amount of steel reinforcement will be required within the piles. After auguring to the desired pile tip level, the auger can be detached above the ground surface and a single steel rebar placed to the bottom through the hollow flight auger prior to initiating the pressure grouting of the pile. This method typically results in more properly aligned steel reinforcement with adequate concrete cover of the rebar, although the rebar may be longer than necessary. Another method of placing steel reinforcement consists of statically pushing into recently completed concrete piles (i.e., while the grout is still "green") the required steel reinforcement. Typically, up to approximately 20 to 25 feet of steel rebar can be placed by this method. The alignment and concrete cover of the rebar, when placed by this second method, is more "suspect" than when using the method of steel placement through the hollow-flight auger. Centralizers should be used to increase the reliability of placing the reinforcing steel in the desired location.

Test Pile Program - It is recommended that at least 3 full scale compression load tests be performed at this site for auger-grouted pile foundations. As a minimum, the load test should be performed to at least 2 times the design load or to failure of the pile. The load test method and locations should be selected by the geotechnical engineer once the pile plan has been established. The test and reaction piles should be installed with the same equipment that will be used to install the production piles. We should witness the installation of the test piles and associated reaction piles and the performance of the load test. In addition to

the load-deformation properties obtained from the load test, installation criteria can be more firmly established from the test and reaction pile installations.

Compression load tests should be performed in general accordance with the latest revisions of ASTM D 1143, "Standard Method of Testing Piles Under Static Axial Compressive Load" which the exception that the maximum loading increment should be maintained for a period not to exceed one hour in duration. Depending on the performance of test and reaction piles installed in an acceptable manner, these piles may be used as permanent job piles. If the anticipated uplift loading for auger-grouted concrete piles exceeds 15 tons, it is recommended that a minimum of one uplift load tests be performed if auger-grouted piles are selected as the foundation type. The uplift load test should be performed according to the procedures of ASTM D 3698 with the exception that the maximum test load not be maintained for more than one hour.

7.2 Driven Pile Considerations

Construction Considerations - Piles should be driven with a steam, air, hydraulic or diesel hammer delivering a minimum energy per blow as determined in accordance Section 455A of the FDOT Standard Specifications for Road and Bridge Construction. The hammer should be operated at the chamber pressure and speed recommended by the manufacturer at all times. Pile driving should be as continuous an operation as possible and should proceed without stopping over the last 10 feet of penetration. The hammer acceptance criteria of the piles will be established prior to construction once the type and size of hammer are furnished by the contractor.

Test Pile Program - A test pile program will need to be implemented prior to driving the production piles. We recommend that a minimum of three test piles be instrumented with the PDA and driven at selected locations. The data will be used to evaluate: hammer-driving system performance, pile stresses during driving, pile structural integrity, and calculation of pile static compressive bearing capacity. The dynamic testing results will then be used in CAPWAP and wave equation analysis to establish an optimum driving criteria to be employed in driving the production piles. Prior to test pile driving, hammer specifications should be available to assess pile driving system suitability.

8.0 QUALITY CONTROL TESTING

We recommend that our firm make a general review of the foundation plans and the foundation construction and earthwork specifications. If necessary, we will suggest any modifications that may be required to verify that our recommendations have been properly interpreted and implemented. We feel that our experience with shaft construction could be helpful in preparing specifications for the foundation construction of this project.

We recommend that E&A be retained to perform the construction material testing and observations required for this project, to verify that our recommendations have been satisfied. Due to our familiarity with the project, we are the most qualified to address problems that may arise during construction, since we are familiar with the intent of our engineering design.

8.1 Auger-grouted Piles

Since the auger-grouted concrete pile is "cast-in-place", the quality of the pile foundation is dependent upon the skill, experience, and techniques used by the foundation contractor. Since the piles are not visible or accessible for direct inspection after construction, and since problems during installation are not as evident and easily observed as with driven piles, we recommend that a geotechnical engineer or experienced engineering technician, acting under the supervision and direction of the engineer, observe and monitor the auger-grouted pile installations. The technician's duties should consist of, but not be limited to, the following:

1. Verify that the piles are augured to the design tip bearing level.
2. Monitor the auger withdrawal rate and grouting operations to help verify that a sufficient mortar grout pressure head is maintained above the injection point during construction.
3. Confirm that the grout pumping equipment is operating satisfactorily throughout the construction process.
4. Record the volume of mortar grout required to construct the pile.
5. Monitor the installation of steel reinforcement (if required) to verify that the size, length, configuration and placement of the steel conforms to the job specifications.

8.2 Driven Piles

During driving, pile driving records should be kept for each pile detailing pertinent information such as the pile type, pile length, hammers, cushions, stroke, date driven, and blow count per foot. Complete documentation for each and every pile must be obtained. Any unusual or unexpected occurrences need to be addressed. All piles should be checked for damage after driving is complete. Piles suspected of damage could be tested to confirm their integrity and/or to determine the extent and location of any damage. The capacity of each pile should be reviewed based on its final tip elevation and driving record.

Sometimes the driving sequence of piles can be important. This is especially true for displacement piles. The driving sequence of displacement pile groups should be from the center of the group outward or from one side to the other side of the pile group.

We recommend that pile driving operations be continuously monitored by a Geotechnical Engineer or his representative to ensure that the pile foundation is installed in accordance with the plans and specifications.

8.3 Earthwork

A representative number of field in-place density tests should be made in the upper 2 feet of compacted natural soils, in each one foot thick lift of compacted backfill and fill, and in the upper 12 inches below the bearing levels in the footing excavations. The density tests are considered necessary to verify that satisfactory compaction operations have been performed one test per 5,000sf of area.

9.0 REPORT LIMITATIONS

Our geotechnical exploration has been performed, our findings obtained, and our recommendations prepared, in accordance with generally accepted geotechnical engineering principles and practices. Ellis & Associates, Inc. is not responsible for any independent conclusions, interpretation, opinions, or recommendations made by others based on the data contained in this report.

Our scope of services was intended to evaluate the soil conditions within the zone of soil influenced by the foundation system. Our scope of services does not address geologic conditions, such as sinkholes or soil conditions existing below the depth of the soil borings.

This report does not reflect any variations that may occur adjacent to or between soil borings. The discovery of any site or subsurface condition during construction that deviates from the data obtained during this geotechnical exploration should be reported to us for our evaluation. Also, in the event of any change to the supplied/assumed structural conditions or the locations of the structures, pavement, or pond areas; please contact us so that we can review our recommendations. We recommend that we be provided the opportunity to review the foundation plans and earthwork specifications to verify that our recommendations have been properly interpreted and implemented.

TABLES

Table 1
Recommended Design Soil Parameters
Seminole Electric Gas Plant
E&A Project Number 35-22956

Boring NO.	Average Depth (feet)	Typical Soil Classification USCS[1]	Total Unit Weight (pcf)	Effective Unit Weight (pcf)	Internal Friction Angle, degrees	Cohesion, c (psf)	N avg	E (psi)	ε_{50}	Undrained Shear Strength Cu psi	Soil Modulus K pci	Poisson Ratio	Shear Modulus (G) psi	Gmax psi	Shear Wave Velocity (Vs) ft/sec	Damping Ratio (D)
Borings SB1, SB4, SB5, SB6	12.5	(SP, SP-SM, SP-SC)	105	43	29	0	5	1040	-	-	20	0.25	416	2257	213	0.18
	35	(SP, SP-SM, SP-SC)	115	53	33	0	18	3744	-	-	60	0.3	1440	8125	356	0.2
	42	(CH)	100	38	0	250	1	600	0.020	1.74	10	0.35	222	451	165	0.15
	70	(SP, SP-SM, SP-SC)	120	58	35	0	40	8320	-	-	125	0.3	3200	18056	507	0.22
	75	(SC)	100	38	28	0	1	600	-	-	20	0.25	240	451	172	0.15
	100	(SM, SC, Limestone)	125	63	36	8,000	40	48000	0.005	55	2000	0.35	17778	18056	1147	0.04
Borings SB2, SB3, SB7, SB10, SB11	15	(SP, SP-SM, SP-SC)	105	43	29	0	6	1248	-	-	20	0.25	499.2	2708	233	0.18
	37	(SP, SP-SM, SP-SC)	115	53	33	0	25	5200	-	-	60	0.3	2000	11285	420	0.2
	47	(CH)	100	38	0	250	1	600	0.020	1.74	10	0.35	222	451	165	0.15
	82	(SP, SP-SM, SP-SC)	120	58	35	0	38	7904	-	-	125	0.3	3040	17153	494	0.22
	100	(CH, SM, SC, Limestone)	125	63	36	8,000	46	52500	0.005	55	2000	0.35	19444	20764	1199	0.04
Borings SB12 and SB13	17	(SP, SP-SM, SP-SC)	105	43	29	0	6	1248	-	-	20	0.25	499.2	2708	233	0.18
	72	(SP, SP-SM, SP-SC)	115	53	33	0	23	4784	-	-	60	0.3	1840	10382	402	0.2
	82	(SM, SC)	100	38	0	250	1	600	0.020	1.74	10	0.35	222	451	165	0.15
	100	(SP, SP-SC, SM, SC, Limestone)	125	63	36	8,000	60	63000	0.005	55	2000	0.35	23333	27083	1314	0.04
Borings SB8, SB9, SB14, and SB15	12.5	(SP, SP-SM, SP-SC)	105	43	29	0	7	1456	-	-	20	0.25	582.4	3160	252	0.18
	31	(SP, SP-SM, SP-SC)	115	53	33	0	32	6656	-	-	60	0.3	2560	14444	475	0.2
	42	(CH)	100	38	0	250	2	600	0.020	1.74	10	0.35	222	903	165	0.15
	72	(SP, SP-SM, SP-SC)	120	58	35	0	45	9360	-	-	125	0.3	3600	20313	538	0.22
	100	(SP, SP-SC, SM, SC, Limestone)	125	63	36	8,000	60	63000	0.005	55	2000	0.35	23333	27083	1314	0.04

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Example Soil Parameter Calculations Sheet
Seminole Electric Gas Plant
E&A Project Number 35-22956

Young's Modulus "E"

$$E(ksi) = 0.208 * N_{60} \text{ [for sands]}$$
$$E(ksi) = 18 + 0.75 * N_{60} \text{ [for limestone]}$$

Shear Modulus "G"

$$G = \frac{E}{2(1+\nu)} \text{ [For sands, clays, and limestone]}$$

G_{max}

$$G_{max}\ (ksi) = 65 * \frac{N_{60}}{144} \text{ [For sands, clays, and limestone]}$$

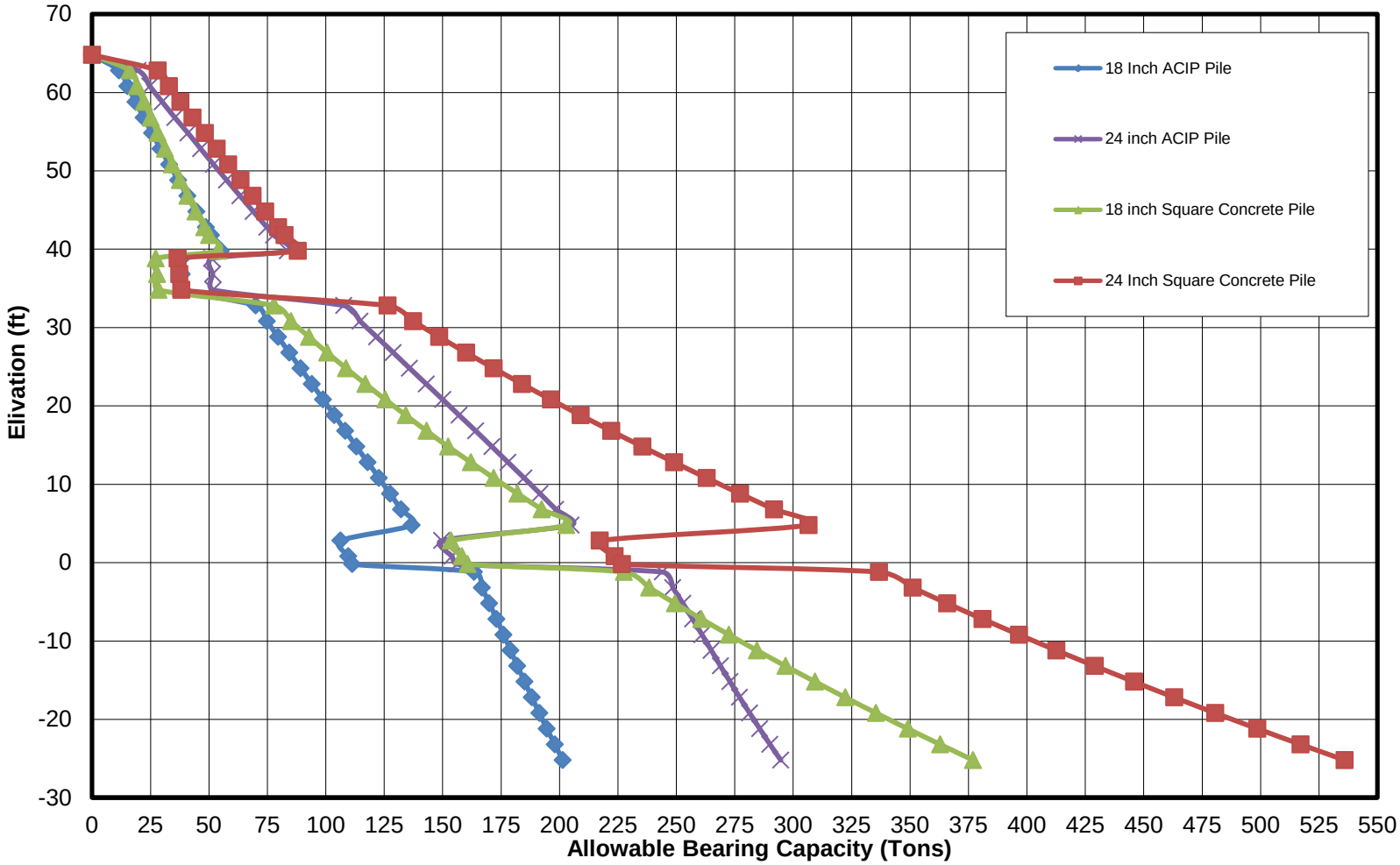
Shear Wave Velocity

$$V_s = \sqrt{\frac{G}{\rho'}} \text{ [For sands, clays, and limestone]}$$

PLATES

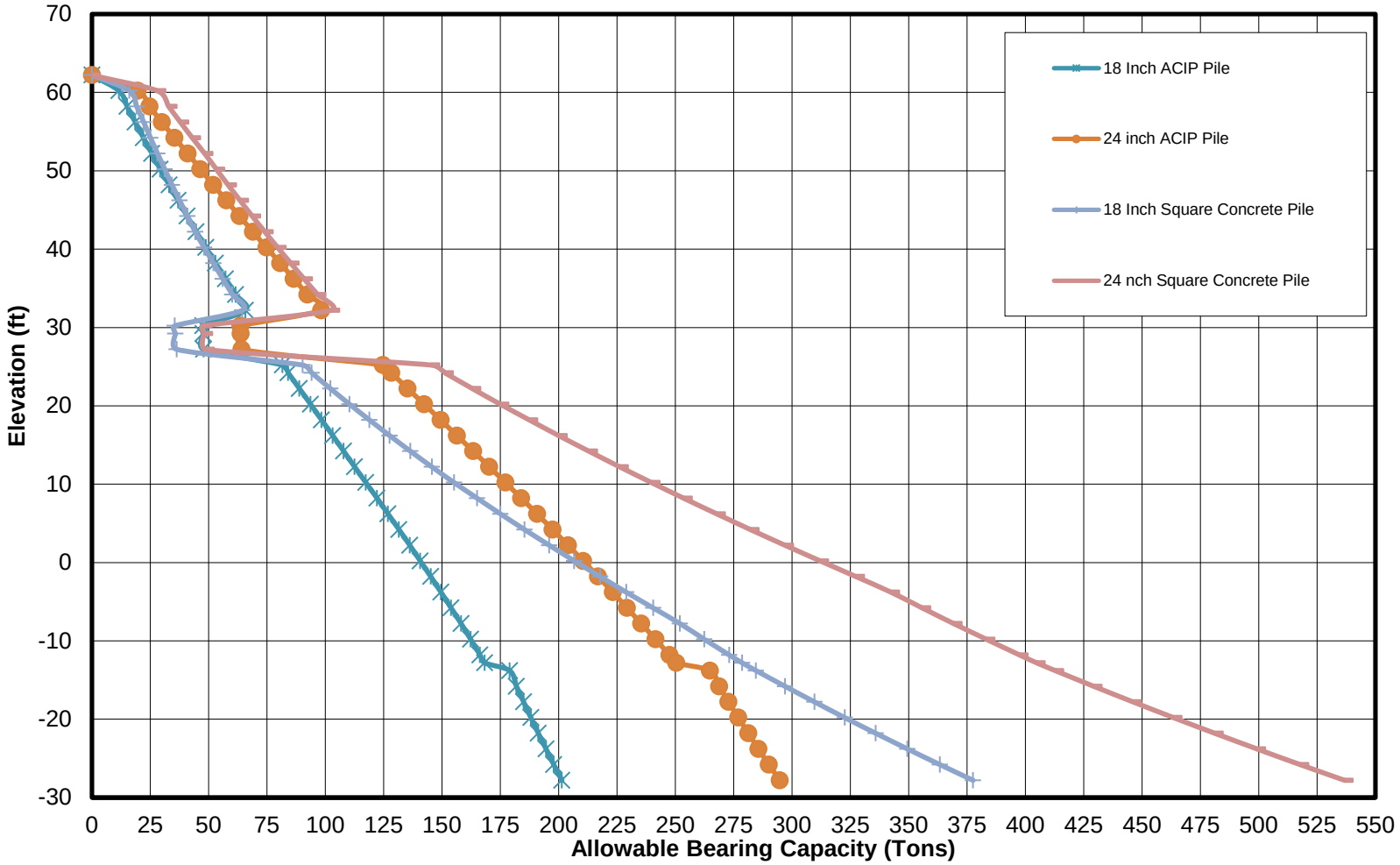
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Plate 1
Allowable Pile Capacity Graph
Seminole Electric Gas Plant - HRSG and Stack
E&A Project Number 35-22956



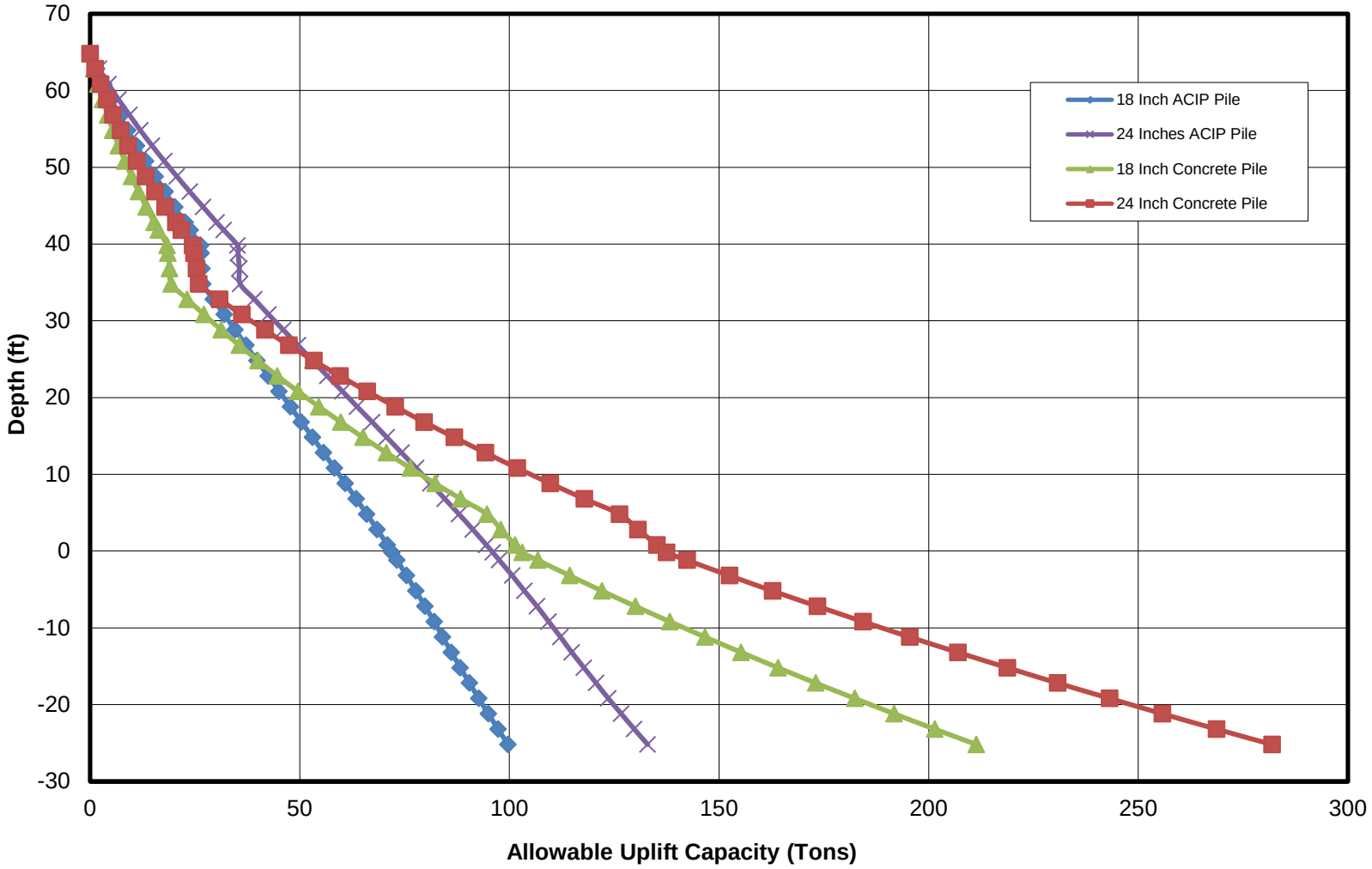
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Plate 2
Allowable Pile Capacity Graph
Seminole Electric Gas Plant - Tank
E&A Project Number 35-22956



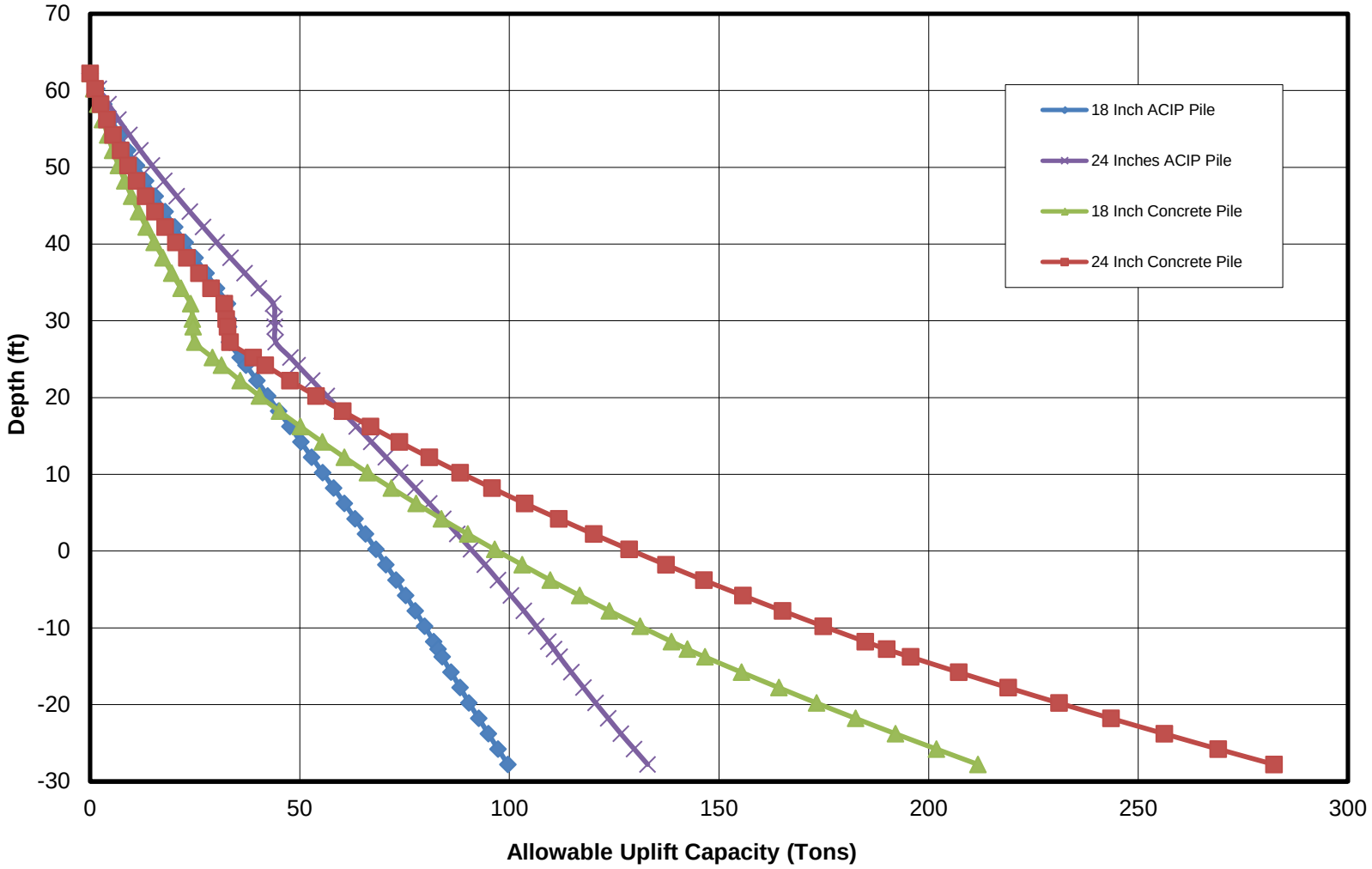
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Plate 3
Allowable Uplift Capacity Graph
Seminole Electric Gas Plant - HRSG and Stack
E&A Project Number 35-22956

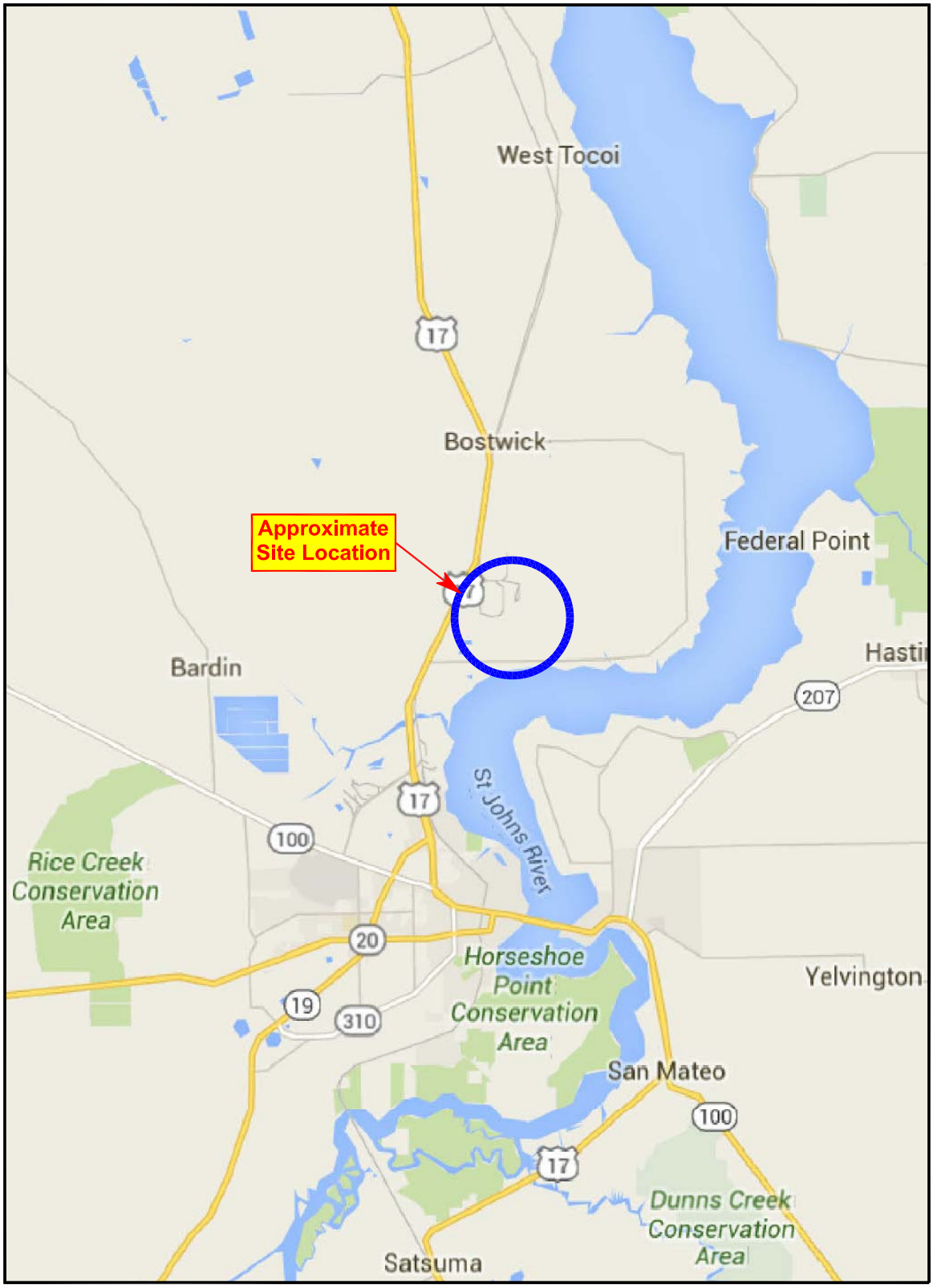


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Plate 4
Allowable Uplift Capacity Graph
Seminole Electric Gas Plant - Tank
E&A Project Number 35-22956



FIGURES



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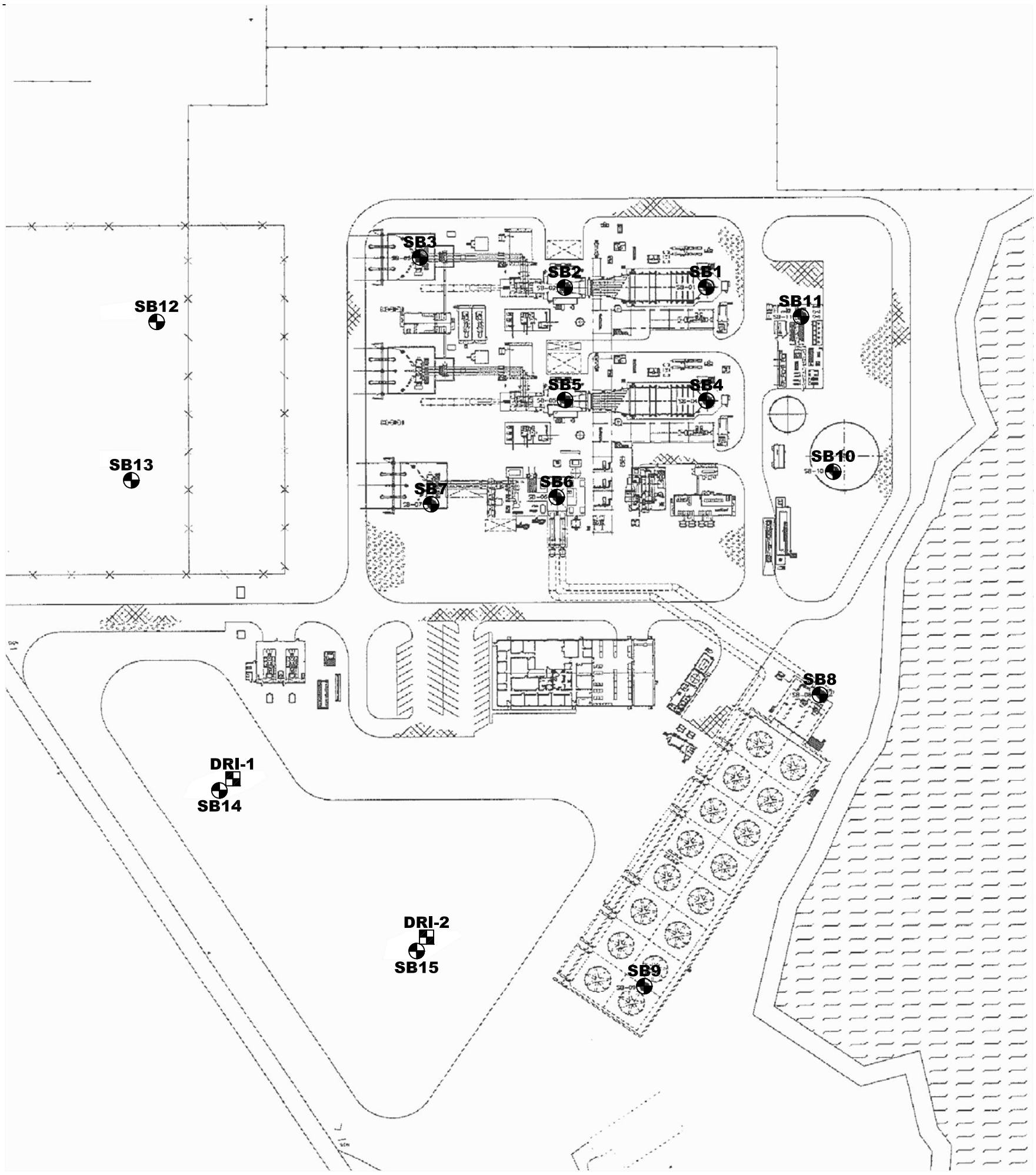
Site Location Plan

Seminole Electric Gas Plant

Putnam County, Florida

Date: 06/14/16	Project No.: 35-22956	Figure 1

JAS - 35-22956



LEGEND

Approximate Location of Standard Penetration Test (SPT) Boring

Approximate Location of Double Ring Infiltrometer Test

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Field Exploration Plan

Seminole Electric Gas Plant

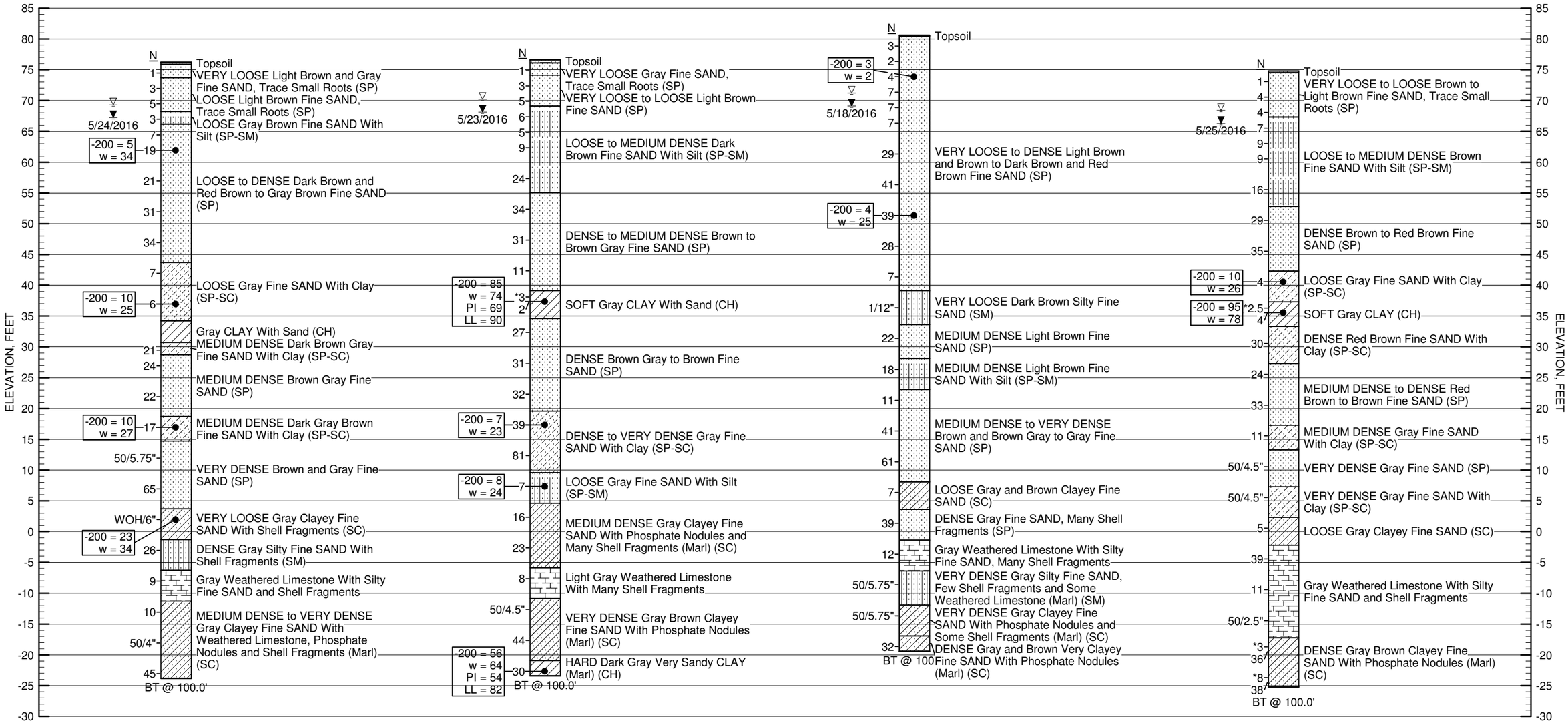
Putnam County, Florida

Date: 06/14/16	Project No.: 35-22956	Figure 2

Graphical Scale

0' 150' 300'

JAS - 35-22956



LEGEND

- Topsoil
- Fine SAND With Silt (SP-SM)
- Silty Fine SAND (SM)
- CLAY (CH)
- Weathered Limestone
- Fine SAND (SP)
- Fine SAND With Clay (SP-SC)
- Clayey Fine SAND (SC)
- Limestone
- Fine SAND (SP)

N	Standard Penetration Resistance, Blows/Foot	50/5"	Number of Blows to Drive Split Spoon Sample in Inches	PI	Plasticity Index
SP	Unified Soil Classification System	BT	Boring Terminated at Depth Below Grade	PL	Plastic Limit
▼	Groundwater Level at Time of Drilling	-200	% Passing No. 200 U.S. Standard Sieve	LL	Liquid Limit
▽	Estimated Normal Seasonal High Groundwater Level	*2	Pocket Penetrometer Disturbed (ksf)	WOH	Distance Split-Spoon Soil Sampler Dropped Under Weight of Drilling Tools and Hammer
WOR	Rod Dropped by Weight of the Rod Only	w	Natural Moisture Content (%)		

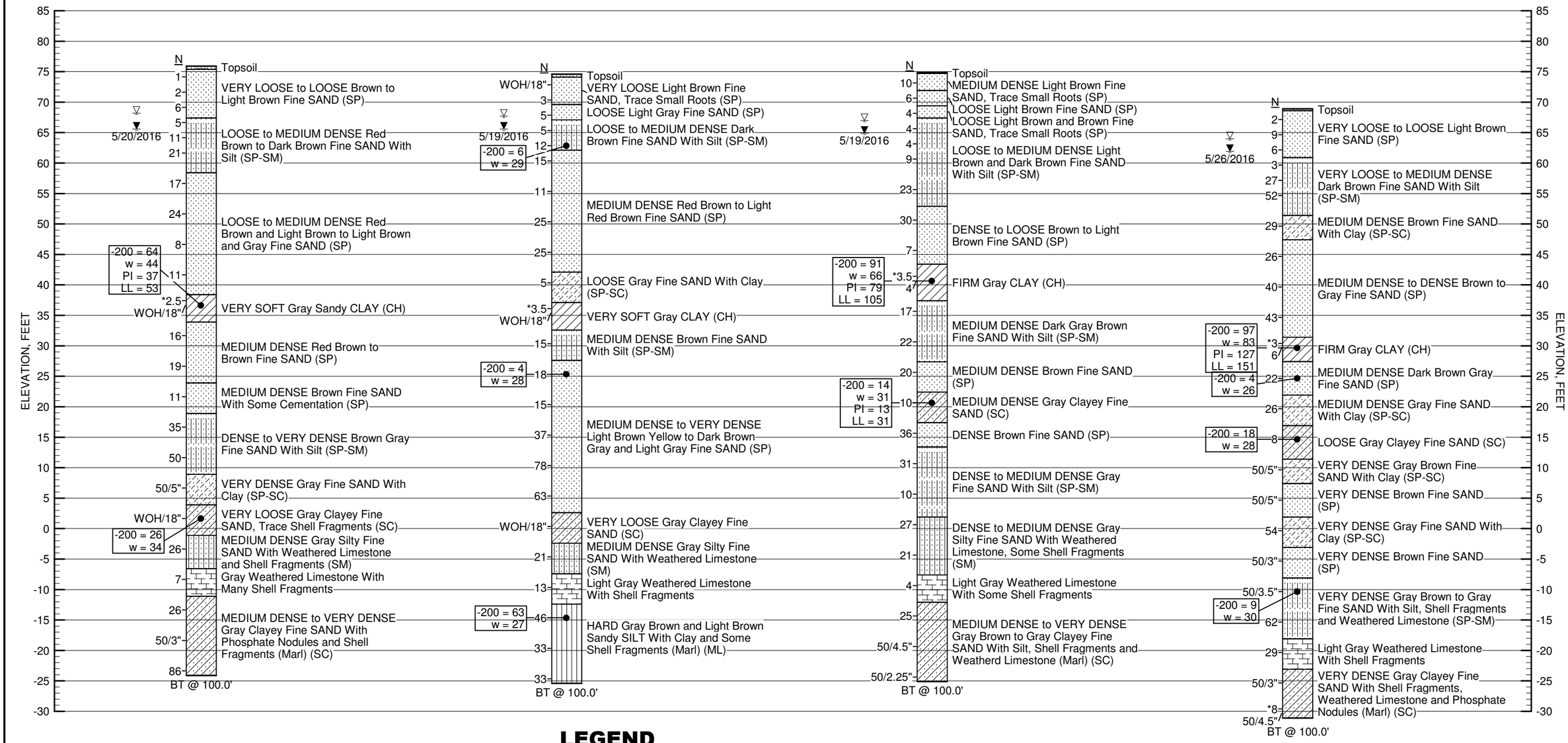
Generalized Subsurface Profiles

Seminole Electric Gas Plant

Putnam County, Florida

Ellis & Associates inc.

DATE: 6/16/16 | PROJ. NO.: 35-22956 | Figure 3



LEGEND

Topsoil
Fine SAND (SP)
Fine SAND With Silt (SP-SM)
Fine SAND With Clay (SP-SC)
Silty Fine SAND (SM)
Clayey Fine SAND (SC)
CLAY (CH)
Limestone
Weathered Limestone
Fine SAND (SP)

N Standard Penetration Resistance, Blows/Foot
SP Unified Soil Classification System
Groundwater Level at Time of Drilling
Estimated Normal Seasonal High Groundwater Level
WOR Rod Dropped by Weight of the Rod Only

50/5" Number of Blows to Drive Split Spoon Sample in Inches
BT Boring Terminated at Depth Below Grade
-200 % Passing No. 200 U.S. Standard Sieve
*2 Pocket Penetrometer Disturbed (ksf)
w Natural Moisture Content (%)

PI Plasticity Index
PL Plastic Limit
LL Liquid Limit
WOH Distance Split-Spoon Soil Sampler Dropped Under Weight of Drilling Tools and Hammer

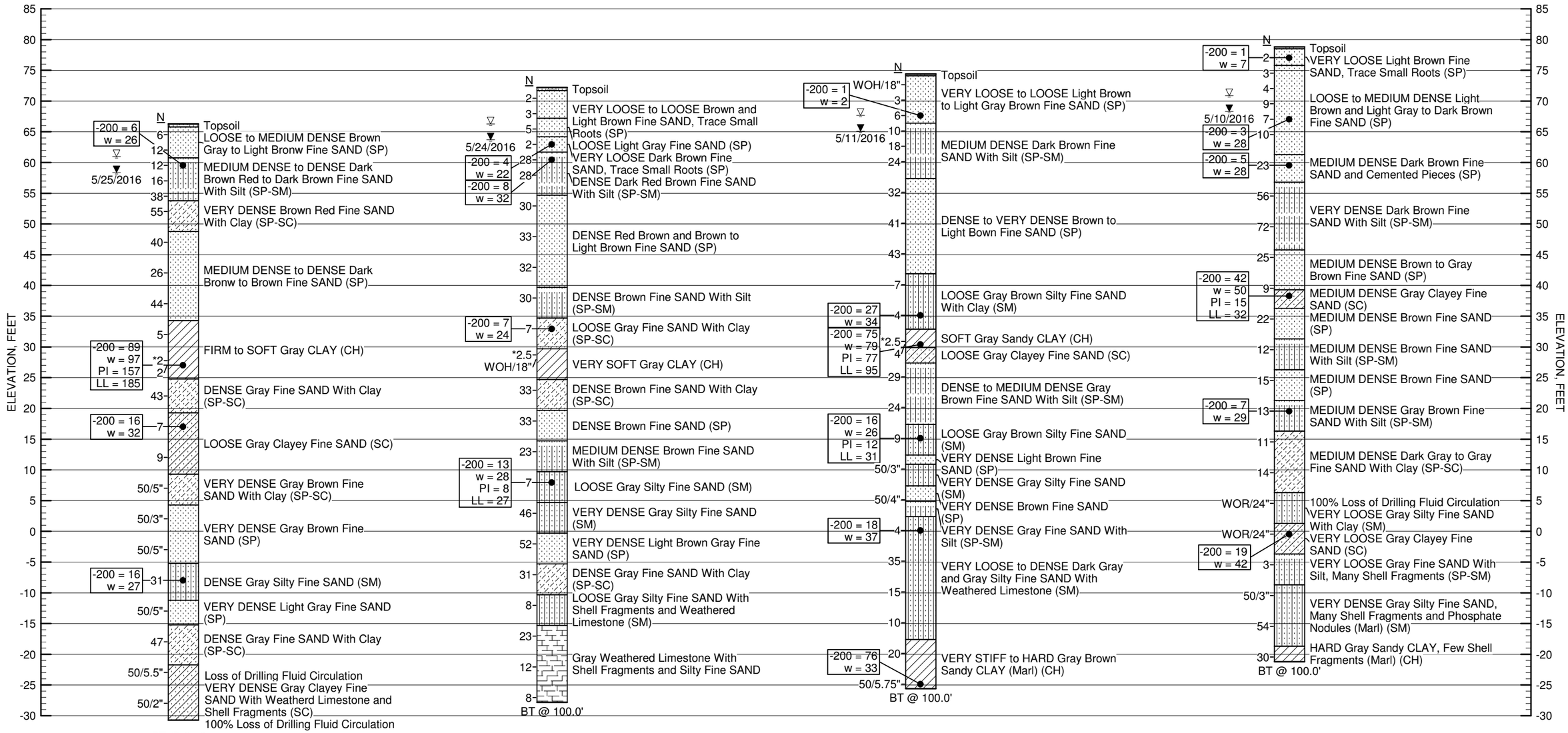
Generalized Subsurface Profiles

Seminole Electric Gas Plant

Putnam County, Florida

Ellis & Associates inc.

DATE: 6/16/16 | PROJ. NO.: 35-22956 | Figure 4



LEGEND

- Topsoil
- Fine SAND (SP)
- Fine SAND With Silt (SP-SM)
- Fine SAND With Clay (SP-SC)
- Silty Fine SAND (SM)
- Clayey Fine SAND (SC)
- CLAY (CH)
- Limestone
- Weathered Limestone
- Fine SAND (SP)

N	Standard Penetration Resistance, Blows/Foot	50/5"	Number of Blows to Drive Split Spoon Sample in Inches	PI	Plasticity Index
SP	Unified Soil Classification System	BT	Boring Terminated at Depth Below Grade	PL	Plastic Limit
▼	Groundwater Level at Time of Drilling	-200	% Passing No. 200 U.S. Standard Sieve	LL	Liquid Limit
▽	Estimated Normal Seasonal High Groundwater Level	*2	Pocket Penetrometer Disturbed (ksf)	WOH	Distance Split-Spoon Soil Sampler Dropped Under Weight of Drilling Tools and Hammer
WOR	Rod Dropped by Weight of the Rod Only	w	Natural Moisture Content (%)		

Generalized Subsurface Profiles

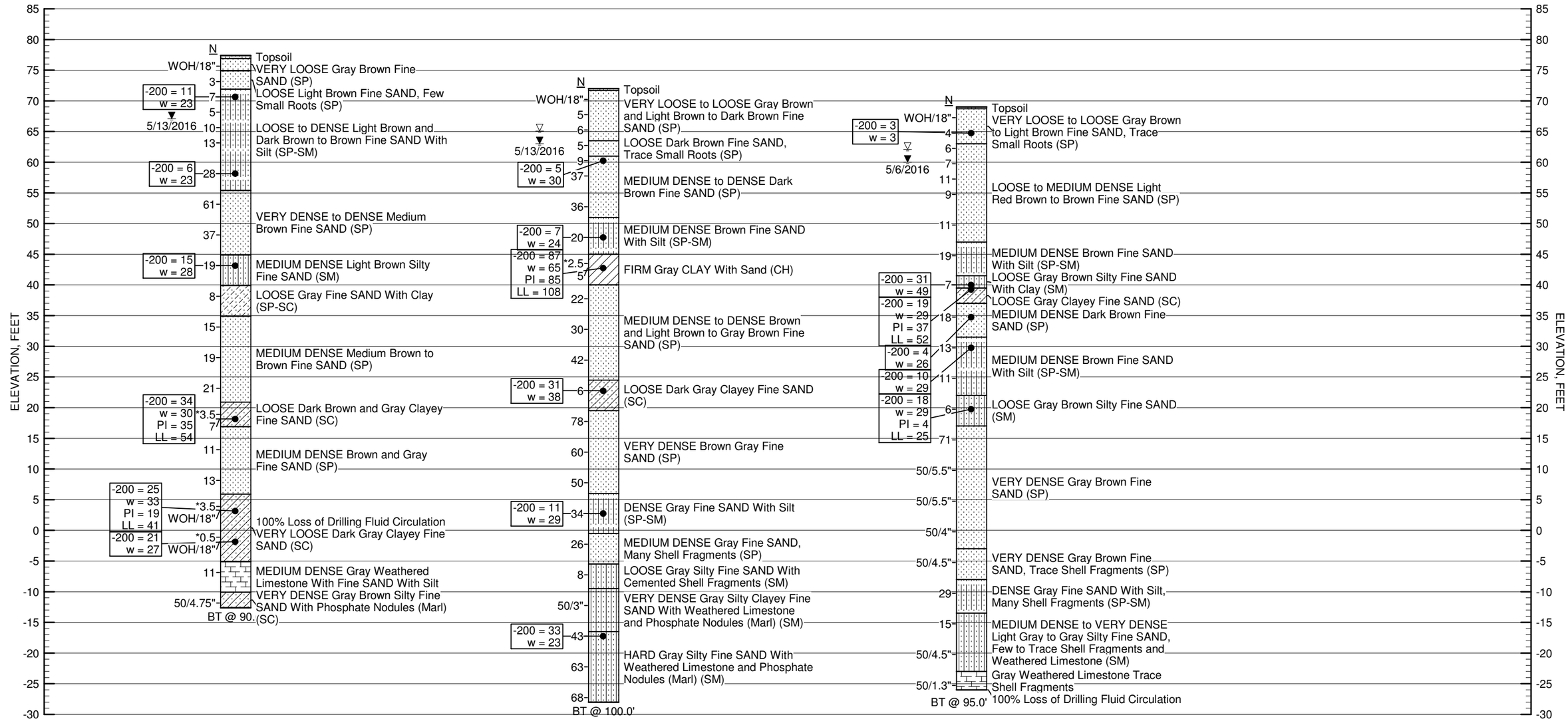
Seminole Electric Gas Plant

Putnam County, Florida

Ellis & Associates inc.

DATE: 6/16/16 | PROJ. NO.: 35-22956 | Figure 5

-3



LEGEND

- Topsoil
- Fine SAND (SP)
- Fine SAND With Silt (SP-SM)
- Fine SAND With Clay (SP-SC)
- Silty Fine SAND (SM)
- Clayey Fine SAND (SC)
- CLAY (CH)
- Limestone
- Weathered Limestone
- Fine SAND (SP)

N	Standard Penetration Resistance, Blows/Foot	50/5"	Number of Blows to Drive Split Spoon Sample in Inches	PI	Plasticity Index
SP	Unified Soil Classification System	BT	Boring Terminated at Depth Below Grade	PL	Plastic Limit
▼	Groundwater Level at Time of Drilling	-200	% Passing No. 200 U.S. Standard Sieve	LL	Liquid Limit
▽	Estimated Normal Seasonal High Groundwater Level	*2	Pocket Penetrometer Disturbed (ksf)	WOH	Distance Split-Spoon Soil Sampler Dropped Under Weight of Drilling Tools and Hammer
WOR	Rod Dropped by Weight of the Rod Only	w	Natural Moisture Content (%)		

Generalized Subsurface Profiles

Seminole Electric Gas Plant

Putnam County, Florida

Ellis & Associates inc.

DATE: 6/16/16 | PROJ. NO.: 35-22956 | Figure 6

-4

APPENDIX A

SOIL BORING LOGS
MONITORING WELL LOGS
FIELD EXPLORATION PROCEDURES
KEY TO SOIL CLASSIFICATION

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB1
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
1			VERY LOOSE Light Brown and Gray Fine SAND, Trace Small Roots (SP)	WOH/6"			
				1	1		
			LOOSE Light Brown Fine SAND, Trace Small Roots (SP)	2			
2				2			
	5			1	3		
3				2			
				3			
				2	5		
			LOOSE Gray Brown Fine SAND With Silt (SP-SM)				
4				2			
				3			
	10				3		
			LOOSE to MEDIUM DENSE Dark Brown Fine SAND (SP)	2			
5				3			
				4	7		
				6			
6				8			5
	15			11	19		
			MEDIUM DENSE Red Brown Fine SAND (SP)				
				6			
7				8			
	20			13	21		
			DENSE Gray Brown Fine SAND (SP)				
				8			
8				12			
	25			19	31		

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) 0 10 20 30 40 | LIQUID LIMIT ◇

SHEAR STRENGTH (ksf) 0 1 2
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◒ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB1
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	25		DENSE Gray Brown Fine SAND (SP) *(Continued)*				
9	30			9 14 20	34		
			LOOSE Gray Fine SAND With Clay (SP-SC)				
10	35			3 3 4	7		
11	40			WOH/6" 3 3	6		10
			Gray CLAY With Sand (CH)				
12	45						
12A			MEDIUM DENSE Dark Brown Gray Fine SAND With Clay (SP-SC)	2 8 13	21		
			MEDIUM DENSE Brown Gray Fine SAND (SP)				
13	50			6 9 15	24		

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%) 0 10 20 30 40

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 1 2

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB1
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	50		MEDIUM DENSE Brown Gray Fine SAND (SP) *(Continued)*				
14	55			6 9 13	22		
			MEDIUM DENSE Dark Gray Brown Fine SAND With Clay (SP-SC)				
15	60			5 7 10	17		10
			VERY DENSE Brown and Gray Fine SAND (SP)				
16	65			13 50/5.75"	50/5.75"		
17	70			17 26 39	65		
			VERY LOOSE Gray Clayey Fine SAND With Shell Fragments (SC)				
18	75			WOR/12" WOH/6"	WOH/6"		23

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) | LIQUID LIMIT ◇
0 10 20 30 40

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 1 2

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB1
Sheet 4 of 4

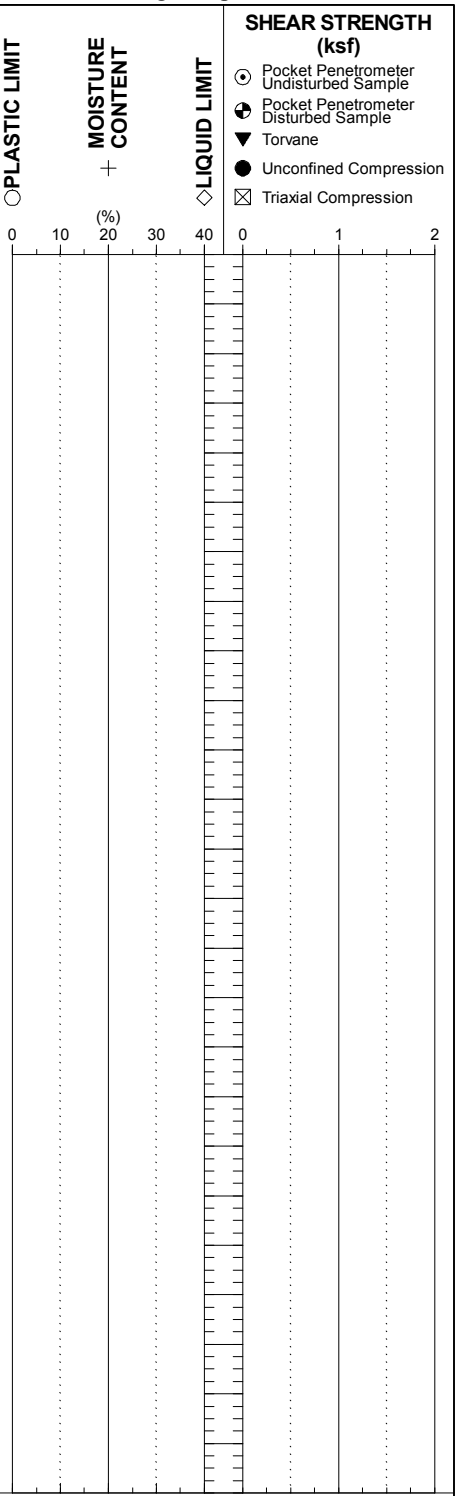
LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		VERY LOOSE Gray Clayey Fine SAND With Shell Fragments (SC) *(Continued)*				
			DENSE Gray Silty Fine SAND With Shell Fragments (SM)				
19	80			11 13 13	26		
			Gray Weathered Limestone With Silty Fine SAND and Shell Fragments				
20	85			5 5 4	9		
			MEDIUM DENSE Gray Clayey Fine SAND With Weathered Limestone, Phosphate Nodules and Shell Fragments (Marl) (SC)				
21	90			4 3 7	10		
			VERY DENSE Gray Clayey Fine SAND With Weathered Limestone and Phosphate Nodules (Marl) (SC)				
22	95			11 50/4"	50/4"		
			DENSE Gray Clayey Fine SAND With Phosphate Nodules (Marl) (SC)				
23	100			10 16 29	45		

Boring Terminated @ 100 ft.

Remarks



LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB2
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/23/16
Boring Begun: 5/20/16 Boring Completed: 5/23/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + (%) / LIQUID LIMIT ◇	SHEAR STRENGTH (ksf)
	0		Topsoil						
1			VERY LOOSE Gray Fine SAND, Trace Small Roots (SP)	WOH/12"					
				1	1				
			VERY LOOSE to LOOSE Light Brown Fine SAND (SP)						
				2					
2				1					
	5			2	3				
				2					
3				2					
				3	5				
			LOOSE to MEDIUM DENSE Dark Brown Fine SAND With Silt (SP-SM) ▼						
				3					
4				3					
	10			3	6				
				2					
5				1					
				4	5				
				2					
6				3					
	15			6	9				
				9					
7				10					
	20			14	24				
			DENSE Brown Fine SAND (SP)						
				8					
8				14					
	25			20	34				

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB2
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/23/16
Boring Begun: 5/20/16 Boring Completed: 5/23/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	25		DENSE Brown Fine SAND (SP) *(Continued)*						
9	30			8 14 17	31				
			MEDIUM DENSE Brown Gray Fine SAND (SP)						
10	35			4 4 7	11				
			SOFT Gray CLAY With Sand (CH)						
11	40			WOH/12" 2	2		85	○ + ◇	◔
			DENSE Brown Gray Fine SAND (SP)						
12	45			6 11 16	27				
			DENSE Brown Fine SAND (SP)						
13	50			8 13 18	31				

SHEAR STRENGTH (ksf)
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◔ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

0 25 50 75 100 (%) 0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB2
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/23/16
Boring Begun: 5/20/16 Boring Completed: 5/23/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		DENSE Brown Fine SAND (SP) *(Continued)*						
14	55			7 13 19	32				
			DENSE to VERY DENSE Gray Fine SAND With Clay (SP-SC)						
15	60			10 19 20	39		7	+	
16	65			24 40 41	81				
			LOOSE Gray Fine SAND With Silt (SP-SM)						
17	70			8 4 3	7		8	+	
			MEDIUM DENSE Gray Clayey Fine SAND With Phosphate Nodules and Many Shell Fragments (Marl) (SC)						
18	75			4 4 12	16				

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

MOISTURE CONTENT (%): 0 25 50 75 100
SHEAR STRENGTH (ksf): 0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB2
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/23/16
Boring Begun: 5/20/16 Boring Completed: 5/23/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + (%) / LIQUID LIMIT ◇ (0 25 50 75 100)	SHEAR STRENGTH (ksf) (0.0 1.5 3.0)
	75		MEDIUM DENSE Gray Clayey Fine SAND With Phosphate Nodules and Many Shell Fragments (Marl) (SC) *(Continued)*						
19	80			9 11 12	23				
			Light Gray Weathered Limestone With Many Shell Fragments						
20	85			4 5 3	8				
			VERY DENSE Gray Brown Clayey Fine SAND With Phosphate Nodules (Marl) (SC)						
21	90			50/4.5"	50/4.5"				
22	95			15 18 26	44				
			HARD Dark Gray Very Sandy CLAY (Marl) (CH)						
23	100			8 12 18	30		56	○ + ◇	

Boring Terminated @ 100 ft.

Remarks

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◔ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ⊠ Triaxial Compression

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB3
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 11.5 ft Time: Drilling Date: 5/18/16
Boring Begun: 5/18/16 Boring Completed: 5/18/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	0		Topsoil						
			LOOSE to VERY LOOSE Light Brown Fine SAND (SP)	2					
1				1					
				2	3				
				WOH/6"					
2				1					
	5			1	2				
			LOOSE Brown Fine SAND (SP)						
				2					
3				2			3	+	
				2	4				
				4					
4				3					
	10			4	7				
			LOOSE Dark Brown Fine SAND (SP)						
			▼	2					
5				5					
				2	7				
				2					
6				3					
	15			4	7				
			DENSE to VERY DENSE Red Brown Fine SAND (SP)						
				8					
7				12					
	20			17	29				
				11					
8				18					
	25			23	41				

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◕ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB3
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 11.5 ft Time: Drilling Date: 5/18/16
Boring Begun: 5/18/16 Boring Completed: 5/18/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	25		DENSE to VERY DENSE Red Brown Fine SAND (SP) *(Continued)*				
			DENSE Brown Red Fine SAND (SP)				
9	30			11 17 22	39		4
			DENSE Light Brown Red Fine SAND (SP)				
10	35			8 12 16	28		
			LOOSE Brown Fine SAND (SP)				
11	40			3 3 4	7		
			VERY LOOSE Dark Brown Silty Fine SAND (SM)				
12	45			WOH/12" 1/12"	1/12"		
			MEDIUM DENSE Light Brown Fine SAND (SP)				
13	50			6 9 13	22		

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%) 0 10 20 30 40

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 1 2

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB3
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 11.5 ft Time: Drilling Date: 5/18/16
Boring Begun: 5/18/16 Boring Completed: 5/18/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%)	SHEAR STRENGTH (ksf)
	50		MEDIUM DENSE Light Brown Fine SAND (SP) *(Continued)*						
			MEDIUM DENSE Light Brown Fine SAND With Silt (SP-SM)						
14	55			4 7 11	18				
			MEDIUM DENSE Brown Fine SAND (SP)						
15	60			4 5 6	11				
			VERY DENSE Brown Gray Fine SAND (SP)						
16	65			7 18 23	41				
			VERY DENSE Gray Fine SAND (SP)						
17	70			17 28 33	61				
			LOOSE Gray and Brown Clayey Fine SAND (SC)						
18	75			3 2 5	7				

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◔ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ☒ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB3
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 11.5 ft Time: Drilling Date: 5/18/16
Boring Begun: 5/18/16 Boring Completed: 5/18/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		LOOSE Gray and Brown Clayey Fine SAND (SC) *(Continued)*				
			DENSE Gray Fine SAND, Many Shell Fragments (SP)				
19	80			14 19 20	39		
			Gray Weathered Limestone With Silty Fine SAND, Many Shell Fragments				
20	85			3 5 7	12		
			VERY DENSE Gray Silty Fine SAND, Few Shell Fragments and Some Weathered Limestone (Marl) (SM)				
21	90			8 50/5.75"	50/5.75"		
			VERY DENSE Gray Clayey Fine SAND With Phosphate Nodules and Some Shell Fragments (Marl) (SC)				
22	95			15 50/5.75"	50/5.75"		
			DENSE Gray and Brown Very Clayey Fine SAND With Phosphate Nodules (Marl) (SC)				
23	100			7 12 20	32		

Boring Terminated @ 100 ft.

Remarks

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) 0 10 20 30 40 | LIQUID LIMIT ◇

SHEAR STRENGTH (ksf)
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◔ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

0 1 2

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB4
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/24/16 Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
1			VERY LOOSE Brown Fine SAND, Trace Small Roots (SP)	WOH/12"			
				1	1		
			LOOSE Light Brown Fine SAND, Trace Small Roots (SP)				
				1			
2				2			
	5			2	4		
			LOOSE Brown Fine SAND, Trace Small Roots (SP)				
				2			
3				2			
				2	4		
			LOOSE to MEDIUM DENSE Brown Fine SAND With Silt (SP-SM) ▼				
				3			
4				3			
	10			4	7		
				3			
5				4			
				5	9		
				3			
6				3			
	15			6	9		
				5			
7				7			
	20			9	16		
			DENSE Brown Fine SAND (SP)				
				8			
8				12			
	25			17	29		

MOISTURE CONTENT (%): 0 20 40 60 80
PLASTIC LIMIT ○ | LIQUID LIMIT ◇

SHEAR STRENGTH (ksf): 0 4 8
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◕ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB4
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/24/16 Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%)	SHEAR STRENGTH (ksf)
	25		DENSE Brown Fine SAND (SP) *(Continued)*						
			DENSE Red Brown Fine SAND (SP)						
9	30			9 14 21	35				
			LOOSE Gray Fine SAND With Clay (SP-SC)						
10	35			3 2 2	4		10	+	
			SOFT Gray CLAY (CH)						
11	40			7 2 2	4		95	+	◓
			DENSE Red Brown Fine SAND With Clay (SP-SC)						
12	45			11 13 17	30				
			MEDIUM DENSE Red Brown Fine SAND (SP)						
13	50			7 10 14	24				

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◓ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ⊠ Triaxial Compression

Moisture content (%): 0 20 40 60 80
Shear strength (ksf): 0 4 8

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB4
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/24/16 Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	50		MEDIUM DENSE Red Brown Fine SAND (SP) *(Continued)*				
			DENSE Brown Fine SAND (SP)				
14	55			9 13 20	33		
			MEDIUM DENSE Gray Fine SAND With Clay (SP-SC)				
15	60			8 5 6	11		
			VERY DENSE Gray Fine SAND (SP)				
16	65			22 50/4.5"	50/4.5"		
			VERY DENSE Gray Fine SAND With Clay (SP-SC)				
17	70			22 31 50/4.5"	50/4.5"		
			LOOSE Gray Clayey Fine SAND (SC)				
18	75			4 2 3	5		

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%)
0 20 40 60 80

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◔ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 4 8

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB4
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/24/16 Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		LOOSE Gray Clayey Fine SAND (SC) *(Continued)*				
			Gray Weathered Limestone With Silty Fine SAND and Shell Fragments				
19	80			13 18 21	39		
			Light Gray to Gray Weathered Limestone With Shell Fragments				
20	85			6 5 6	11		
21	90			9 10 50/2.5"	50/2.5"		
			DENSE Gray Brown Clayey Fine SAND With Phosphate Nodules (Marl) (SC)				
22	95			11 16 20	36		
23	100			13 17 21	38		

Boring Terminated @ 100 ft.

SHEAR STRENGTH (ksf)
Pocket Penetrometer Undisturbed Sample
Pocket Penetrometer Disturbed Sample
Torvane
Unconfined Compression
Triaxial Compression

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%)
0 20 40 60 80
0 4 8

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB5
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/20/16
Boring Begun: 5/20/16 Boring Completed: 5/20/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value
	0		Topsoil		
			VERY LOOSE Brown Fine SAND (SP)	WOH/12"	
1				1	1
			VERY LOOSE to LOOSE Light Brown Fine SAND (SP)	WOH/6"	
2				1	
	5			1	2
				2	
3				3	
				3	6
			LOOSE to MEDIUM DENSE Red Brown Fine SAND With Silt (SP-SM)	2	
4				2	
	10			3	5
				3	
5				5	
				6	11
			MEDIUM DENSE Dark Brown Fine SAND With Silt (SP-SM)		
				6	
6				9	
	15			12	21
			MEDIUM DENSE Red Brown Fine SAND (SP)		
				5	
7				7	
	20			10	17
				8	
8				10	
	25			14	24

PERCENT ORGANIC MATERIAL

PERCENT PASSING NO. 200 SIEVE

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) | LIQUID LIMIT ◇

0 15 30 45 60

SHEAR STRENGTH (ksf)
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◕ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

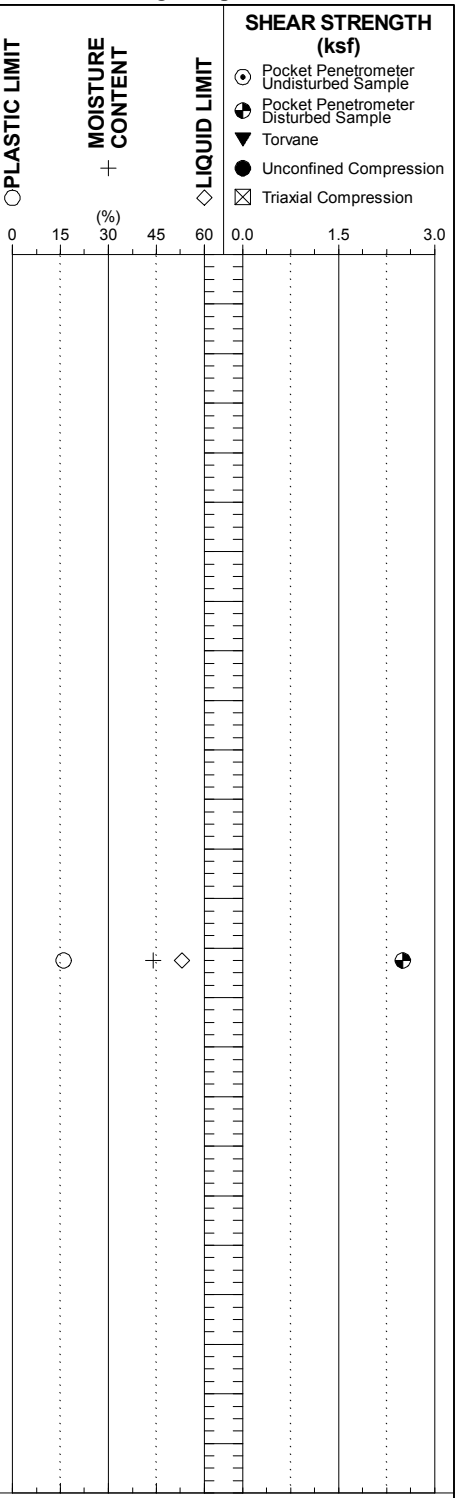
Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB5
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/20/16
Boring Begun: 5/20/16 Boring Completed: 5/20/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	25		MEDIUM DENSE Red Brown Fine SAND (SP) *(Continued)*				
			LOOSE Light Brown Fine SAND (SP)				
9	30			5 4 4	8		
			MEDIUM DENSE Light Brown and Gray Fine SAND (SP)				
10	35			4 4 7	11		
			VERY SOFT Gray Sandy CLAY (CH)	WOH/18"			
11	40			WOH/18"			64
			MEDIUM DENSE Red Brown Fine SAND (SP)				
12	45			4 5 11	16		
			MEDIUM DENSE Brown Fine SAND (SP)				
13	50			6 8 11	19		



Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB5
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/20/16
Boring Begun: 5/20/16 Boring Completed: 5/20/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	50		MEDIUM DENSE Brown Fine SAND (SP) *(Continued)*				
			MEDIUM DENSE Brown Fine SAND With Some Cementation (SP)				
14				3 4 7	11		
	55						
			DENSE Brown Gray Fine SAND With Silt (SP-SM)				
15				6 16 19	35		
	60						
			VERY DENSE Gray and Brown Fine SAND With Silt (SP-SM)				
16				14 20 30	50		
	65						
			VERY DENSE Gray Fine SAND With Clay (SP-SC)				
17				17 38 50/5"	50/5"		
	70						
			VERY LOOSE Gray Clayey Fine SAND, Trace Shell Fragments (SC)				
18				WOH/18"	WOH/18"		26
	75						

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) | LIQUID LIMIT ◇
0 15 30 45 60

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB5
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/20/16
Boring Begun: 5/20/16 Boring Completed: 5/20/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value
	75		VERY LOOSE Gray Clayey Fine SAND, Trace Shell Fragments (SC) *(Continued)*		
			MEDIUM DENSE Gray Silty Fine SAND With Weathered Limestone and Shell Fragments (SM)		
19	80			9 10 16	26
			Gray Weathered Limestone With Many Shell Fragments		
20	85			3 2 5	7
			MEDIUM DENSE to VERY DENSE Gray Clayey Fine SAND With Phosphate Nodules and Shell Fragments (Marl) (SC)		
21	90			7 14 12	26
22	95			35 42 50/3"	50/3"
23	100			44 42 44	86

Boring Terminated @ 100 ft.

PERCENT ORGANIC MATERIAL

PERCENT PASSING NO. 200 SIEVE

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) | LIQUID LIMIT ◇

0 15 30 45 60

SHEAR STRENGTH (ksf)
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◕ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB6
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/19/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
1			VERY LOOSE Light Brown Fine SAND, Trace Small Roots (SP)	WOH/18"			
				WOH/18"			
2				1			
				1			
	5			2	3		
			LOOSE Light Gray Fine SAND (SP)				
3				2			
				2			
				3	5		
			LOOSE to MEDIUM DENSE Dark Brown Fine SAND With Silt (SP-SM)				
4				2			
				2			
	10			3	5		
5				2			
				4			6
				8	12		
			MEDIUM DENSE Red Brown Fine SAND (SP)				
6				4			
				6			
	15			9	15		
7				3			
				4			
	20			7	11		
			MEDIUM DENSE Light Red Brown Fine SAND (SP)				
8				7			
				10			
	25			15	25		

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%) 0 10 20 30 40

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 2 4

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB6
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/19/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	25		MEDIUM DENSE Light Red Brown Fine SAND (SP) *(Continued)*				
9				7 10 15	25		
	30						
			LOOSE Gray Fine SAND With Clay (SP-SC)				
10				3 2 3	5		
	35						
			VERY SOFT Gray CLAY (CH)				
11				WOH/18"			
	40				WOH/18"		
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)				
12				6 5 10	15		
	45						
			MEDIUM DENSE Light Brown Yellow Fine SAND (SP)				
13				5 7 11	18		4
	50						

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%) 0 10 20 30 40

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 2 4

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB6
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/19/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%) 0 10 20 30 40	SHEAR STRENGTH (ksf) 0 2 4
	50		MEDIUM DENSE Light Brown Yellow Fine SAND (SP) *(Continued)*						
			MEDIUM DENSE Light Brown Fine SAND (SP)						
14	55			5 7 8	15				
			DENSE Dark Brown Gray Fine SAND (SP)						
15	60			9 15 22	37				
			VERY DENSE Gray Brown Fine SAND (SP)						
16	65			18 35 43	78				
			VERY DENSE Light Gray Fine SAND (SP)						
17	70			21 27 36	63				
			VERY LOOSE Gray Clayey Fine SAND (SC)						
18	75			WOH/18" WOH/18"					

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB6
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/19/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%) 0 10 20 30 40	SHEAR STRENGTH (ksf) ⊙ Pocket Penetrometer Undisturbed Sample; ◔ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ☒ Triaxial Compression 0 2 4
	75		VERY LOOSE Gray Clayey Fine SAND (SC) *(Continued)*						
			MEDIUM DENSE Gray Silty Fine SAND With Weathered Limestone (SM)						
19	80			6 10 11	21				
			Light Gray Weathered Limestone With Shell Fragments						
20	85			4 7 6	13				
			HARD Gray Brown and Light Brown Sandy SILT With Clay and Some Shell Fragments (Marl) (ML)						
21	90			13 19 27	46		63	+	
22	95			11 14 19	33				
23	100			12 14 19	33				

Boring Terminated @ 100 ft.

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB7
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/18/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value
	0		Topsoil		
1			MEDIUM DENSE Light Brown Fine SAND, Trace Small Roots (SP)	3 5 5	10
2	5		LOOSE Light Brown Fine SAND (SP)	3 3 3	6
3			LOOSE Light Brown and Brown Fine SAND, Trace Small Roots (SP)	2 2 2	4
4	10		LOOSE Light Brown and Dark Brown Fine SAND With Silt (SP-SM) ▼	2 2 2	4
5			LOOSE Dark Brown Fine SAND With Silt (SP-SM)	2 1 3	4
6	15		MEDIUM DENSE Dark Red Brown Fine SAND With Silt (SP-SM)	3 3 6	9
7	20			10 11 12	23
8	25		DENSE Brown Fine SAND (SP)	9 13 17	30

PERCENT ORGANIC MATERIAL

PERCENT PASSING NO. 200 SIEVE

PLASTIC LIMIT ○ | MOISTURE CONTENT + | LIQUID LIMIT ◇
(%) 0 30 60 90 120

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◕ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 2 4

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB7
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/18/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	25		DENSE Brown Fine SAND (SP) *(Continued)*						
			LOOSE Light Brown Fine SAND (SP)						
9	30			3 2 5	7				
			FIRM Gray CLAY (CH)						
10	35			4 3 1	4		91	○ + ◇	◐
			MEDIUM DENSE Dark Gray Brown Fine SAND With Silt (SP-SM)						
11	40			6 8 9	17				
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)						
12	45			5 11 11	22				
			MEDIUM DENSE Brown Fine SAND (SP)						
13	50			4 8 12	20				

0 30 60 90 120 (%)

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◐ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 2 4

Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB7
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/18/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		MEDIUM DENSE Brown Fine SAND (SP) *(Continued)*						
			MEDIUM DENSE Gray Clayey Fine SAND (SC)						
14				4 4 6	10		14	○ ◇	
	55								
			DENSE Brown Fine SAND (SP)						
15				10 16 20	36				
	60								
			DENSE to MEDIUM DENSE Gray Fine SAND With Silt (SP-SM)						
16				13 13 18	31				
	65								
17				7 4 6	10				
	70								
			DENSE to MEDIUM DENSE Gray Silty Fine SAND With Weathered Limestone, Some Shell Fragments (SM)						
18				7 12 15	27				
	75								

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB7
Sheet 4 of 4

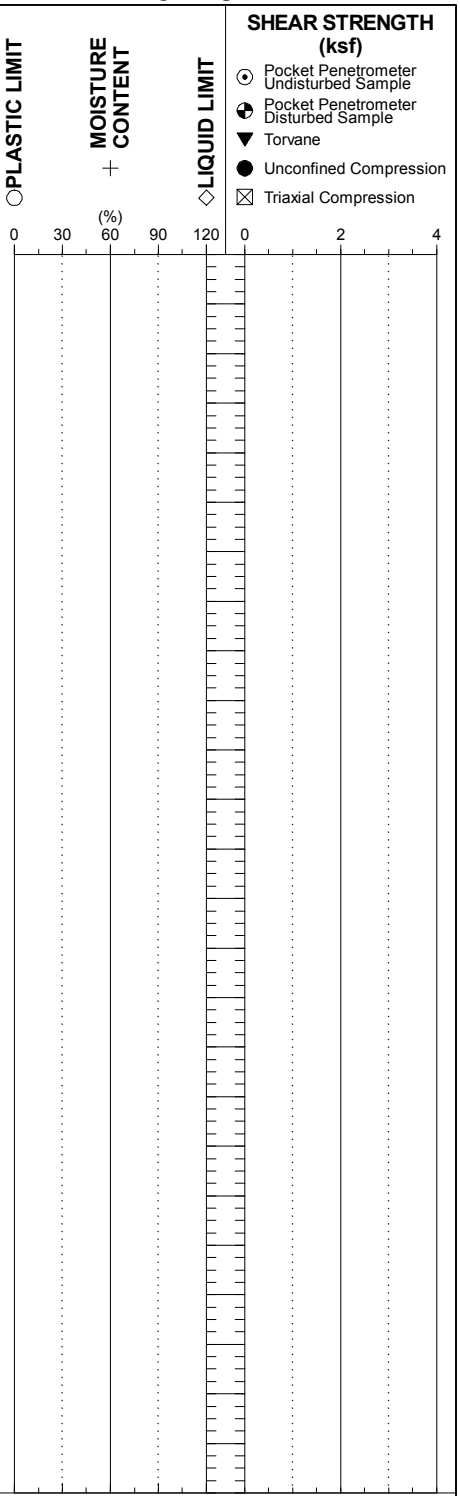
LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10 ft Time: Drilling Date: 5/19/16
Boring Begun: 5/18/16 Boring Completed: 5/19/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		DENSE to MEDIUM DENSE Gray Silty Fine SAND With Weathered Limestone, Some Shell Fragments (SM) *(Continued)*				
19	80			8 11 10	21		
			Light Gray Weathered Limestone With Some Shell Fragments				
20	85			2 2 2	4		
			MEDIUM DENSE Gray Brown Clayey Fine SAND Fine SAND With Silt (Marl) (SC)				
21	90			10 11 14	25		
			VERY DENSE Gray Clayey Fine SAND Fine SAND With Silt, Many Shell Fragments (Marl) (SC)				
22	95			47 50/4.5"	50/4.5"		
			VERY DENSE Gray Clayey Fine SAND With Weathered Limesone (Marl) (SC)				
23	100			22 50/2.25"	50/2.25"		

Boring Terminated @ 100 ft.

Remarks



LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB8
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7 ft Time: Drilling Date: 5/26/16
Boring Begun: 5/25/16
Boring Completed: 5/26/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
1			VERY LOOSE to LOOSE Light Brown Fine SAND (SP)	1 1 1	2		
2	5			3 4 5	9		
3			▼	3 3 3	6		
4	10		VERY LOOSE to MEDIUM DENSE Dark Brown Fine SAND With Silt (SP-SM)	1 1 2	3		
5				7 13 14	27		
6	15		VERY DENSE Dark Red Brown Fine SAND With Silt (SP-SM)	18 27 25	52		
7	20		MEDIUM DENSE Brown Fine SAND With Clay (SP-SC)	8 14 15	29		
8	25		MEDIUM DENSE to DENSE Brown Fine SAND (SP)	8 12 14	26		

PLASTIC LIMIT ○ | MOISTURE CONTENT + | LIQUID LIMIT ◇ (%)
0 40 80 120 160

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◕ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 4 8

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB8
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7 ft Time: Drilling Date: 5/26/16
Boring Begun: 5/25/16
Boring Completed: 5/26/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%)	SHEAR STRENGTH (ksf)
	25		MEDIUM DENSE to DENSE Brown Fine SAND (SP) *(Continued)*						
9	30	■		11 18 22	40				
			DENSE Gray Fine SAND (SP)						
10	35	■		13 22 21	43				
			FIRM Gray CLAY (CH)						
11	40	■		2 3 3	6		97	○ + ◇	◒
			MEDIUM DENSE Dark Brown Gray Fine SAND (SP)						
12	45	■		7 11 11	22		4	+	
			MEDIUM DENSE Gray Fine SAND With Clay (SP-SC)						
13	50	■		6 11 15	26				

0 40 80 120 160 (%)
0 4 8

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression

Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB8
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7 ft Time: Drilling Date: 5/26/16
Boring Begun: 5/25/16
Boring Completed: 5/26/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		MEDIUM DENSE Gray Fine SAND With Clay (SP-SC) *(Continued)*						
			LOOSE Gray Clayey Fine SAND (SC)						
14	55			6 3 5	8		18	+	
			VERY DENSE Gray Brown Fine SAND With Clay (SP-SC)						
15	60			50/5"	50/5"				
			VERY DENSE Brown Fine SAND (SP)						
16	65			50/5"	50/5"				
			VERY DENSE Gray Fine SAND With Clay (SP-SC)						
17	70			14 29 25	54				
			VERY DENSE Brown Fine SAND (SP)						
18	75			45 50/3"	50/3"				

○ PLASTIC LIMIT ◇ LIQUID LIMIT + MOISTURE CONTENT (%) 0 40 80 120 160

SHEAR STRENGTH (ksf) 0 4 8
⊙ Pocket Penetrometer Undisturbed Sample
◔ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB8
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7 ft Time: Drilling Date: 5/26/16
Boring Begun: 5/25/16
Boring Completed: 5/26/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		VERY DENSE Brown Fine SAND (SP) *(Continued)*				
			VERY DENSE Gray Brown Fine SAND With Silt (SP-SM)				
19	80			50/3.5"	50/3.5"		9
			VERY DENSE Gray Fine SAND With Silt and Shell Fragments With Weathered Limestone (SP-SM)				
20	85			21 32 30	62		
			Light Gray Weathered Limestone With Shell Fragments				
21	90			9 12 17	29		
			VERY DENSE Gray Clayey Fine SAND With Shell Fragments, Weathered Limestone and Phosphate Nodules (Marl) (SC)				
22	95			50/3"	50/3"		
23	100			50/4.5"	50/4.5"		

Boring Terminated @ 100 ft.

Remarks

SHEAR STRENGTH (ksf)
- Pocket Penetrometer Undisturbed Sample
- Pocket Penetrometer Disturbed Sample
- Torvane
- Unconfined Compression
- Triaxial Compression

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) | LIQUID LIMIT ◇
0 40 80 120 160
0 4 8

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

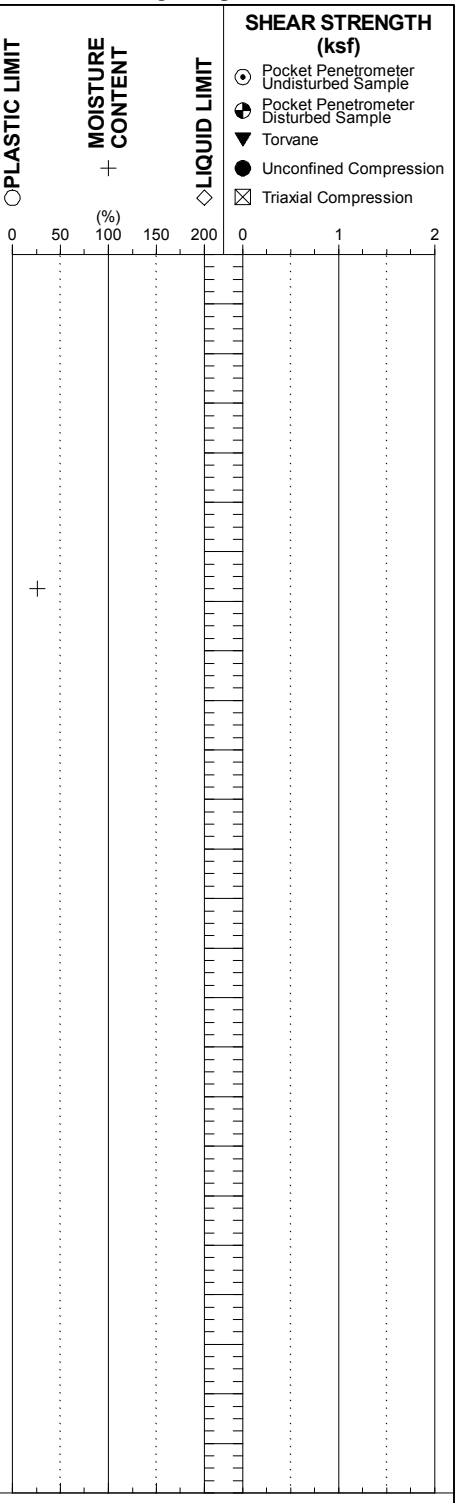
Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB9
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7.9 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/25/16
Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
			LOOSE Brown Gray Fine SAND (SP)	3			
1				4			
				2	6		
			MEDIUM DENSE Light Brown Fine SAND (SP)				
				3			
2				6			
	5			6	12		
			MEDIUM DENSE Dark Brown Red Fine SAND With Silt (SP-SM)	5			
3				5			6
				7	12		
			MEDIUM DENSE Dark Gray Brown Fine SAND With Silt (SP-SM) ▼				
				8			
4				8			
	10			8	16		
			DENSE Dark Brown Fine SAND With Silt (SP-SM)	14			
5				18			
				20	38		
			VERY DENSE Brown Red Fine SAND With Clay (SP-SC)				
				16			
6				29			
	15			26	55		
			DENSE Dark Brown Fine SAND (SP)				
				12			
7				20			
	20			20	40		
			MEDIUM DENSE to DENSE Brown Fine SAND (SP)				
				7			
8				11			
	25			15	26		



Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB9
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7.9 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/25/16
Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	25		MEDIUM DENSE to DENSE Brown Fine SAND (SP) *(Continued)*						
9	30			10 22 22	44				
			FIRM to SOFT Gray CLAY (CH)						
10	35			7 2 3	5				
11	40			1 1 1	2		89	○ + ◇	◔
			DENSE Gray Fine SAND With Clay (SP-SC)						
12	45			17 23 20	43				
			LOOSE Gray Clayey Fine SAND (SC)						
13	50			5 4 3	7		16	+	

Pocket Penetrometer Undisturbed Sample ⊙
Pocket Penetrometer Disturbed Sample ◔
Torvane ▼
Unconfined Compression ●
Triaxial Compression ⊠

Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB9
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7.9 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/25/16
Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		LOOSE Gray Clayey Fine SAND (SC) *(Continued)*						
14	55			3 5 4	9				
			VERY DENSE Gray Brown Fine SAND With Clay (SP-SC)						
15	60			20 50/5"	50/5"				
			VERY DENSE Gray Brown Fine SAND (SP)						
16	65			38 50/3"	50/3"				
17	70			30 50/5"	50/5"				
			DENSE Gray Silty Fine SAND (SM)						
18	75			15 14 17	31		16	+	

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%): 0, 50, 100, 150, 200

SHEAR STRENGTH (ksf): 0, 1, 2

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB9
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: ATV
Driller: DK Register
Boring Location: See Field Exploration Plan
Drill Rod: AWJ
Drill Mud: Super Gel-X
Casing Size:
Length of Casing:
Groundwater Depth: 7.9 ft Time: Drilling Date: 5/25/16
Boring Begun: 5/25/16
Boring Completed: 5/25/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		DENSE Gray Silty Fine SAND (SM) *(Continued)*				
			VERY DENSE Light Gray Fine SAND (SP)				
19	80			45 50/5"	50/5"		
			DENSE Gray Fine SAND With Clay (SP-SC)				
20	85			19 22 25	47		
			VERY DENSE Gray Clayey Fine SAND With Weatherd Limestone and Shell Fragments (Marl) (SC)	50/5.5"			
21	90				50/5.5"		
			Loss of Drilling Fluid Circulation				
22	95			50/2"	50/2"		
			100% Loss of Drilling Fluid Circulation				
			Boring Terminated @ 97 ft.				
	100						

PLASTIC LIMIT ○ | MOISTURE CONTENT + | LIQUID LIMIT ◇ (%): 0 50 100 150 200

SHEAR STRENGTH (ksf): 0 1 2
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◔ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB10
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	0		Topsoil						
1			VERY LOOSE Brown Fine SAND, Trace Small Roots (SP)	WOH/6"					
				1					
				1	2				
			LOOSE Light Brown and Brown Fine SAND, Trace Small Roots (SP)						
				2					
2				1					
	5			2	3				
			LOOSE Light Gray Fine SAND (SP)						
				3					
3				2					
				3	5				
			VERY LOOSE Dark Brown Fine SAND, Trace Small Roots (SP) ▼						
				1					
4				1			4	+	
	10			1	2				
			DENSE Dark Red Brown Fine SAND With Silt (SP-SM)	6					
5				15			8	+	
				13	28				
				9					
6				13					
	15			15	28				
			DENSE Red Brown Fine SAND (SP)						
				9					
7				12					
	20			18	30				
			DENSE Brown Fine SAND (SP)						
				10					
8				14					
	25			19	33				

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB10
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%)	SHEAR STRENGTH (ksf)
	25		DENSE Brown Fine SAND (SP) *(Continued)*						
			DENSE Light Brown Fine SAND (SP)						
9	30	■		9 12 20	32				
			DENSE Brown Fine SAND With Silt (SP-SM)						
10	35	■		10 12 18	30				
			LOOSE Gray Fine SAND With Clay (SP-SC)						
11	40	■		4 3 4	7		7	+	
			VERY SOFT Gray CLAY (CH)	WOH/18"					
12	45	■		WOH/18"					
			DENSE Brown Fine SAND With Clay (SP-SC)						
13	50	■		9 14 19	33				

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

0 10 20 30 40 (%)
0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB10
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		DENSE Brown Fine SAND With Clay (SP-SC) *(Continued)*						
			DENSE Brown Fine SAND (SP)						
14	55			9 13 20	33				
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)						
15	60			7 10 13	23				
			LOOSE Gray Silty Fine SAND (SM)						
16	65			3 3 4	7		13	○ ◇	
			VERY DENSE Gray Silty Fine SAND (SM)						
17	70			13 19 27	46				
			VERY DENSE Light Brown Gray Fine SAND (SP)						
18	75			13 25 27	52				

Pocket Penetrometer Undisturbed Sample
Pocket Penetrometer Disturbed Sample
Torvane
Unconfined Compression
Triaxial Compression

0 10 20 30 40
0.0 1.5 3.0

Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB10
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 8.5 ft Time: Drilling Date: 5/24/16
Boring Begun: 5/23/16 Boring Completed: 5/24/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + (%) / LIQUID LIMIT ◇	SHEAR STRENGTH (ksf)
	75		VERY DENSE Light Brown Gray Fine SAND (SP) *(Continued)*						
			DENSE Gray Fine SAND With Clay (SP-SC)						
19	80			17 14 17	31				
			LOOSE Gray Silty Fine SAND With Shell Fragments and Weathered Limestone (SM)						
20	85			4 3 5	8				
			Gray Weathered Limestone With Shell Fragments and Silty Fine SAND						
21	90			13 10 13	23				
			Gray Weathered Limestone						
22	95			6 5 7	12				
			Gray Weathered Limestone With Shell Fragments						
23	100			5 4 4	8				

Boring Terminated @ 100 ft.

Remarks

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

MOISTURE CONTENT (%): 0 10 20 30 40

SHEAR STRENGTH (ksf): 0.0 1.5 3.0

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

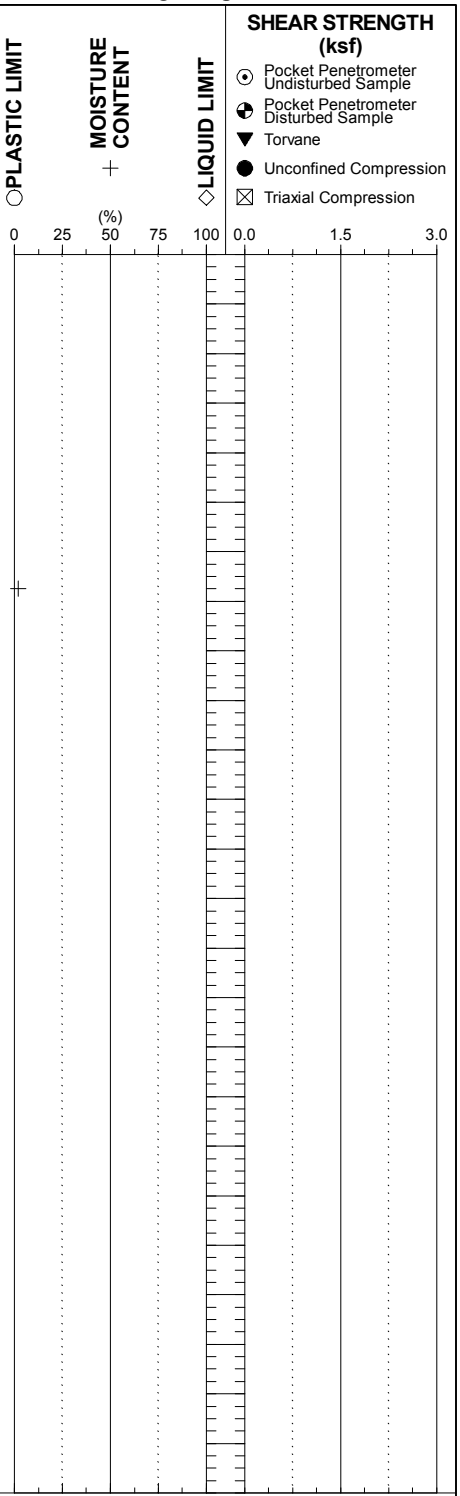
Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB11
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9.3 ft Time: Drilling Date: 5/11/16
Boring Begun: 5/10/16 Boring Completed: 5/11/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
			VERY LOOSE Light Brown Fine SAND (SP)	WOH/18"			
1				WOH/18"			
			LOOSE Light Gray Brown Fine SAND (SP)	1			
2				1			
	5			2	3		
				2			
3				3			1
				3	6		
			MEDIUM DENSE Dark Brown Fine SAND With Silt (SP-SM)	4			
4				4			
	10			6	10		
				5			
5				6			
				12	18		
				10			
6				11			
	15			13	24		
			DENSE Brown Fine SAND (SP)				
				10			
7				13			
	20			19	32		
			VERY DENSE to DENSE Light Brown Fine SAND (SP)				
				11			
8				17			
	25			24	41		



Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB11
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9.3 ft Time: Drilling Date: 5/11/16
Boring Begun: 5/10/16 Boring Completed: 5/11/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	25		VERY DENSE to DENSE Light Brown Fine SAND (SP) *(Continued)*						
9	30			10 17 26	43				
			LOOSE Gray Brown Silty Fine SAND (SM)						
10	35			2 3 4	7				
			LOOSE Gray Silty Fine SAND With Clay (SM)						
11	40			2 2 2	4		27	+	
			SOFT Gray Sandy CLAY (CH)						
12A				WOH/6" 2			75	○ + ◇	◕
12	45		LOOSE Gray Clayey Fine SAND (SC)	2	4				
			DENSE to MEDIUM DENSE Gray Brown Fine SAND With Silt (SP-SM)						
13	50			8 12 17	29				

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◕ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ⊠ Triaxial Compression

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%): 0 25 50 75 100

SHEAR STRENGTH (ksf): 0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB11
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9.3 ft Time: Drilling Date: 5/11/16
Boring Begun: 5/10/16 Boring Completed: 5/11/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		DENSE to MEDIUM DENSE Gray Brown Fine SAND With Silt (SP-SM) *(Continued)*						
14	55			4 8 16	24				
			LOOSE Gray Brown Silty Fine SAND (SM)						
15	60			6 4 5	9		16	○ + ◇	
			VERY DENSE Light Brown Fine SAND (SP)						
16	65		VERY DENSE Gray Silty Fine SAND (SM)	18 50/3"	50/3"				
			VERY DENSE Brown Fine SAND (SP)						
17	70		VERY DENSE Gray Fine SAND With Silt (SP-SM)	22 43 50/4"	50/4"				
			VERY LOOSE Dark Gray Silty Fine SAND (SM)						
18	75			WOH/6" 2 2	4		18	+	

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

0 25 50 75 100 (%) 0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB11
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9.3 ft Time: Drilling Date: 5/11/16
Boring Begun: 5/10/16 Boring Completed: 5/11/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%)	SHEAR STRENGTH (ksf)
	75		VERY LOOSE Dark Gray Silty Fine SAND (SM) *(Continued)*						
			DENSE Gray Silty Fine SAND With Weathered Limestone (SM)						
19	80			12 15 20	35				
			MEDIUM DENSE Gray Silty Fine SAND With Weathered Limestone (SM)						
20	85			8 8 7	15				
21	90			4 3 7	10				
			VERY STIFF to HARD Gray Brown Sandy CLAY (Marl) (CH)						
22	95			9 9 11	20				
23	100			27 50/5.75"	50/5.75"		76	+	

Boring Terminated @ 100 ft.

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB12
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Boring Location: See Field Exploration Plan
Drill Rig: Automatic Hammer Driller: D. Francis
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.5 ft Time: Drilling Date: 5/10/16
Boring Begun: 5/6/16 Boring Completed: 5/10/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%)	SHEAR STRENGTH (ksf)
	0		Topsoil						
1			VERY LOOSE Light Brown Fine SAND, Trace Small Roots (SP)	1 1 1	2		1	+	
2	5		LOOSE Light Brown Fine SAND (SP)	1 1 2	3				
3				2 2 2	4				
4	10		MEDIUM DENSE Light Gray Fine SAND (SP)	4 4 5	9				
5			LOOSE to MEDIUM DENSE Dark Brown Fine SAND (SP)	3 3 4	7		3	+	
6	15			6 5 5	10				
7	20		MEDIUM DENSE Dark Brown Fine SAND and Cemented Pieces (SP)	8 10 13	23		5	+	
8	25		VERY DENSE Dark Brown Fine SAND With Silt (SP-SM)	16 23 33	56				

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◔ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB12
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.5 ft Time: Drilling Date: 5/10/16
Boring Begun: 5/6/16 Boring Completed: 5/10/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	25		VERY DENSE Dark Brown Fine SAND With Silt (SP-SM) *(Continued)*						
9	30			11 23 49	72				
			MEDIUM DENSE Brown Fine SAND (SP)						
10	35			7 11 14	25				
			MEDIUM DENSE Gray Brown Fine SAND (SP)						
11	40			3 4 5	9				
11A			MEDIUM DENSE Gray Clayey Fine SAND (SC)				42	○ ◇ +	
			MEDIUM DENSE Brown Fine SAND (SP)						
12	45			2 6 16	22				
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)						
13	50			3 5 7	12				

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◕ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ⊠ Triaxial Compression

PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%): 0 15 30 45 60

SHEAR STRENGTH (ksf): 0 1 2

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB12
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.5 ft Time: Drilling Date: 5/10/16
Boring Begun: 5/6/16 Boring Completed: 5/10/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%) 0 15 30 45 60	SHEAR STRENGTH (ksf) 0 1 2
	50		MEDIUM DENSE Brown Fine SAND With Silt (SP-SM) *(Continued)*						
			MEDIUM DENSE Brown Fine SAND (SP)						
14	55			5 6 9	15				
			MEDIUM DENSE Gray Brown Fine SAND With Silt (SP-SM)						
15	60			6 5 8	13		7	+	
			MEDIUM DENSE Dark Gray Fine SAND With Clay (SP-SC)						
16	65			5 6 5	11				
			MEDIUM DENSE Gray Fine SAND With Clay (SP-SC)						
17	70			6 8 6	14				
			VERY LOOSE Gray Silty Fine SAND With Clay (SM)	WOR/24"					
18	75		100% Loss of Drilling Fluid Circulation	WOR/24"					

SHEAR STRENGTH (ksf)
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◒ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB12
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.5 ft Time: Drilling Date: 5/10/16
Boring Begun: 5/6/16 Boring Completed: 5/10/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		VERY LOOSE Gray Silty Fine SAND With Clay (SM) *(Continued)*				
			VERY LOOSE Gray Clayey Fine SAND (SC)				
19	80			WOR/24"	WOR/24"		19
			VERY LOOSE Gray Fine SAND With Silt, Many Shell Fragments (SP-SM)				
20	85			WOR/12" 3	3		
			VERY DENSE Gray Silty Fine SAND, Many Shell Fragments and Phosphate Nodules (Marl) (SM)				
21	90			50/3"	50/3"		
			VERY DENSE Gray Silty Fine SAND With Phosphate Nodules (Marl) (SM)				
22	95			21 25 29	54		
			HARD Gray Sandy CLAY, Few Shell Fragments (Marl) (CH)				
23	100			9 12 18	30		

Boring Terminated @ 100 ft.

Remarks

SHEAR STRENGTH (ksf)
- Pocket Penetrometer Undisturbed Sample
- Pocket Penetrometer Disturbed Sample
- Torvane
- Unconfined Compression
- Triaxial Compression

PLASTIC LIMIT ○ MOISTURE CONTENT + LIQUID LIMIT ◇ (%)
0 15 30 45 60
0 1 2

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB13
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	0		Topsoil				
			VERY LOOSE Gray Brown Fine SAND (SP)	WOH/18"			
1				WOH/18"			
			LOOSE Light Brown Fine SAND, Few Small Roots (SP)	1			
2				1			
	5			2	3		
			LOOSE Light Brown Fine SAND With Silt (SP-SM)	2			
3				3			11
				4	7		
			LOOSE Medium Brown Fine SAND With Silt (SP-SM)	2			
4				3			
	10		▼	2	5		
			MEDIUM DENSE Dark Brown Fine SAND With Silt (SP-SM)	3			
5				4			
				6	10		
				3			
6				6			
	15			7	13		
			DENSE Brown and Light Brown Fine SAND With Silt (SP-SM)	9			
7				13			6
	20			15	28		
			VERY DENSE to DENSE Medium Brown Fine SAND (SP)				
				16			
8				27			
	25			34	61		

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) | LIQUID LIMIT ◇
0 15 30 45 60

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 2 4

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB13
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%) 0 15 30 45 60	SHEAR STRENGTH (ksf) 0 2 4
	25		VERY DENSE to DENSE Medium Brown Fine SAND (SP) *(Continued)*						
9	30			12 16 21	37				
			MEDIUM DENSE Light Brown Silty Fine SAND (SM)						
10	35			7 9 10	19		15	+	
			LOOSE Gray Fine SAND With Clay (SP-SC)						
11	40			2 2 6	8				
			MEDIUM DENSE Medium Brown Fine SAND (SP)						
12	45			2 5 10	15				
13	50			5 8 11	19				

Pocket Penetrometer Undisturbed Sample
Pocket Penetrometer Disturbed Sample
Torvane
Unconfined Compression
Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB13
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	50		MEDIUM DENSE Medium Brown Fine SAND (SP) *(Continued)*						
			MEDIUM DENSE Brown Fine SAND (SP)						
14	55			6 9 12	21				
			LOOSE Dark Brown and Gray Clayey Fine SAND (SC)						
15	60			6 4 3	7		34	○ + ◇	◕
			MEDIUM DENSE Brown Fine SAND (SP)						
16	65			4 4 7	11				
			MEDIUM DENSE Brown and Gray Fine SAND (SP)						
17	70			5 5 8	13				
			VERY LOOSE Dark Gray Clayey Fine SAND (SC)						
18	75			WOH/18" WOH/18"			25	○ + ◇	◕

SHEAR STRENGTH (ksf)
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◕ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%): 0 15 30 45 60
SHEAR STRENGTH (ksf): 0 2 4

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB13
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 10.3 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		VERY LOOSE Dark Gray Clayey Fine SAND (SC) *(Continued)* 100% Loss of Drilling Fluid Circulation				
			VERY LOOSE Dark Gray Brown Clayey Fine SAND (SC)				
19	80			WOH/18" WOH/18"			21
			MEDIUM DENSE Gray Weathered Limestone With Fine SAND With Silt				
20	85			11 7 4	11		
			VERY DENSE Gray Brown Silty Fine SAND With Phosphate Nodules (Marl) (SC)				
21	90			30 42 50/4.75"	50/4.75"		
			Boring Terminated @ 90 ft.				
	95						
	100						

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) 0 15 30 45 60 | LIQUID LIMIT ◇

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 2 4

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB14
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%) 0 30 60 90 120	SHEAR STRENGTH (ksf) 0.0 1.5 3.0
	0		Topsoil						
1			VERY LOOSE Gray Brown Fine SAND (SP)	WOH/18"					
				WOH/18"					
			LOOSE Light Brown Fine SAND (SP)						
2				2					
				2					
	5			3	5				
			LOOSE Dark Brown Fine SAND (SP)						
3				2					
				3					
				3	6				
			LOOSE Dark Brown Fine SAND, Trace Small Roots (SP) ▼	4					
4				3					
	10			2	5				
			MEDIUM DENSE to DENSE Dark Brown Fine SAND (SP)	2					
5				3			5	+	
				6	9				
				11					
6				14					
	15			23	37				
				11					
7				15					
	20			21	36				
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)						
				6					
8				8			7	+	
	25			12	20				

Remarks

SHEAR STRENGTH (ksf): ⊙ Pocket Penetrometer Undisturbed Sample; ◔ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ☒ Triaxial Compression

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB14
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	25		MEDIUM DENSE Brown Fine SAND With Silt (SP-SM) *(Continued)*						
			FIRM Gray CLAY With Sand (CH)						
9	30			2 2 3	5		87	○ + ◇	◔
			MEDIUM DENSE Brown Fine SAND (SP)						
10	35			6 8 14	22				
			DENSE Light Brown Fine SAND (SP)						
11	40			7 11 19	30				
			DENSE Gray Brown Fine SAND (SP)						
12	45			10 16 26	42				
			LOOSE Dark Gray Clayey Fine SAND (SC)						
13	50			2 2 4	6		31	+	

Pocket Penetrometer Undisturbed Sample
Pocket Penetrometer Disturbed Sample
Torvane
Unconfined Compression
Triaxial Compression

0 30 60 90 120
0.0 1.5 3.0

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB14
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT ○ / MOISTURE CONTENT + / LIQUID LIMIT ◇ (%) 0 30 60 90 120	SHEAR STRENGTH (ksf) ⊙ Pocket Penetrometer Undisturbed Sample; ◔ Pocket Penetrometer Disturbed Sample; ▼ Torvane; ● Unconfined Compression; ☒ Triaxial Compression 0.0 1.5 3.0
	50		LOOSE Dark Gray Clayey Fine SAND (SC) *(Continued)*						
			VERY DENSE Brown Gray Fine SAND (SP)						
14	55	■		15 30 48	78				
15	60	■		12 29 31	60				
16	65	■		17 20 30	50				
			DENSE Gray Fine SAND With Silt (SP-SM)						
17	70	■		16 18 16	34		11	+	
			MEDIUM DENSE Gray Fine SAND, Many Shell Fragments (SP)						
18	75	■		10 12 14	26				

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB14
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/13/16
Boring Begun: 5/13/16 Boring Completed: 5/13/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	75		MEDIUM DENSE Gray Fine SAND, Many Shell Fragments (SP) *(Continued)*						
			LOOSE Gray Silty Fine SAND With Cemented Shell Fragments (SM)						
19	80			5 4 4	8				
			VERY DENSE Gray Silty Clayey Fine SAND With Weathered Limestone and Phosphate Nodules (Marl) (SM)						
20	85			11 50/3"	50/3"				
			HARD Gray Silty Fine SAND With Weathered Limestone and Phosphate Nodules (Marl) (SM)	13 17 26	43		33	+	
22	90			20 21 42	63				
23	95			14 26 42	68				
	100		Boring Terminated @ 100 ft.						

Remarks

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

0 30 60 90 120 (%) 0.0 1.5 3.0

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB15
Sheet 1 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/6/16
Boring Begun: 5/5/16 Boring Completed: 5/6/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE	PLASTIC LIMIT / MOISTURE CONTENT / LIQUID LIMIT (%)	SHEAR STRENGTH (ksf)
	0		Topsoil						
1			VERY LOOSE Gray Brown Fine SAND, Trace Small Roots (SP)	WOH/18"					
				WOH/18"					
			LOOSE Light Brown Fine SAND, Trace Small Roots (SP)	1					
2				2			3	+	
	5			2	4				
3			LOOSE Light Red Brown Fine SAND (SP)	3					
				2					
				4	6				
			LOOSE to MEDIUM DENSE Brown Fine SAND (SP)	3					
4				3					
	10			4	7				
				4					
5				4					
				7	11				
				3					
6				4					
	15			5	9				
			MEDIUM DENSE Brown Fine SAND With Seams of Dark Brown Fine Sand With Silt (SP)						
				3					
7				5					
	20			6	11				
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)						
				5					
8				8					
	25			11	19				

SHEAR STRENGTH (ksf): Pocket Penetrometer Undisturbed Sample; Pocket Penetrometer Disturbed Sample; Torvane; Unconfined Compression; Triaxial Compression

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB15
Sheet 2 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/6/16
Boring Begun: 5/5/16 Boring Completed: 5/6/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	25		MEDIUM DENSE Brown Fine SAND With Silt (SP-SM) *(Continued)*				
			LOOSE Gray Brown Silty Fine SAND With Clay (SM)				
9A				4 4			31
9B	30		LOOSE Gray Clayey Fine SAND (SC)	3	7		19
			MEDIUM DENSE Dark Brown Fine SAND (SP)				
10	35			7 8 10	18		4
			MEDIUM DENSE Brown Fine SAND With Silt (SP-SM)				
11	40			3 6 7	13		10
12	45			3 4 7	11		
			LOOSE Gray Brown Silty Fine SAND (SM)				
13	50			3 2 4	6		18

PLASTIC LIMIT ○ | MOISTURE CONTENT + | LIQUID LIMIT ◇ (%) 0 15 30 45 60

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◕ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 1 2

Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB15
Sheet 3 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/6/16
Boring Begun: 5/5/16 Boring Completed: 5/6/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	50		LOOSE Gray Brown Silty Fine SAND (SM) *(Continued)*				
			VERY DENSE Gray Brown Fine SAND (SP)				
14	55			20 22 49	71		
15	60			23 50/5.5"	50/5.5"		
			VERY DENSE Yellow Brown Fine SAND (SP)				
16	65			25 50/5.5"	50/5.5"		
			VERY DENSE Dark Gray Fine SAND (SP)				
17	70			28 50 50/4"	50/4"		
			VERY DENSE Gray Brown Fine SAND, Trace Shell Fragments (SP)				
18	75			15 40 50/4.5"	50/4.5"		

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) 0 15 30 45 60 | LIQUID LIMIT ◇

SHEAR STRENGTH (ksf) 0 1 2
- ⊙ Pocket Penetrometer Undisturbed Sample
- ◔ Pocket Penetrometer Disturbed Sample
- ▼ Torvane
- ● Unconfined Compression
- ⊠ Triaxial Compression

Remarks

Ellis & Associates inc.

Project No.: 35-22956
Boring No.: SB15
Sheet 4 of 4

LOG OF BORING

Project: Seminole Electric Gas Plant
Client: Seminole Electric Cooperative, Inc.
Drill Rig: Automatic Hammer Driller: D. Francis
Boring Location: See Field Exploration Plan
Drill Rod: AWJ Drill Mud: Super Gel-X
Casing Size: Length of Casing:
Groundwater Depth: 9 ft Time: Drilling Date: 5/6/16
Boring Begun: 5/5/16 Boring Completed: 5/6/16

SAMPLE NO.	DEPTH, FEET	SAMPLE TYPE	DESCRIPTION	BLOWS PER 6 IN.	N Value	PERCENT ORGANIC MATERIAL	PERCENT PASSING NO. 200 SIEVE
	75		VERY DENSE Gray Brown Fine SAND, Trace Shell Fragments (SP) *(Continued)*				
			DENSE Gray Fine SAND With Silt, Many Shell Fragments (SP-SM)				
19				9 11 18	29		
	80						
			MEDIUM DENSE Light Gray Silty Fine SAND, Few Shell Fragments and Weathered Limestone (Marl) (SM)				
20				5 9 6	15		
	85						
			VERY DENSE Gray Silty Fine SAND, Trace Shell Fragments and Weathered Limestone (Marl) (SM)				
21				50/4.5"	50/4.5"		
	90						
			Gray Weathered Limestone Trace Shell Fragments				
22				50/1.3"	50/1.3"		
	95		100% Loss of Drilling Fluid Circulation Boring Terminated @ 95 ft.				
	100						

PLASTIC LIMIT ○ | MOISTURE CONTENT + (%) 0 15 30 45 60 | LIQUID LIMIT ◇

SHEAR STRENGTH (ksf)
⊙ Pocket Penetrometer Undisturbed Sample
◒ Pocket Penetrometer Disturbed Sample
▼ Torvane
● Unconfined Compression
⊠ Triaxial Compression
0 1 2

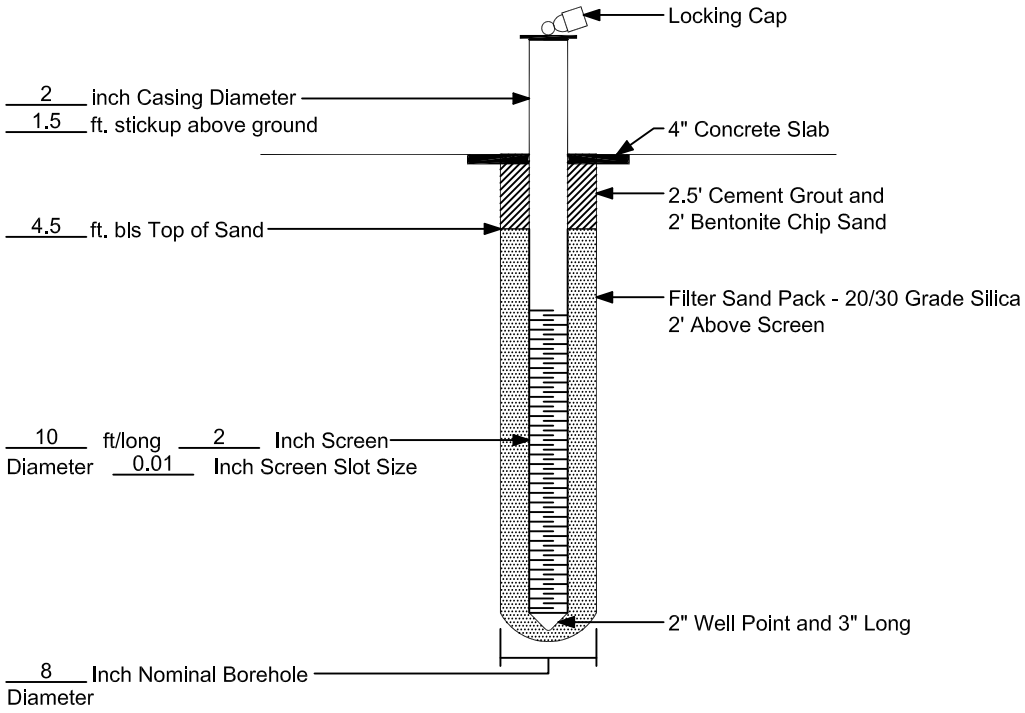
Remarks

LOG OF BORING 35-22956.GPJ ELLIS ASSOCIATES.GDT 6/17/16

MONITORING WELL CONSTRUCTION LOG

Project Name: **Seminole Electric Gas Plant**
Well No.: **SB11**
Well Location: **See Site Map**

Project No.: **35-22956**
Performed By: **David Francis**
Date Performed: **05/12/16**



Method of Installation (Hollow Stem)

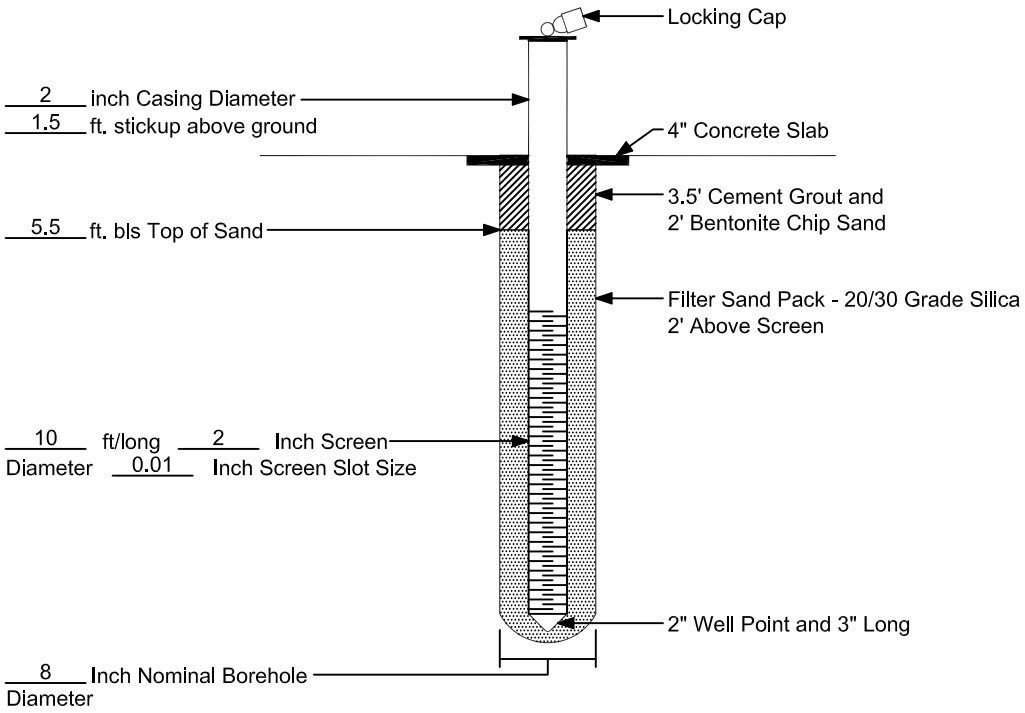
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JAS - 35-22956

MONITORING WELL CONSTRUCTION LOG

Project Name: **Seminole Electric Gas Plant**
Well No.: **SB12**
Well Location: **See Site Map**

Project No.: **35-22956**
Performed By: **David Francis**
Date Performed: **05/13/16**



Method of Installation (Hollow Stem)

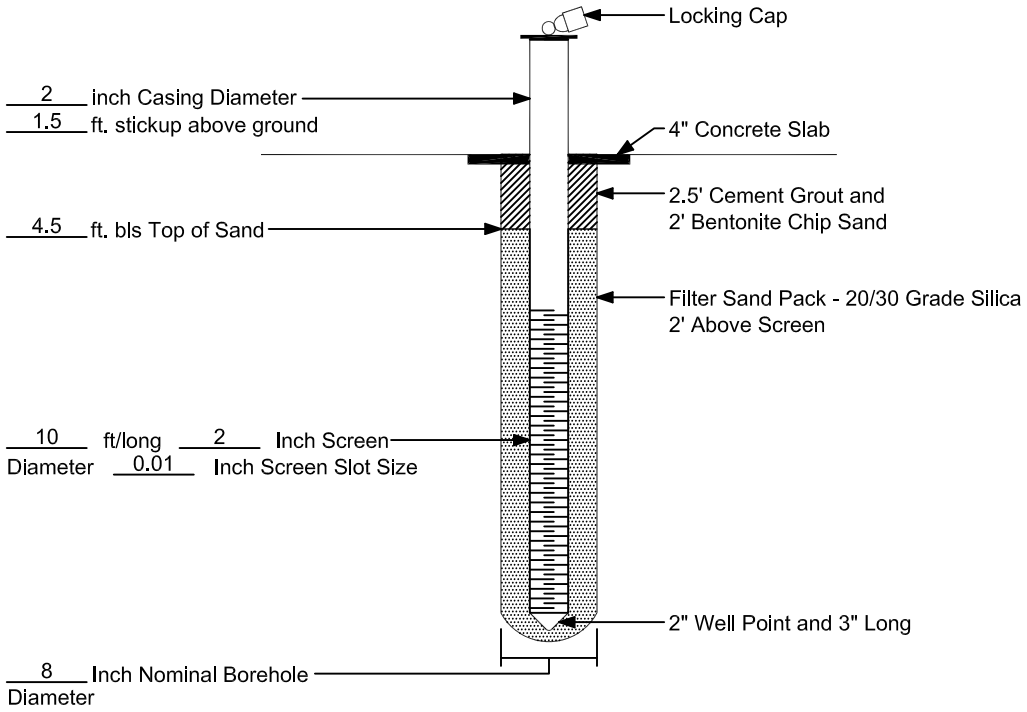
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MONITORING WELL CONSTRUCTION LOG

Project Name: **Seminole Electric Gas Plant**
Well No.: **SB15**
Well Location: **See Site Map**

Project No.: **35-22956**
Performed By: **David Francis**
Date Performed: **05/13/16**



Method of Installation (Hollow Stem)

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JAS - 35-22956

FIELD EXPLORATION PROCEDURES

Standard Penetration Test (SPT) Borings

The Standard Penetration Test (SPT) borings were made in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils". The borings were advanced by rotary (or "wash-n-chop") drilling techniques. At 2 ½ to 5 foot intervals, a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the soil using a 140 pound hammer falling on the average 30 inches per hammer blow. The number of hammer blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less if in hard rock-like material), the sampler was retrieved from the borehole and representative samples of the material within the split-barrel were containerized and sealed. After completing the drilling operations, the samples for each boring were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classification. The retrieved samples will be kept in our facility for a period of six (6) months unless directed otherwise.

Ellis & Associates inc.

KEY TO SOIL CLASSIFICATION

Description of Compactness or Consistency in Relation
To Standard Penetration Resistance

Granular Materials		
Relative Density	**Safety Hammer SPT N-Value (Blow/Foot)**	**Automatic Hammer SPT N-Value (Blow/Foot)**
Very Loose	Less than 4	Less than 3
Loose	4 – 10	3 – 8
Medium Dense	10 – 30	8 – 24
Dense	30 – 50	24 – 40
Very Dense	Greater than 50	Greater than 40

Silts and Clays		
Consistency	**Safety Hammer SPT N-Value (Blow/Foot)**	**Automatic Hammer SPT N-Value (Blow/Foot)**
Very Soft	Less than 2	Less than 1
Soft	2 – 4	1 – 3
Firm	4 – 8	3 – 6
Stiff	8 – 15	6 – 12
Very Stiff	15 – 30	12 – 24
Hard	Greater than 30	Greater than 24

DESCRIPTION OF SOIL COMPOSITION**

(Unified Soil Classification System)

MAJOR DIVISION		Group Symbol	LABORATORY CLASSIFICATION CRITERIA		SOIL DESCRIPTION
			FINER THAN 200 SIEVE %	SUPPLEMENTARY REQUIREMENTS	
Coarse grained (over 50% by weight coarser than No. 200 sieve)	Gravelly soils (over half of coarse fraction larger than No. 4)	GW	<5*	D_{60}/D_{10} greater than 4, $D_{30}^2 / (D_{60} \times D_{10})$ between 1 & 3	Well graded gravels, sandy gravels
		GP	<5*	Not meeting above gradation for GW	Gap graded or uniform gravels, sandy gravels
		GM	>12*	PI less than 4 or below A-line	Silty gravels, silty sandy gravels
		GC	>12*	PI over 7 above A-line	Clayey gravels, clayey sandy gravels
	Sandy soils (over half of coarse fraction finer than No. 4)	SW	<5*	D_{60}/D_{10} greater than 6, $D_{30}^2 / (D_{60} \times D_{10})$ between 1 & 3	Well graded sands, gravelly sands
		SP	<5*	Not meeting above gradation requirements	Gap graded or uniform sands, gravelly sands
		SM	>12*	PI less than 4 or below A-line	Silty sands, silty gravelly sands
		SC	>12*	PI over 7 and above A-line	Clayey sands, clayey gravelly sands
Fine grained (over 50% by weight finer than No. 200 sieve)	Low compressibility (liquid limit less than 50)	ML	Plasticity chart		Silts, very fine sands, silty or clayey fine sands, micaceous silts
		CL	Plasticity chart		Low plasticity clays, sandy or silty clays
		OL	Plasticity chart, organic odor or color		Organic silts and clays of low plasticity
	High compressibility (liquid limit more than 50)	MH	Plasticity chart		Micaceous silts, diatomaceous silts, volcanic ash
		CH	Plasticity chart		Highly plastic clays and sandy clays
		OH	Plasticity chart, organic odor or color		Organic silts and clays of high plasticity
Soils with fibrous organic matter		PT	Fibrous organic matter; will char, burn or glow		Peat, sandy peats, and clayey peat

* For soils having 5 to 12 percent passing the No. 200 sieve, use a dual symbol such as SP-SM.
** Standard Classification of Soils for Engineering Purposes (ASTM D 2487)

SAND/GRAVEL DESCRIPTION MODIFIERS	
Modifier	**Sand/Gravel Content**
Trace	<15%
With	15% to 29%
Sandy/Gravelly	>29%

ORGANIC MATERIAL MODIFIERS	
Modifier	**Organic Content**
Trace	1% to 2%
Few	2% to 4%
Some	4% to 8%
Many	>8%

SILT/CLAY DESCRIPTION MODIFIERS	
Modifier	**Silt/Clay Content**
Trace	<5%
With	5% to12%
Silty/Clayey	13% to 35%
Very	>35%

APPENDIX B

LABORATORY DATA
LABORATORY TEST PROCEDURES
CONSOLIDATION TEST RESULTS

Ellis & Associates inc.
ECS Group of Companies

SUMMARY OF LABORATORY TEST RESULTS

Project: Seminole Electric
Client: Seminole Electric
Project No.: 2593-0002

Boring/ Sample No.	Sample Depth (ft.)	Organic Content %	Fines Content %	Natural Moisture Content %	Atterberg Limits			Pocket Pen. (tsf)
					Liquid Limit %	Plastic Limit %	Plasticity Index	
SB12-1	0.5-2.0		1	7				
SB12-5	11.0-13.0		3	28				
SB12-7	18.5-20.0		5	28				
SB12-11A	39.0-40.0		42	50	32	17	15	
SB12-15	48.5-50.0		7	29				
SB12-19	78.5-80.0		19	42				
SB11-3	6.0-8.0		1	2				
SB11-11	38.5-40		27	34				
SB11-18	73.5-75.0		18	37				
SB11-12A	43.5-44.0		75	79	95	18	77	
SB11-15	58.5-60		16	26	31	19	12	
SB11-23	108.5-110		76	33				
SB14-5	11.0-13.0		5	30				
SB14-8	23.5-25.0		7	24				
SB14-9	28.5-30.0		87	65	108	23	85	
SB14-13	48.5-50.0		31	38				
SB14-17	68.5-70.0		11	29				
SB14-21	88.5-90.0		33	23				
SB15-2	2.5-5.0		3	3				
SB15-10	33.5-35.0		4	26				
SB15-11	38.5-40		10	29				
SB15-13	48.5-50.0		18	29	25	21	4	
SB15-9A	28.5-29.5		31	49				
SB15-9B	29.5-30.0		19	29	52	15	37	
SB13-3	6.0-8.0		11	23				
SB13-7	18.5-20.0		6	23				
SB13-10	33.5-35.0		15	28				
SB13-15	58.5-60		34	30	54	19	35	
SB13-19	78.5-80.0		21	27				
SB13-18	73.5-75.0		25	33	41	22	19	
SB10-4	8.0-10.0		4	22				
SB9-3	6.0-8.0		6	26				
SB9-13	48.5-50.0		16	32				
SB8-14	53.5-55.0		18	28				

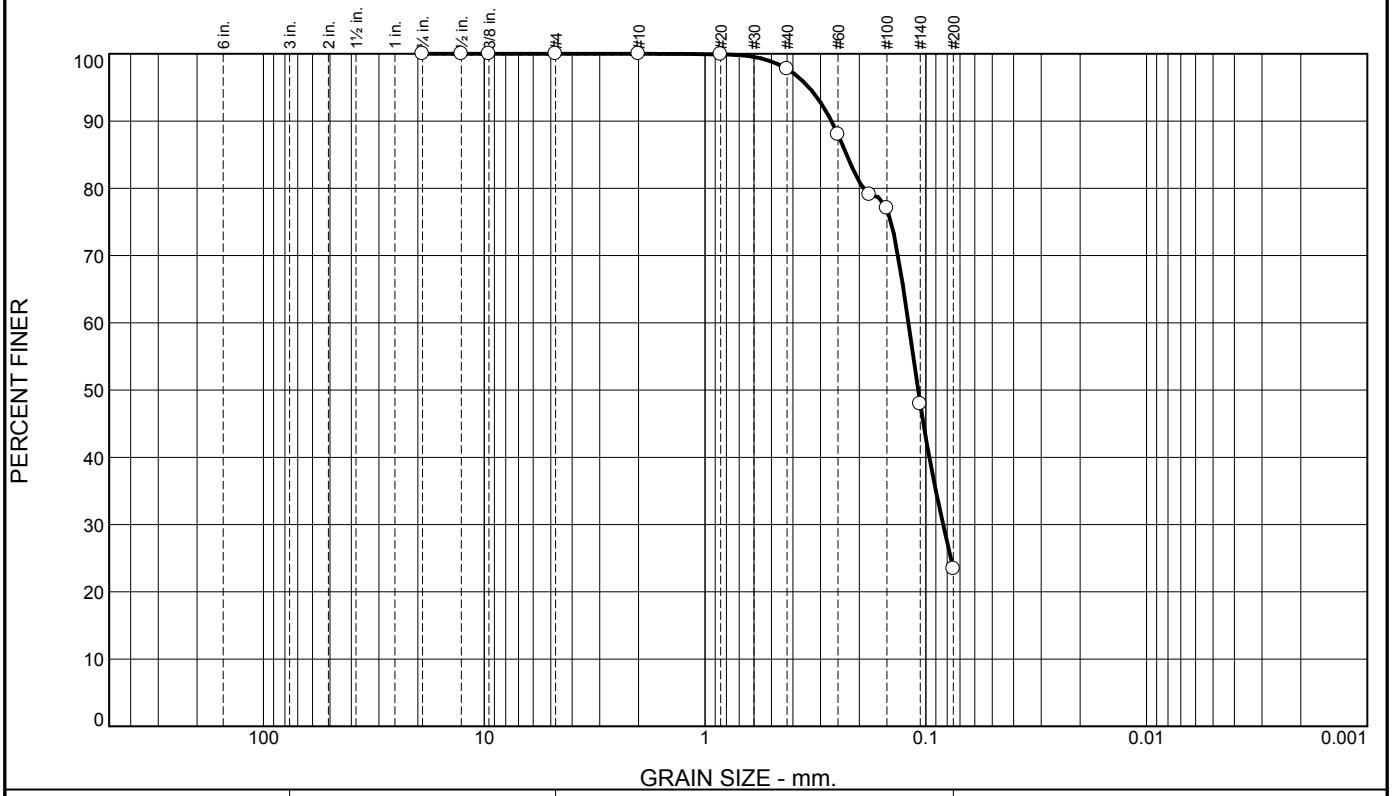
Ellis & Associates inc.
ECS Group of Companies

SUMMARY OF LABORATORY TEST RESULTS

Project: Seminole Electric
Client: Seminole Electric
Project No.: 2593-0002

Boring/ Sample No.	Sample Depth (ft.)	Organic Content %	Fines Content %	Natural Moisture Content %	Atterberg Limits			Pocket Pen. (tsf)
					Liquid Limit %	Plastic Limit %	Plasticity Index	
SB8-19	78.5-80.0		9	30				
SB8-12	43.5-45.0		4	26				
SB8-11	38.5-40		97	83	151	24	127	
SB7-14	53.5-55.0		14	31	31	18	13	
SB7-10	33.5-35.0		91	66	105	26	79	
SB6-21	88.5-90.0		63	27				
SB6-13	48.5-50.0		4	28				
SB6-5	11.0-13.0		6	29				
SB5-18	73.5-75.0		26	34				
SB5-11	38.5-40		64	44	53	16	37	
SB4-10	33.5-35.0		10	26				
SB4-11	38.5-40		95	78				
SB1-6	13.5-15		5	34				
SB1-11	38.5-40		10	25				
SB1-15	58.5-60		10	27				
SB1-18	73.5-75.0		23	34				
SB2-11	38.5-40		85	74	90	21	69	
SB2-15	58.5-60		7	23				
SB2-17	68.5-70		8	24				
SB2-23	98.5-100		56	64	82	28	54	
SB3-3	6.0-8.0		3	2				
SB3-9	28.5-30		4	25				
SB9-18	73.5-75		16	27				
SB9-11	38.5-40		89	97	185	28	157	
SB10-16	63.5-65		13	28	27	19	8	
SB10-11	38.5-40		7	24				
SB10-5	11.0-13.0		8	32				

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.3	74.3	23.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	97.7		
#60	88.0		
#80	79.1		
#100	77.0		
#140	47.9		
#200	23.4		

* (no specification provided)

Soil Description

GR Clayey FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2675 D_{85}= 0.2283 D_{60}= 0.1199
D_{50}= 0.1084 D_{30}= 0.0835 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Location: SB1
Sample Number: 18 **Depth:** 73.5-75.0' **Date:** 6-5-16

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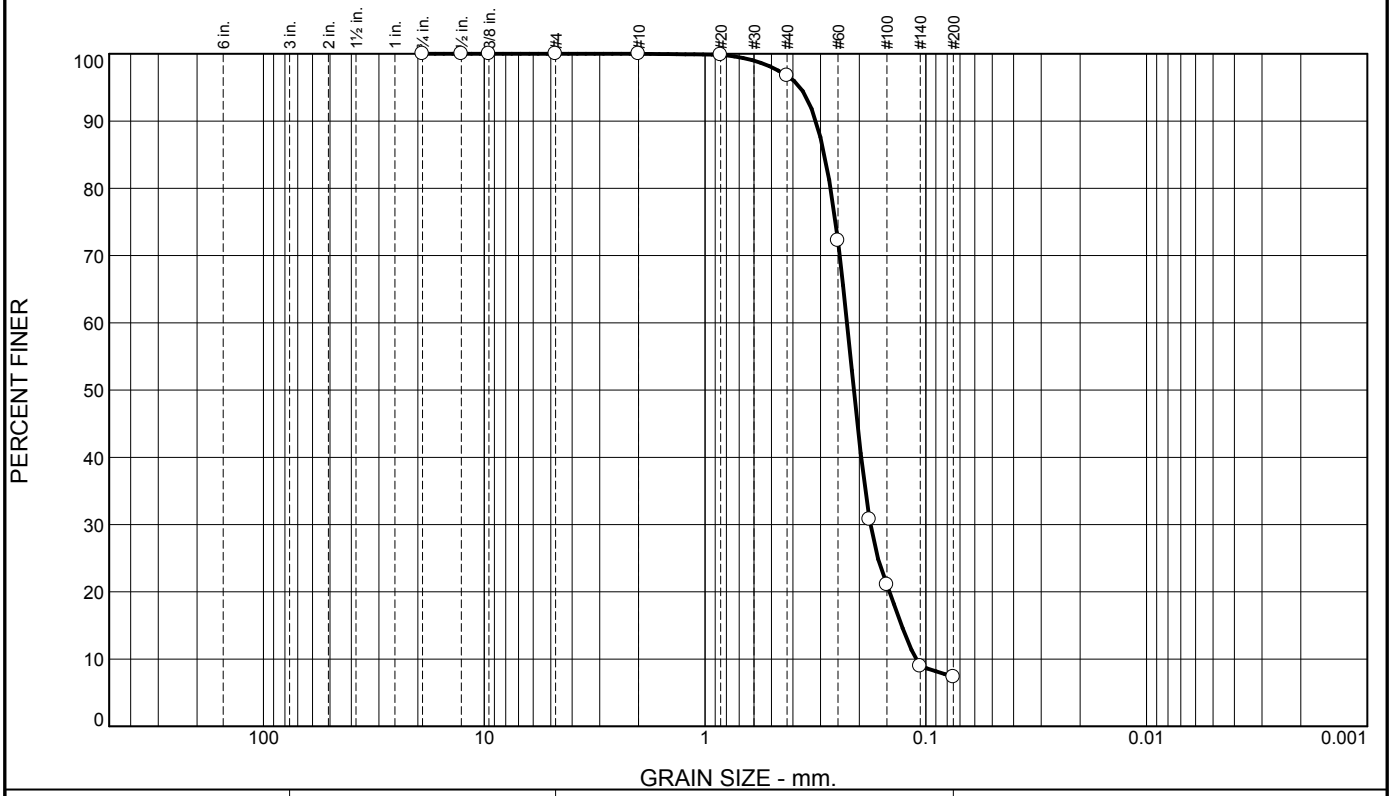
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	3.3	89.4	7.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	96.7		
#60	72.2		
#80	30.8		
#100	21.1		
#140	8.9		
#200	7.3		

* (no specification provided)

Soil Description

GR FS w/ CL & TR Weathered Limestone

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.3145 D_{85}= 0.2879 D_{60}= 0.2274
D_{50}= 0.2117 D_{30}= 0.1783 D_{15}= 0.1287
D_{10}= 0.1108 C_u= 2.05 C_c= 1.26

Classification

USCS= AASHTO=

Remarks

Location: SB2
Sample Number: 15 **Depth:** 58.5-60.0' **Date:** 6-5-16

Ellis & Associates, Inc.

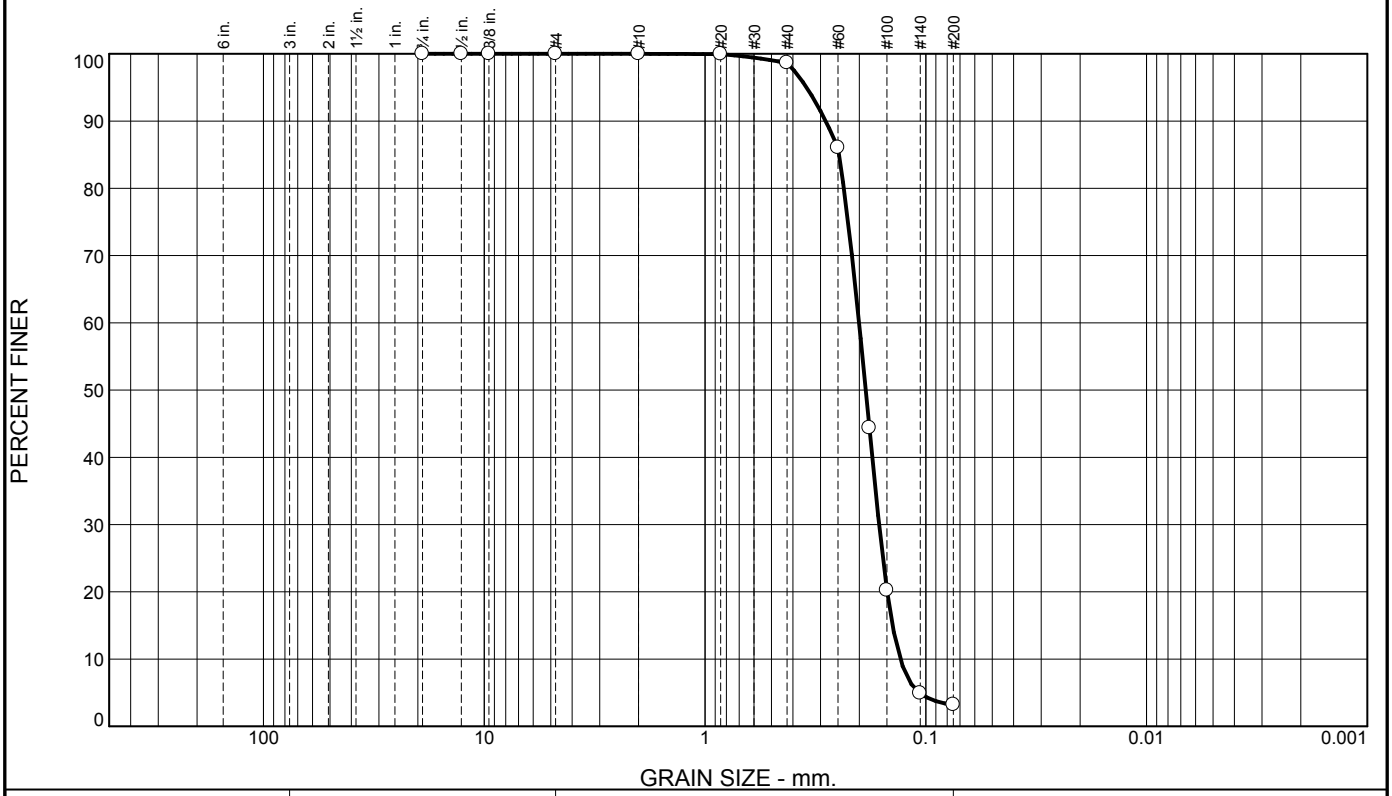
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.3	95.5	3.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	98.7		
#60	86.0		
#80	44.4		
#100	20.2		
#140	4.9		
#200	3.2		

* (no specification provided)

Soil Description

BR FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2841 D_{85}= 0.2471 D_{60}= 0.2005
D_{50}= 0.1870 D_{30}= 0.1627 D_{15}= 0.1415
D_{10}= 0.1304 C_u= 1.54 C_c= 1.01

Classification

USCS= SP AASHTO=

Remarks

Location: SB3
Sample Number: 3 **Depth:** 6.0-8.0' **Date:** 6-5-16

Ellis & Associates, Inc.

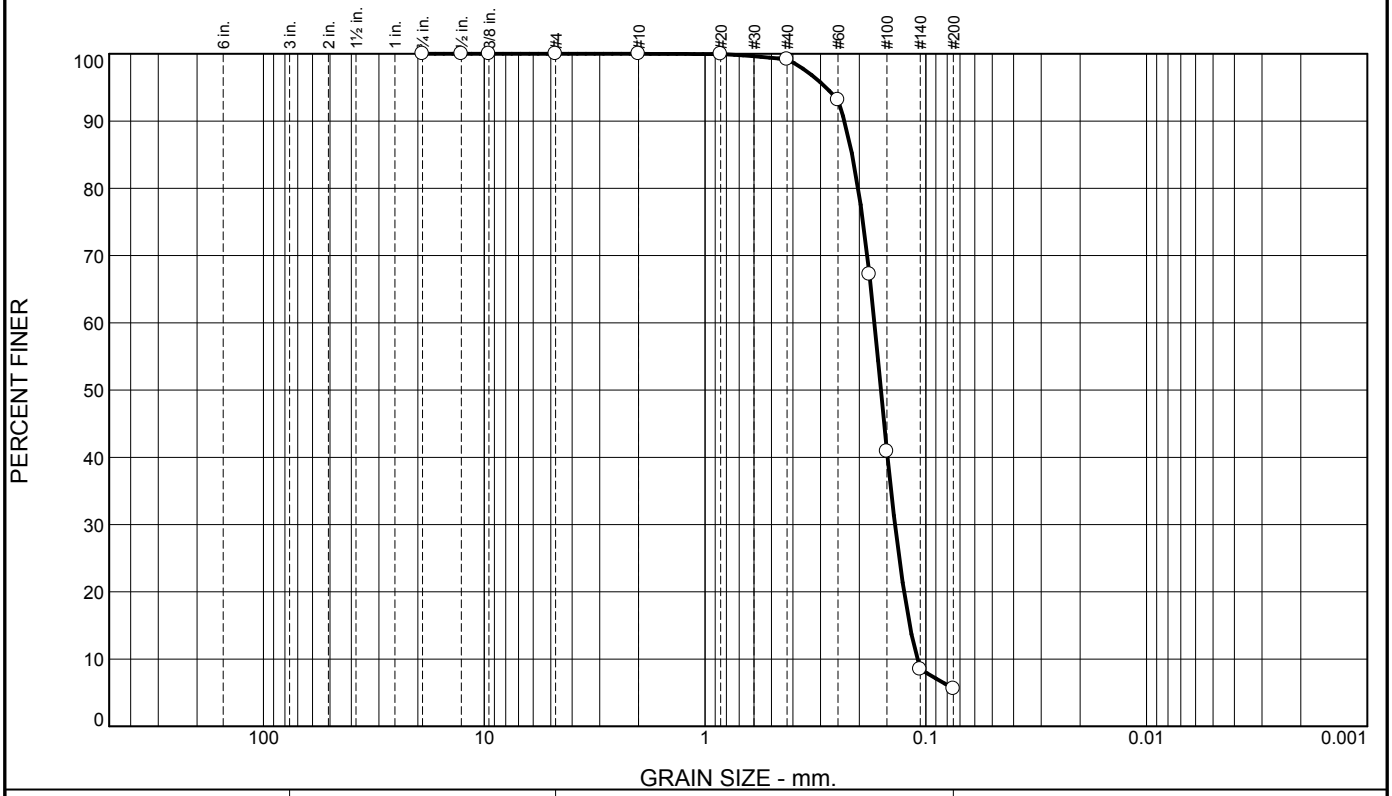
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.8	93.6	5.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.2		
#60	93.2		
#80	67.2		
#100	40.9		
#140	8.5		
#200	5.6		

* (no specification provided)

Soil Description

DK BR FS w/ Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2335 D_{85}= 0.2155 D_{60}= 0.1708
D_{50}= 0.1597 D_{30}= 0.1379 D_{15}= 0.1182
D_{10}= 0.1094 C_u= 1.56 C_c= 1.02

Classification

USCS= AASHTO=

Remarks

Location: SB6
Sample Number: 5 **Depth:** 11.0-13.0' **Date:** 6-7-16

Ellis & Associates, Inc.

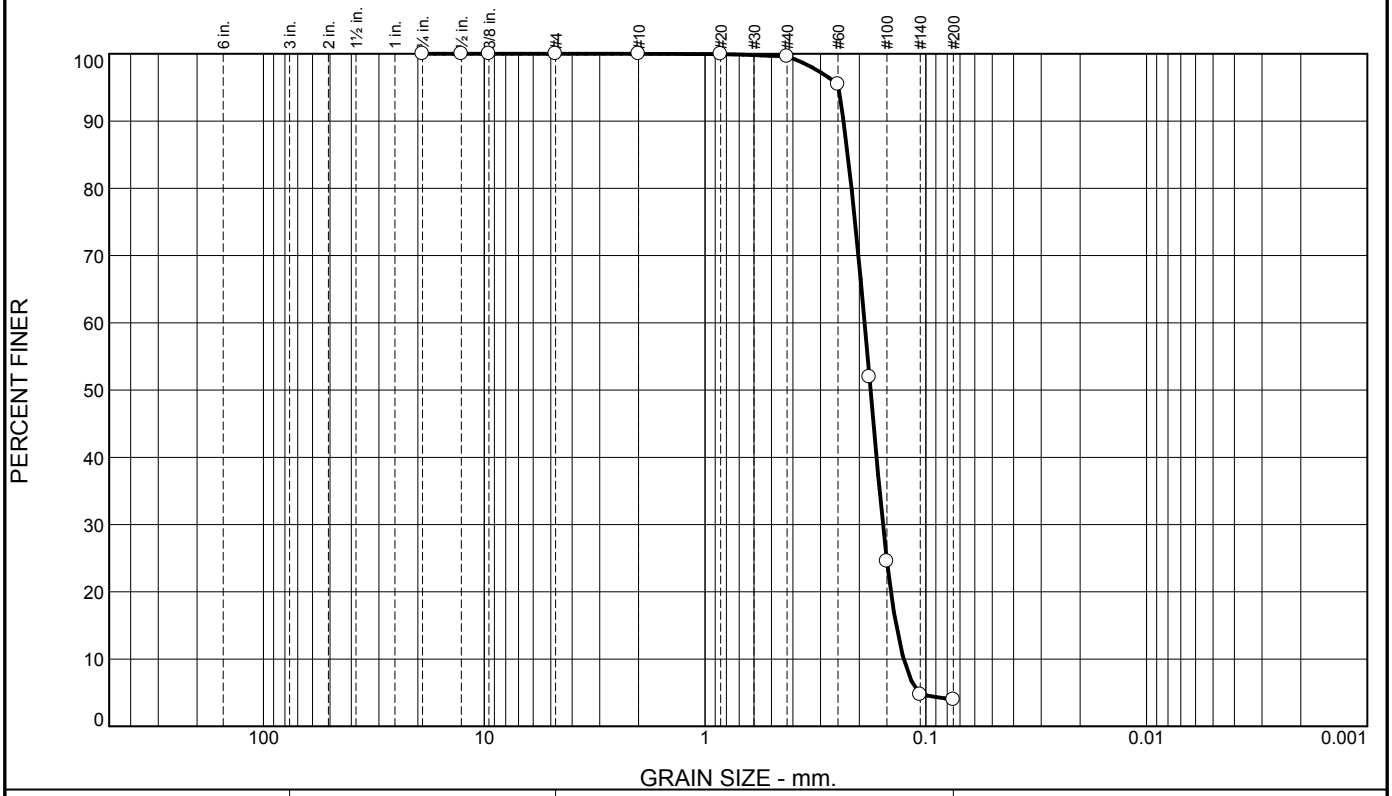
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.4	95.6	4.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.6		
#60	95.5		
#80	51.9		
#100	24.5		
#140	4.7		
#200	4.0		

* (no specification provided)

Soil Description

LT BR FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2357 D_{85}= 0.2255 D_{60}= 0.1893
D_{50}= 0.1779 D_{30}= 0.1564 D_{15}= 0.1362
D_{10}= 0.1260 C_u= 1.50 C_c= 1.03

Classification

USCS= SP AASHTO=

Remarks

Location: SB6
Sample Number: 13 **Depth:** 48.5-50.0' **Date:** 6-6-16

Ellis & Associates, Inc.

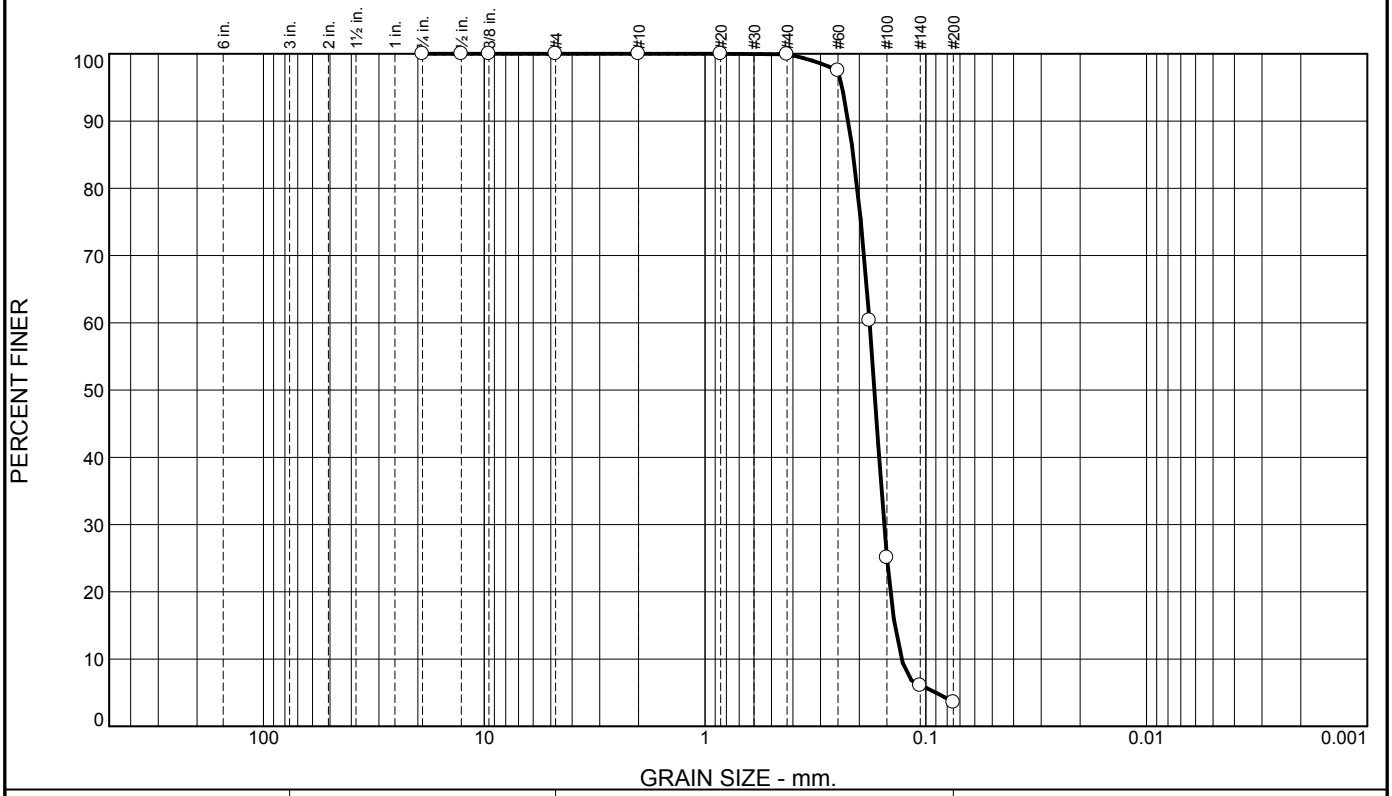
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.1	96.3	3.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.9		
#60	97.5		
#80	60.4		
#100	25.1		
#140	6.1		
#200	3.6		

* (no specification provided)

Soil Description

DK BR FS w/ CL

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2242 D_{85}= 0.2130 D_{60}= 0.1797
D_{50}= 0.1708 D_{30}= 0.1545 D_{15}= 0.1382
D_{10}= 0.1287 C_u= 1.40 C_c= 1.03

Classification

USCS= SP AASHTO=

Remarks

Location: SB8
Sample Number: 12 **Depth:** 43.5-45.0' **Date:** 6-7-16

Ellis & Associates, Inc.

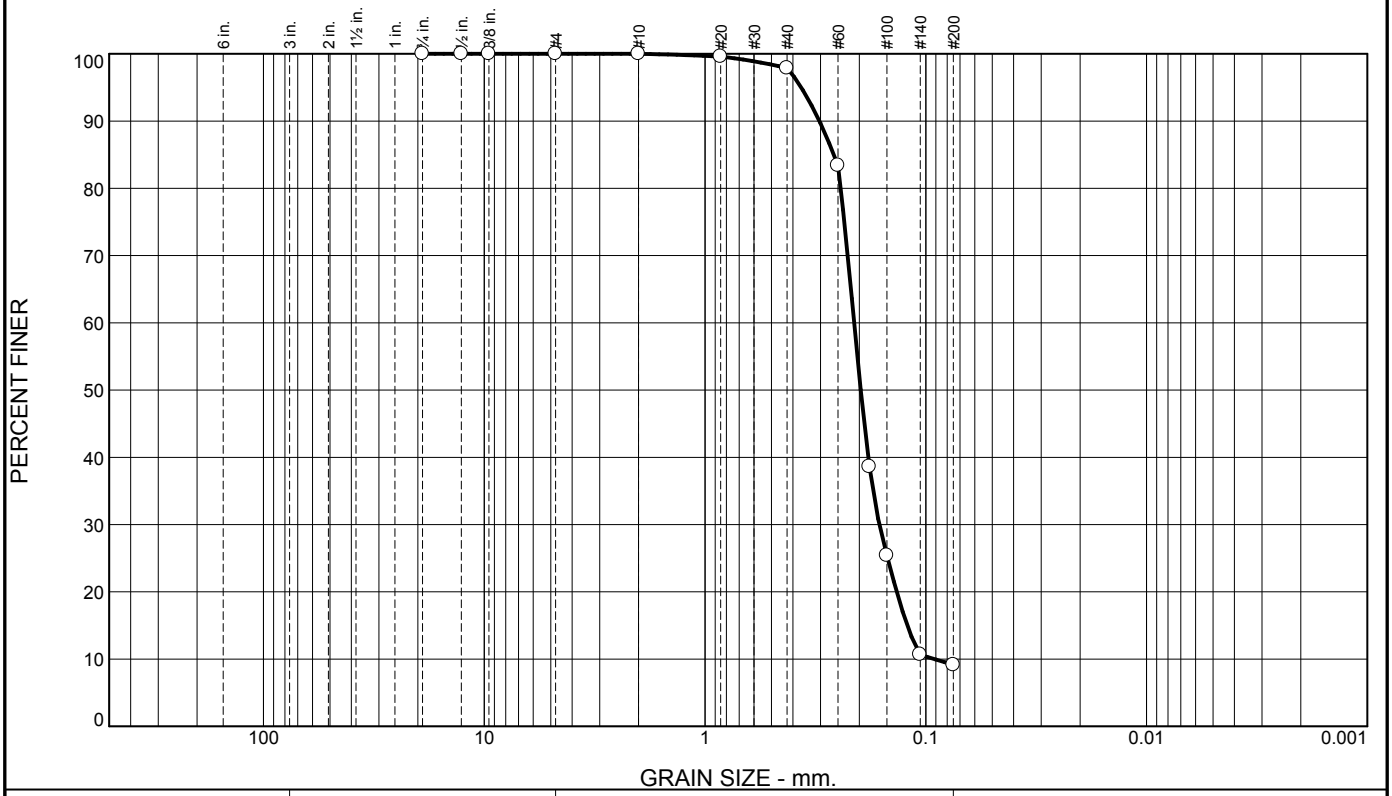
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.1	88.8	9.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.6		
#40	97.9		
#60	83.4		
#80	38.6		
#100	25.4		
#140	10.6		
#200	9.1		

* (no specification provided)

Soil Description

DK BR Sil FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.3033 D_{85}= 0.2610 D_{60}= 0.2110
D_{50}= 0.1971 D_{30}= 0.1623 D_{15}= 0.1213
D_{10}= 0.0914 C_u= 2.31 C_c= 1.36

Classification

USCS= AASHTO=

Remarks

Location: SB8
Sample Number: 19 **Depth:** 78.5-80.0' **Date:** 6-6-16

Ellis & Associates, Inc.

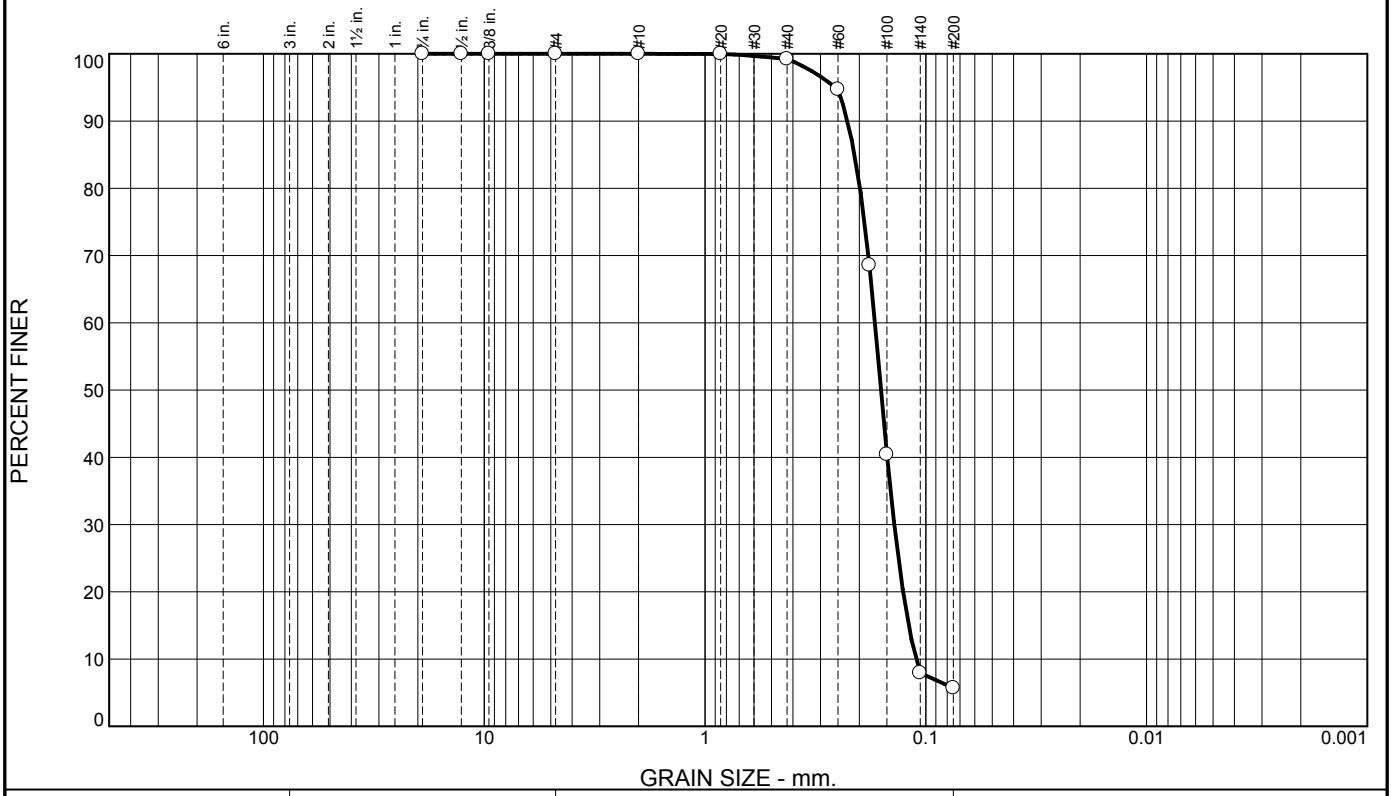
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.8	93.5	5.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.2		
#60	94.7		
#80	68.5		
#100	40.4		
#140	7.9		
#200	5.7		

* (no specification provided)

Soil Description

BK BR FS w/ Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2261 D_{85}= 0.2101 D_{60}= 0.1699
D_{50}= 0.1595 D_{30}= 0.1389 D_{15}= 0.1196
D_{10}= 0.1107 C_u= 1.53 C_c= 1.03

Classification

USCS= AASHTO=

Remarks

Location: SB9
Sample Number: 3 **Depth:** 6.0-8.0' **Date:** 6-6-16

Ellis & Associates, Inc.

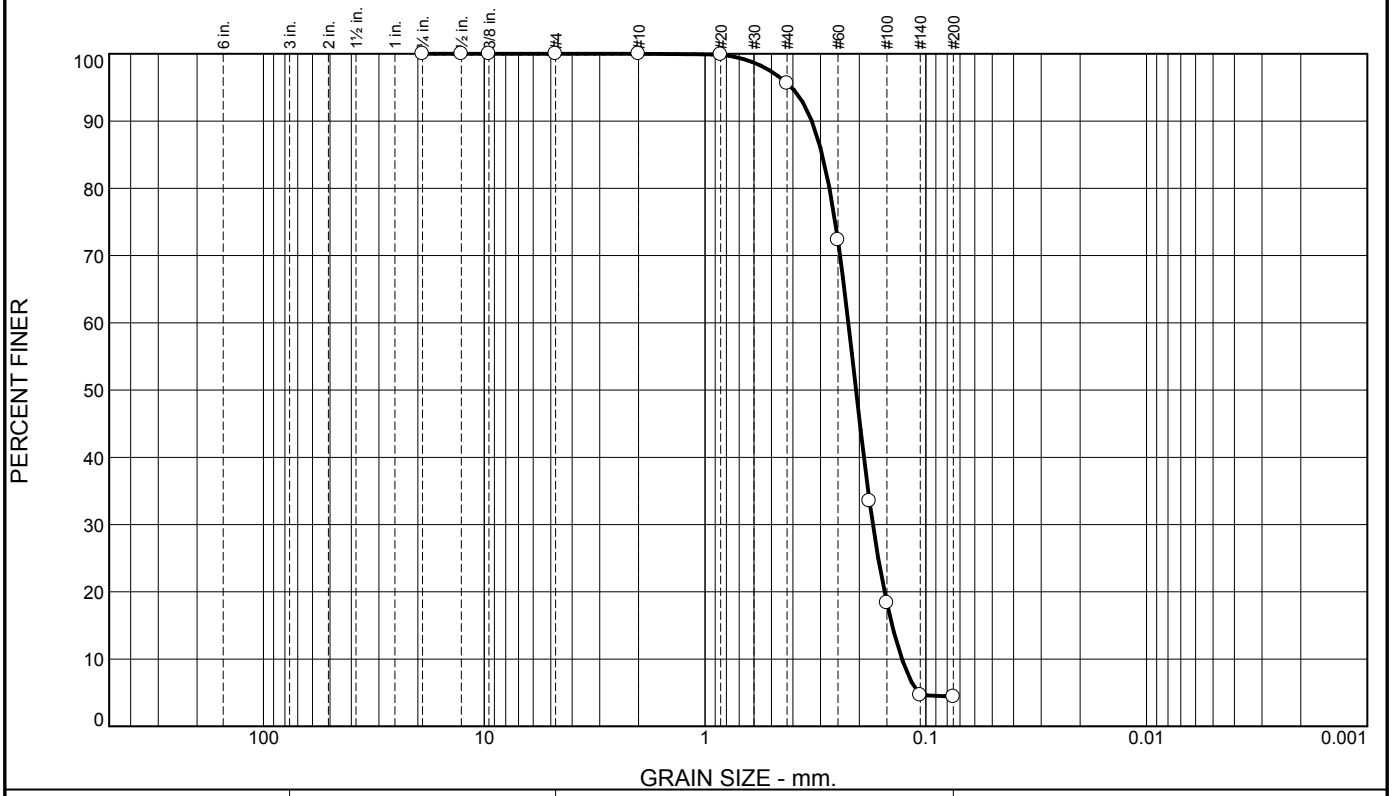
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	4.4	91.2	4.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	95.6		
#60	72.3		
#80	33.5		
#100	18.3		
#140	4.6		
#200	4.4		

* (no specification provided)

Soil Description

DK BR FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.3281 D_{85}= 0.2946 D_{60}= 0.2242
D_{50}= 0.2070 D_{30}= 0.1738 D_{15}= 0.1420
D_{10}= 0.1282 C_u= 1.75 C_c= 1.05

Classification

USCS= SP AASHTO=

Remarks

Location: SB10
Sample Number: 4 **Depth:** 8.0-10.0' **Date:** 6-6-16

Ellis & Associates, Inc.

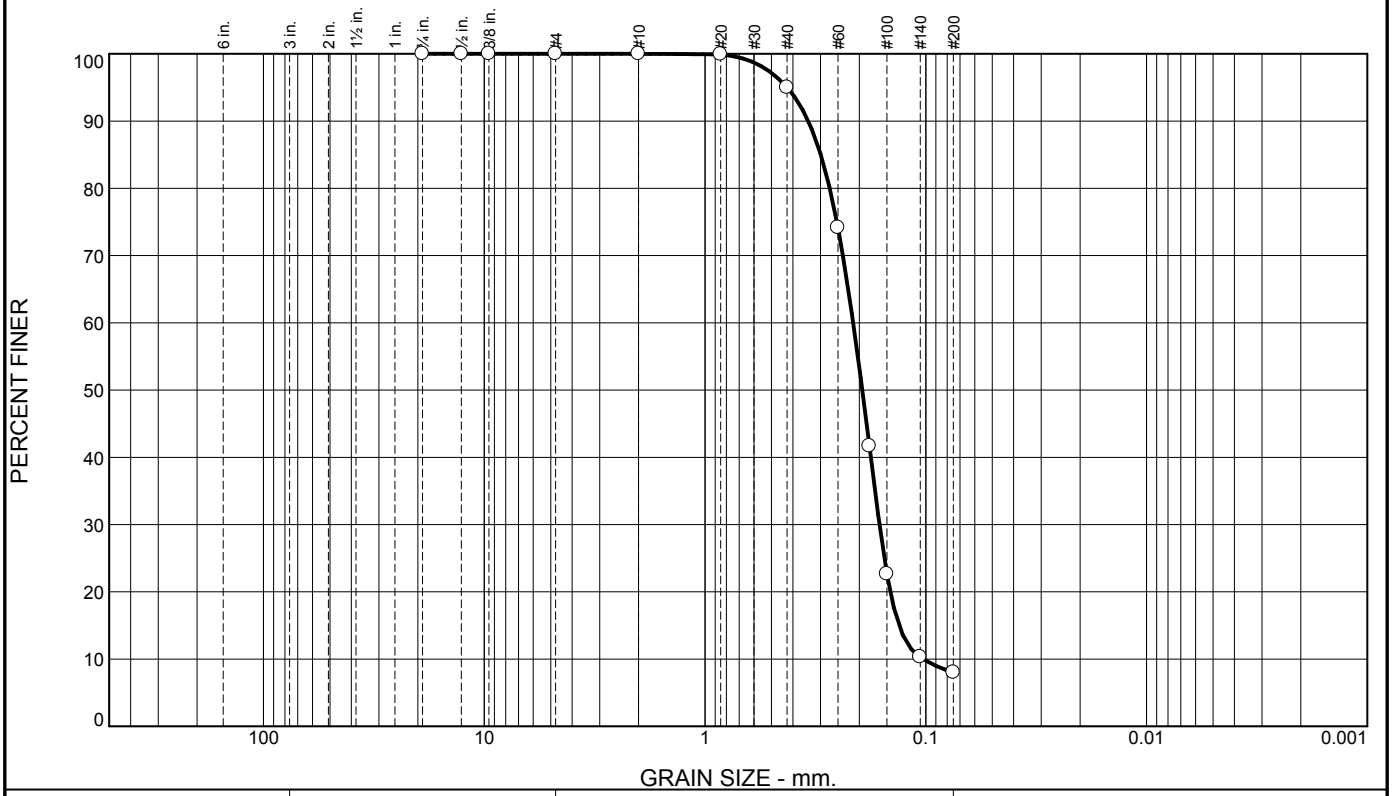
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	5.0	87.0	8.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	95.0		
#60	74.2		
#80	41.7		
#100	22.6		
#140	10.3		
#200	8.0		

* (no specification provided)

Soil Description

DK Red BR FS w/ Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.3404 D_{85}= 0.2990 D_{60}= 0.2132
D_{50}= 0.1939 D_{30}= 0.1621 D_{15}= 0.1322
D_{10}= 0.1027 C_u= 2.08 C_c= 1.20

Classification

USCS= AASHTO=

Remarks

Location: SB10
Sample Number: 5 **Depth:** 11.0-12.5' **Date:** 6-6-16

Ellis & Associates, Inc.

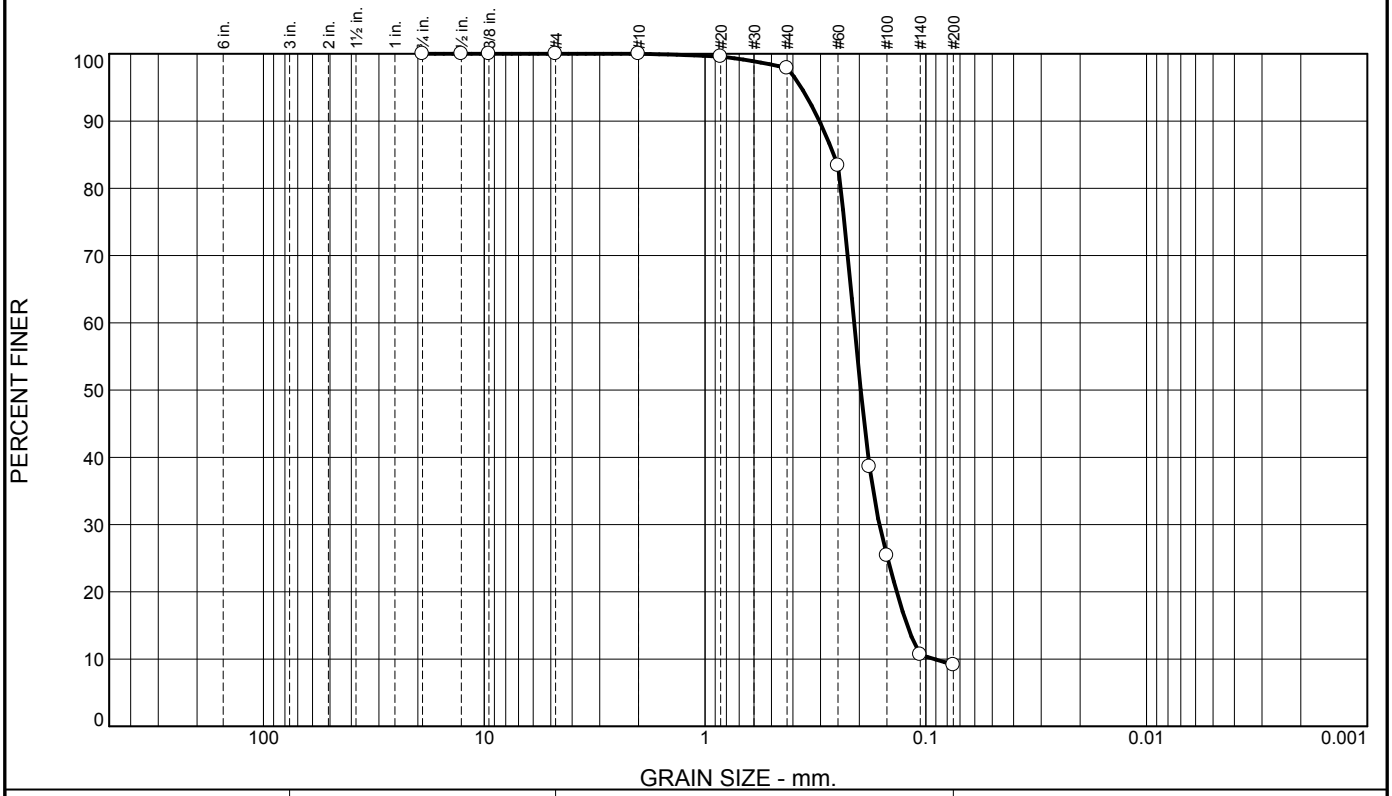
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.1	88.8	9.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.6		
#40	97.9		
#60	83.4		
#80	38.6		
#100	25.4		
#140	10.6		
#200	9.1		

* (no specification provided)

Soil Description

DK BR Sil FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.3033 D_{85}= 0.2610 D_{60}= 0.2110
D_{50}= 0.1971 D_{30}= 0.1623 D_{15}= 0.1213
D_{10}= 0.0914 C_u= 2.31 C_c= 1.36

Classification

USCS= AASHTO=

Remarks

Location: SB8
Sample Number: 19 **Depth:** 78.5-80.0' **Date:** 6-6-16

Ellis & Associates, Inc.

Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.2	97.7	1.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	98.8		
#60	88.4		
#80	46.0		
#100	19.8		
#140	3.0		
#200	1.1		

* (no specification provided)

Soil Description

Yellow Tan FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2651 D_{85}= 0.2407 D_{60}= 0.1972
D_{50}= 0.1846 D_{30}= 0.1622 D_{15}= 0.1430
D_{10}= 0.1338 C_u= 1.47 C_c= 1.00

Classification

USCS= SP AASHTO=

Remarks

Location: SB12
Sample Number: 1 **Depth:** 0.5-2.0' **Date:** 5-31-16

Ellis & Associates, Inc.

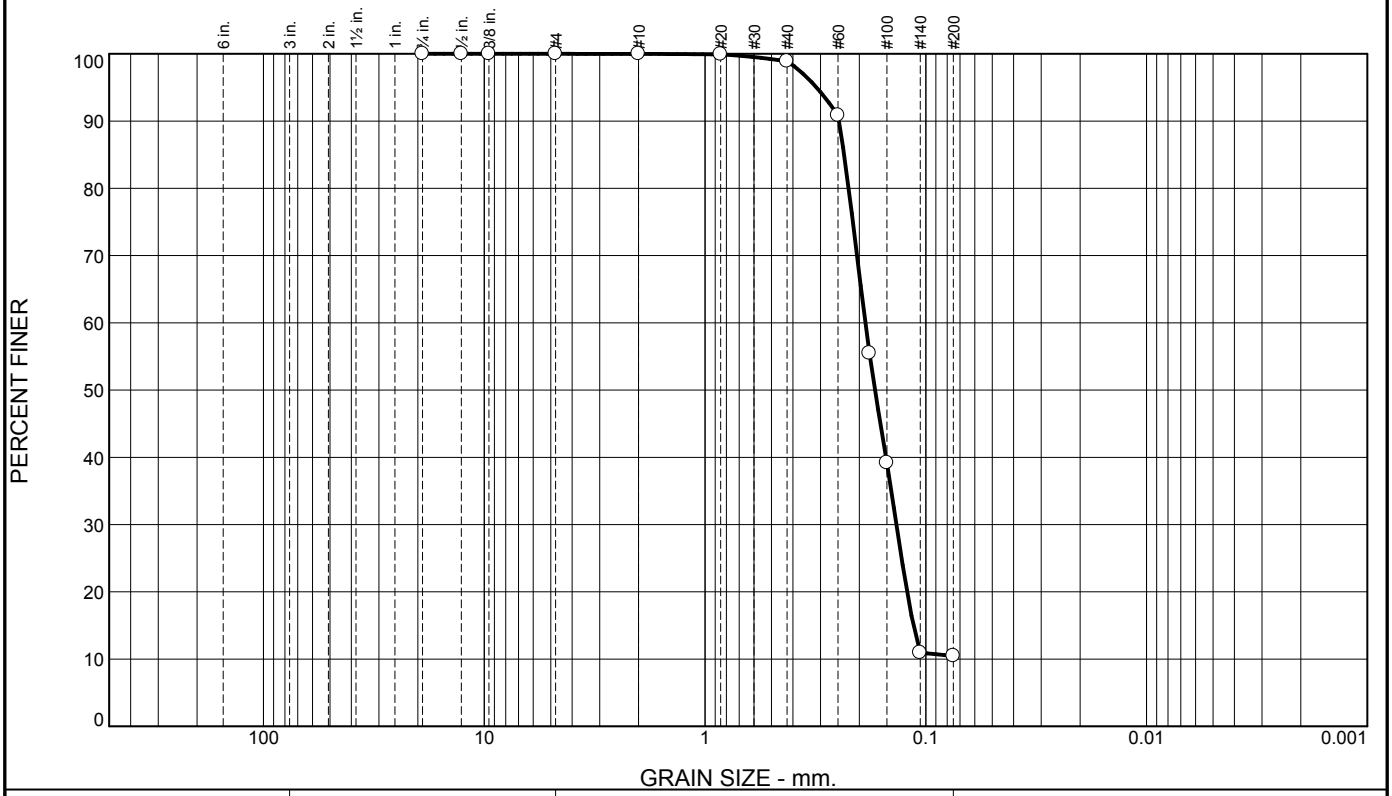
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.1	88.4	10.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	98.9		
#60	90.9		
#80	55.5		
#100	39.2		
#140	11.0		
#200	10.5		

* (no specification provided)

Soil Description

LT BR Sil FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2474 D_{85}= 0.2343 D_{60}= 0.1878
D_{50}= 0.1699 D_{30}= 0.1359 D_{15}= 0.1138
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Location: SB13
Sample Number: 3 **Depth:** 6.0-8.0' **Date:** 5-31-16

Ellis & Associates, Inc.

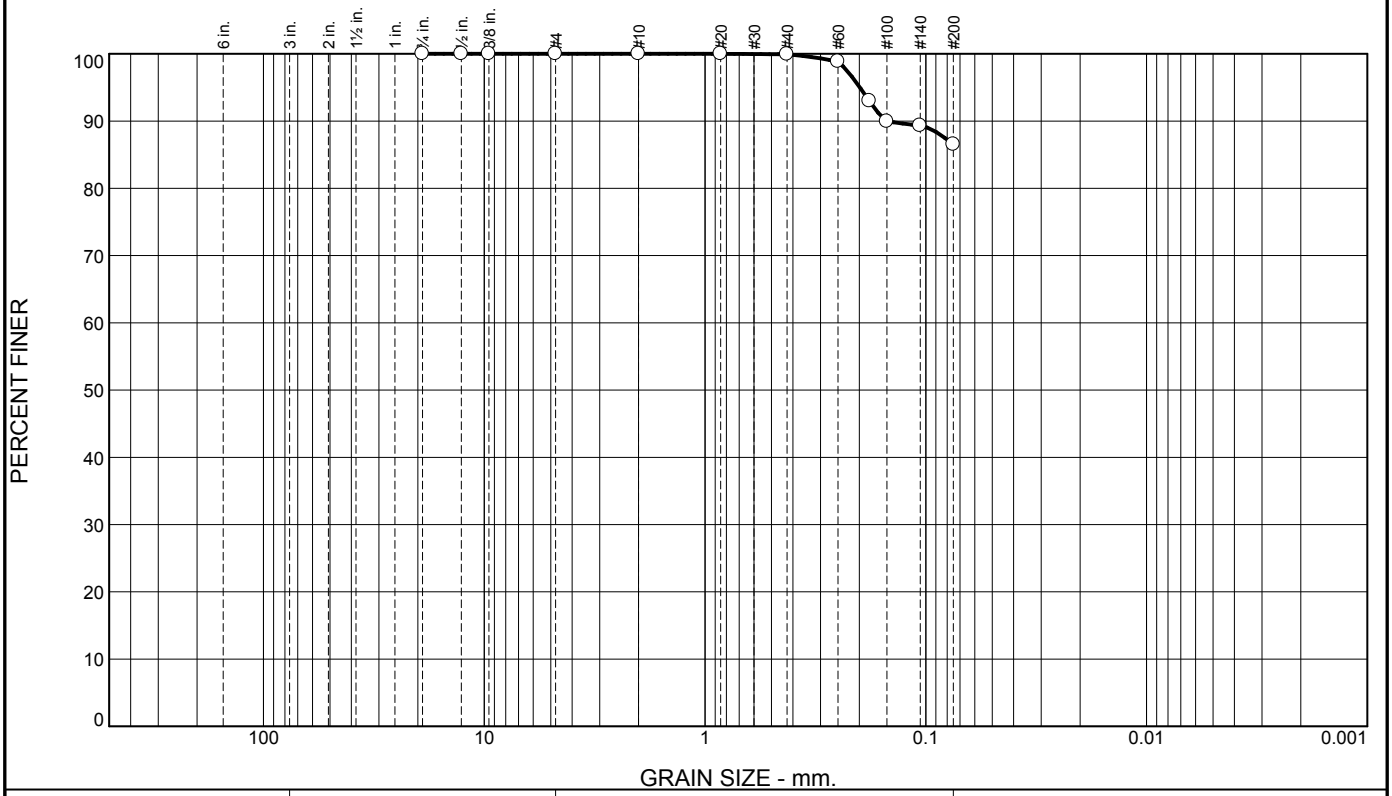
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.1	13.4	86.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.9		
#60	98.9		
#80	93.0		
#100	89.9		
#140	89.3		
#200	86.5		

* (no specification provided)

Soil Description

GR Cl w/ Sand

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.1509 D_{85}= D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Location: SB14
Sample Number: 9 **Depth:** 28.5-30.0' **Date:** 5-31-16

Ellis & Associates, Inc.

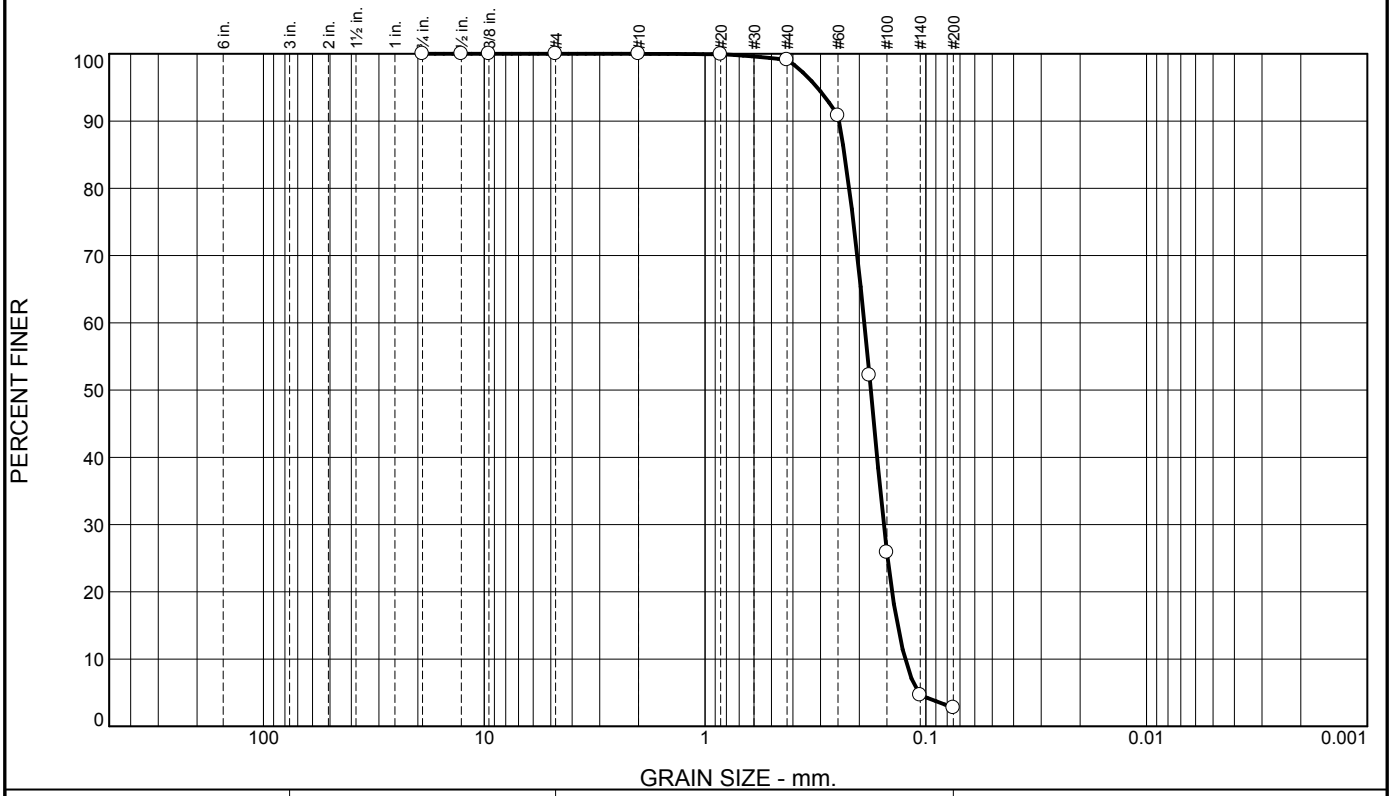
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.9	96.3	2.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	99.9		
#40	99.1		
#60	90.8		
#80	52.2		
#100	25.8		
#140	4.6		
#200	2.8		

* (no specification provided)

Soil Description

LT BR FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2473 D_{85}= 0.2333 D_{60}= 0.1898
D_{50}= 0.1774 D_{30}= 0.1550 D_{15}= 0.1342
D_{10}= 0.1241 C_u= 1.53 C_c= 1.02

Classification

USCS= SP AASHTO=

Remarks

Location: SB15
Sample Number: 2 **Depth:** 2.5-5.0' **Date:** 5-31-16

Ellis & Associates, Inc.

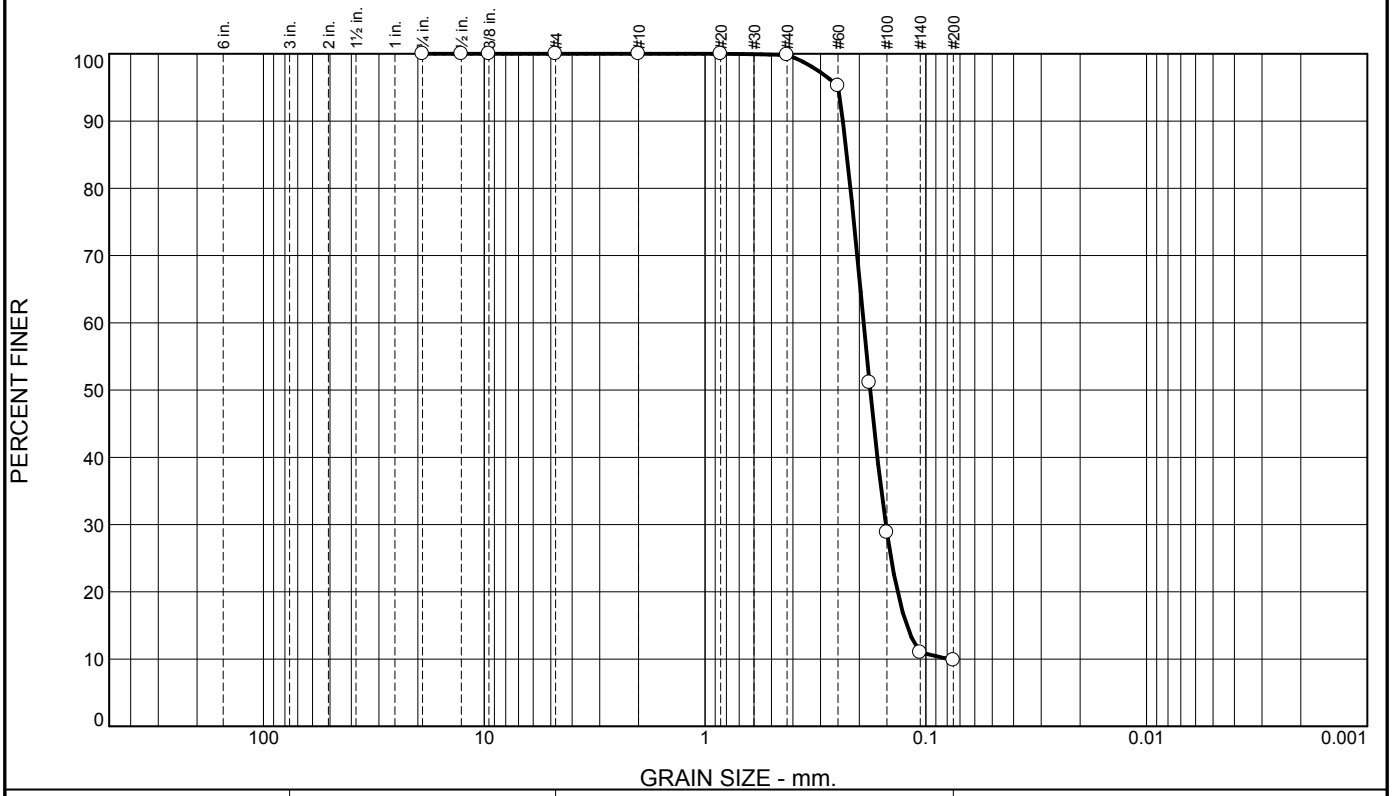
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	90.0	9.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.8		
#60	95.2		
#80	51.1		
#100	28.8		
#140	11.0		
#200	9.8		

* (no specification provided)

Soil Description

BR FS w/ Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2374 D_{85}= 0.2277 D_{60}= 0.1912
D_{50}= 0.1786 D_{30}= 0.1518 D_{15}= 0.1220
D_{10}= 0.0791 C_u= 2.42 C_c= 1.52

Classification

USCS= AASHTO=

Remarks

Location: SB15
Sample Number: 11 **Depth:** 38.5-40.0' **Date:** 5-31-16

Ellis & Associates, Inc.

Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	95.8	4.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.8		
#60	85.1		
#80	25.3		
#100	12.2		
#140	4.8		
#200	4.0		

* (no specification provided)

Soil Description

Red BR FS

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2859 D_{85}= 0.2499 D_{60}= 0.2181
D_{50}= 0.2076 D_{30}= 0.1861 D_{15}= 0.1597
D_{10}= 0.1410 C_u= 1.55 C_c= 1.13

Classification

USCS= SP AASHTO=

Remarks

Location: SB3
Sample Number: 9 **Depth:** 28.5-30.0' **Date:** 6-6-16

Ellis & Associates, Inc.

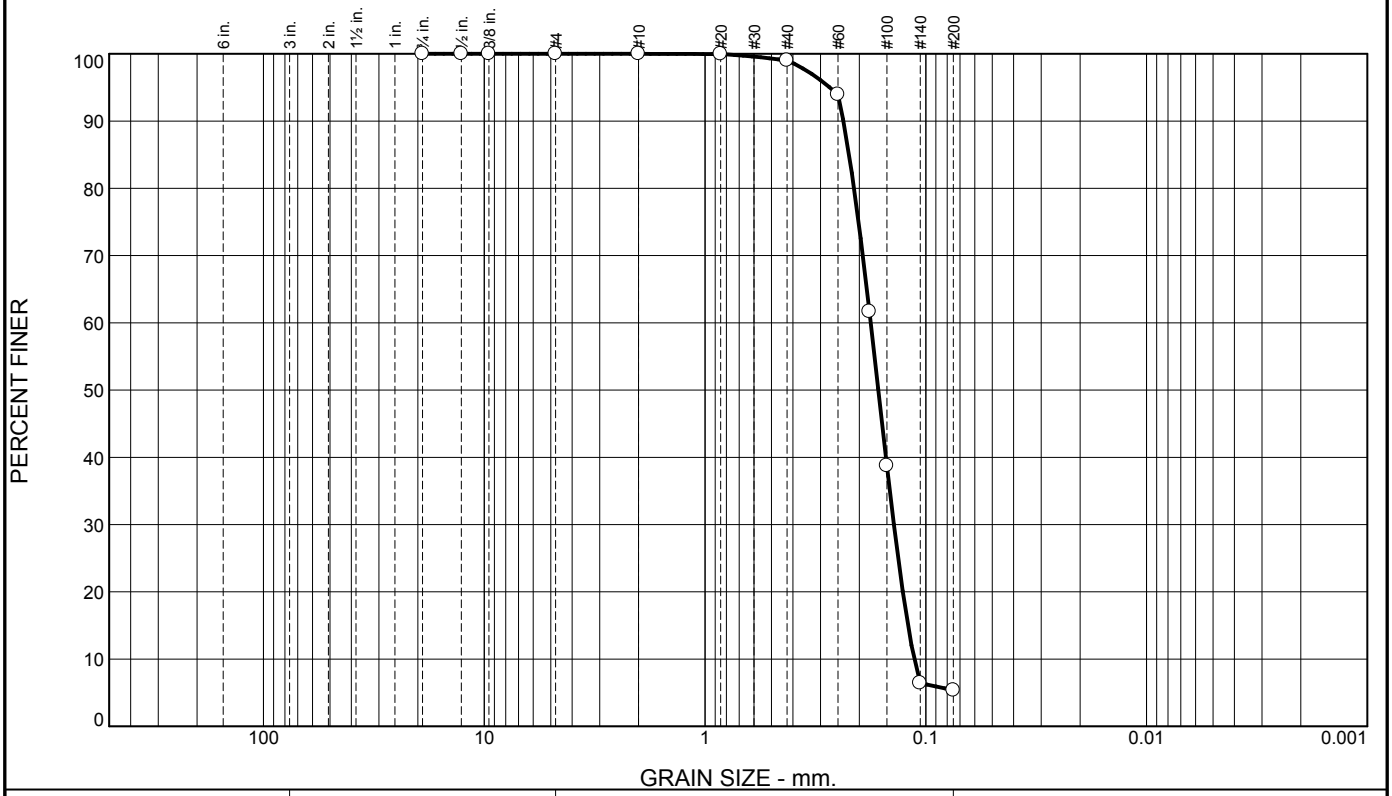
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.0	93.6	5.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.0		
#60	93.9		
#80	61.7		
#100	38.7		
#140	6.4		
#200	5.4		

* (no specification provided)

Soil Description

DK BR FS w/ Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2361 D_{85}= 0.2225 D_{60}= 0.1776
D_{50}= 0.1641 D_{30}= 0.1395 D_{15}= 0.1205
D_{10}= 0.1129 C_u= 1.57 C_c= 0.97

Classification

USCS= AASHTO=

Remarks

Location: SB12
Sample Number: 7 **Depth:** 18.5-20.0' **Date:** 5-31-16

Ellis & Associates, Inc.

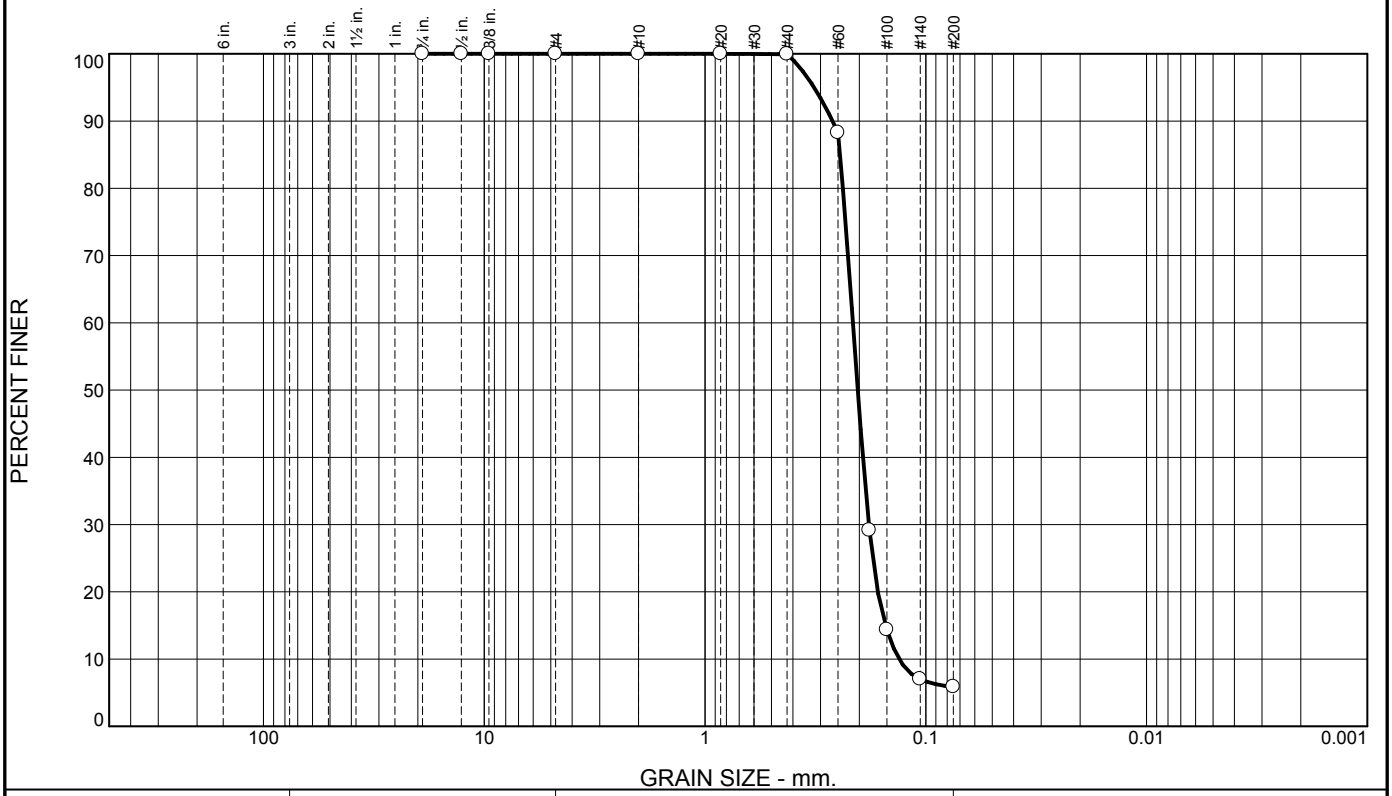
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.1	94.0	5.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	100.0		
3/8	100.0		
#4	100.0		
#10	100.0		
#20	100.0		
#40	99.9		
#60	88.3		
#80	29.1		
#100	14.4		
#140	7.0		
#200	5.9		

* (no specification provided)

Soil Description

BR FS w/ Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.2645 D_{85}= 0.2446 D_{60}= 0.2138
D_{50}= 0.2034 D_{30}= 0.1811 D_{15}= 0.1521
D_{10}= 0.1321 C_u= 1.62 C_c= 1.16

Classification

USCS= AASHTO=

Remarks

Location: SB13
Sample Number: 7 **Depth:** 18.5-20.0' **Date:** 5-31-16

Ellis & Associates, Inc.

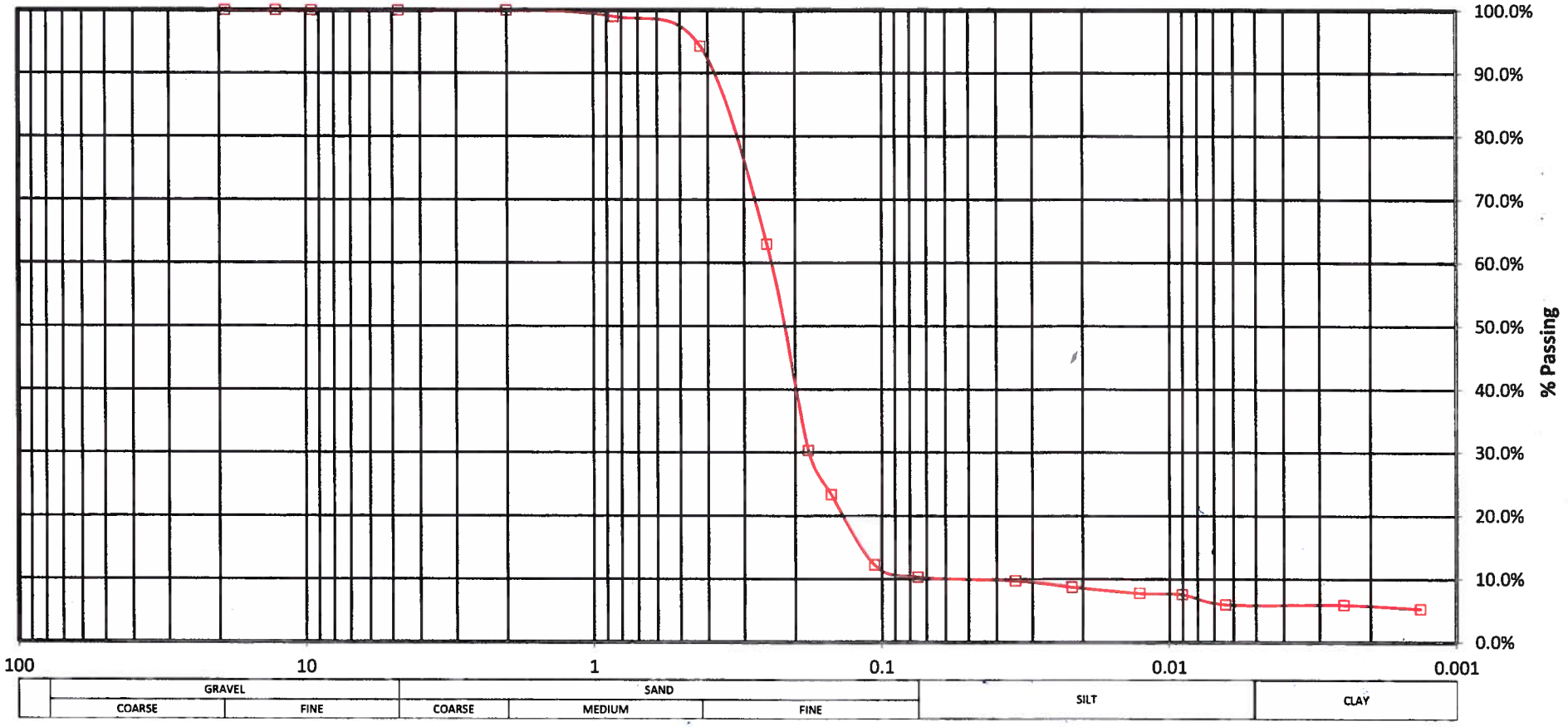
Jacksonville, FL

Client: Seminole Electric
Project: Seminole Electric

Project No: 2593-0002 **Figure**

Tested By: CA

Grain Size Distribution



Particle Size, mm

Sample #	SB1-15 58.5-60.0'
Moisture Content	32.0%

% Silt	4.3%
% Clay	6.0%

Comments

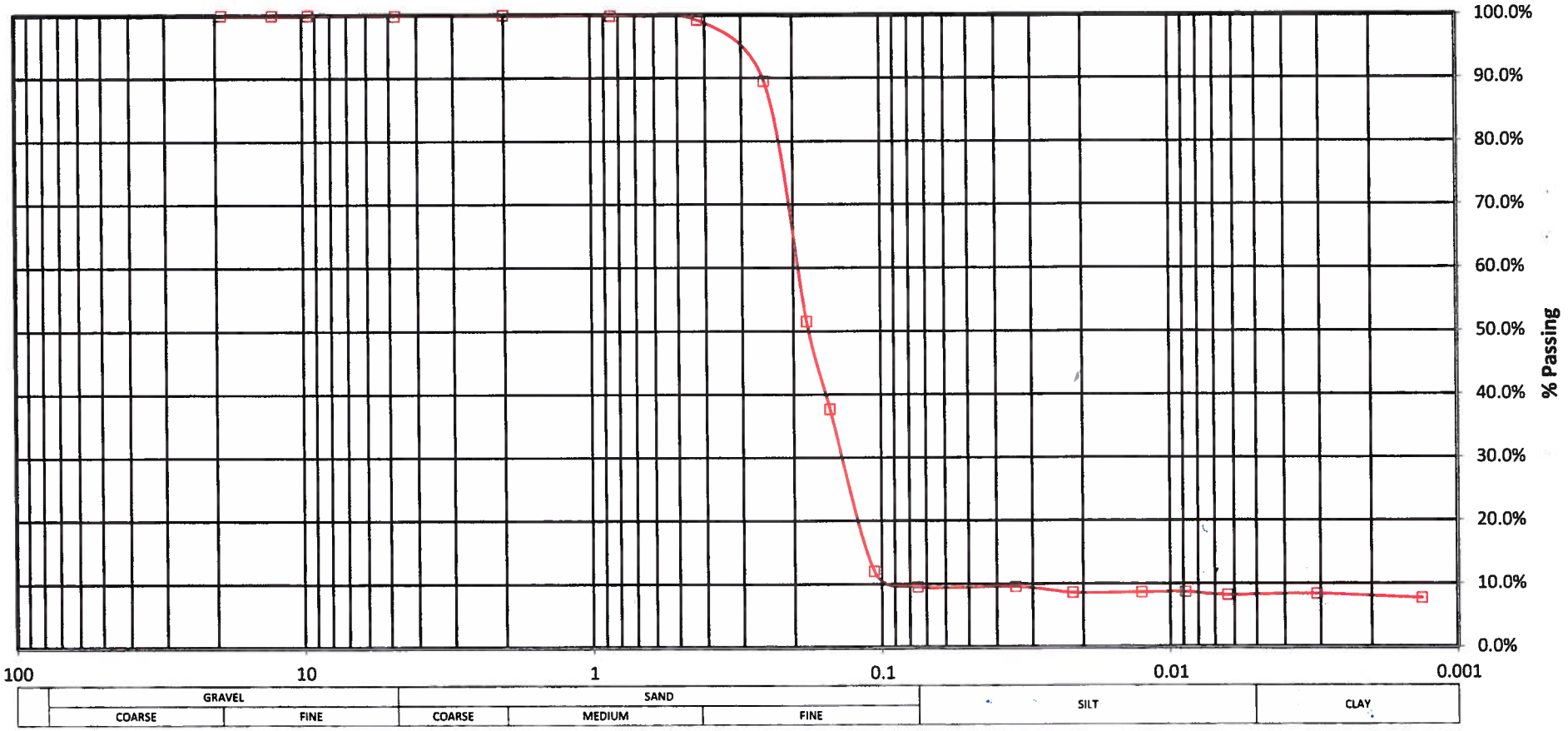
Gray BR FS w/ Clay

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB4-10 33.5-35.0'
Moisture Content	26.0%

% Silt	1.3%
% Clay	8.3%

Comments

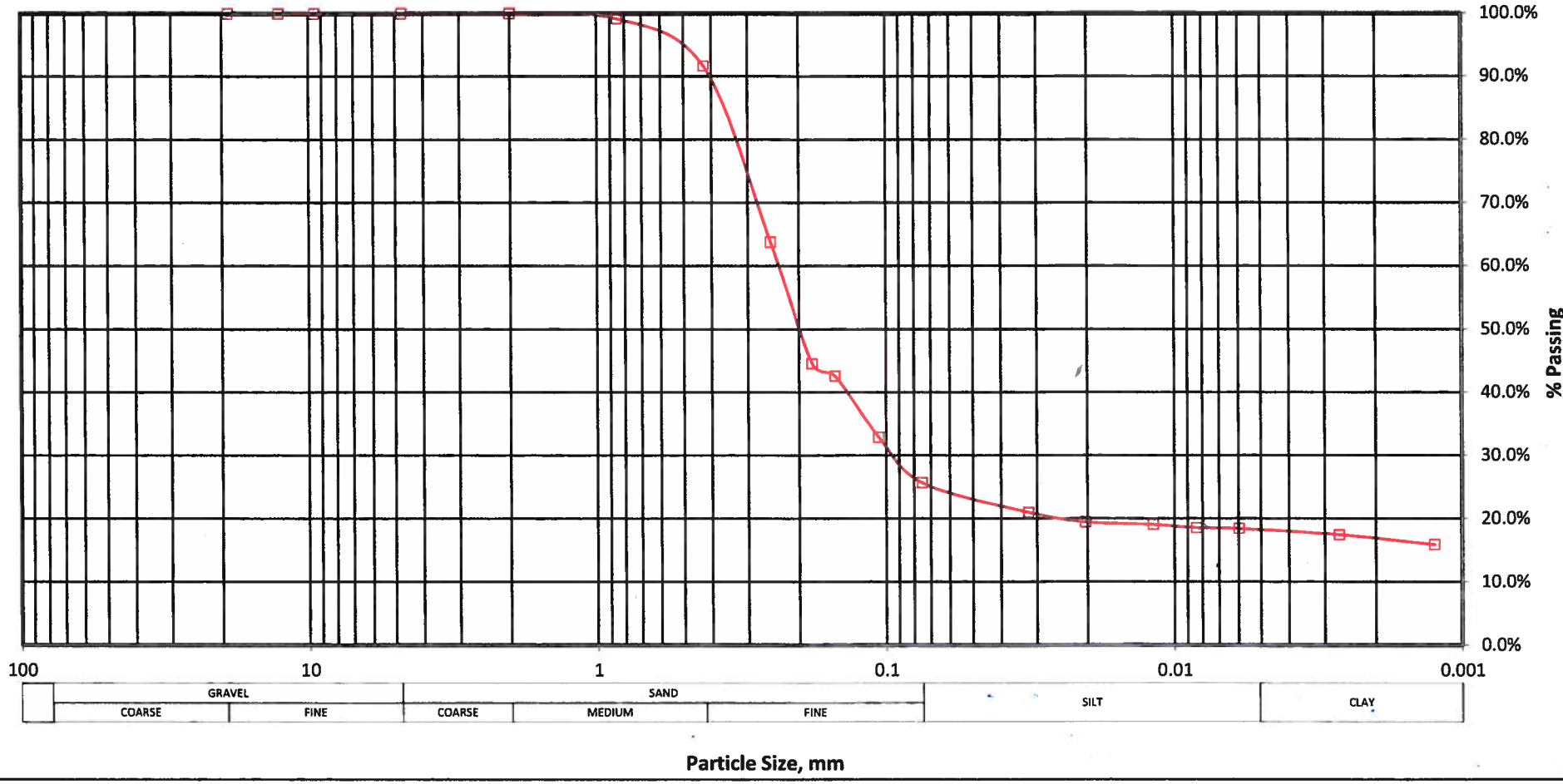
Gray Silty FS

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB5-18 73.5-75.0'
Moisture Content	34.0%

% Silt	7.6%
% Clay	18.1%

Comments

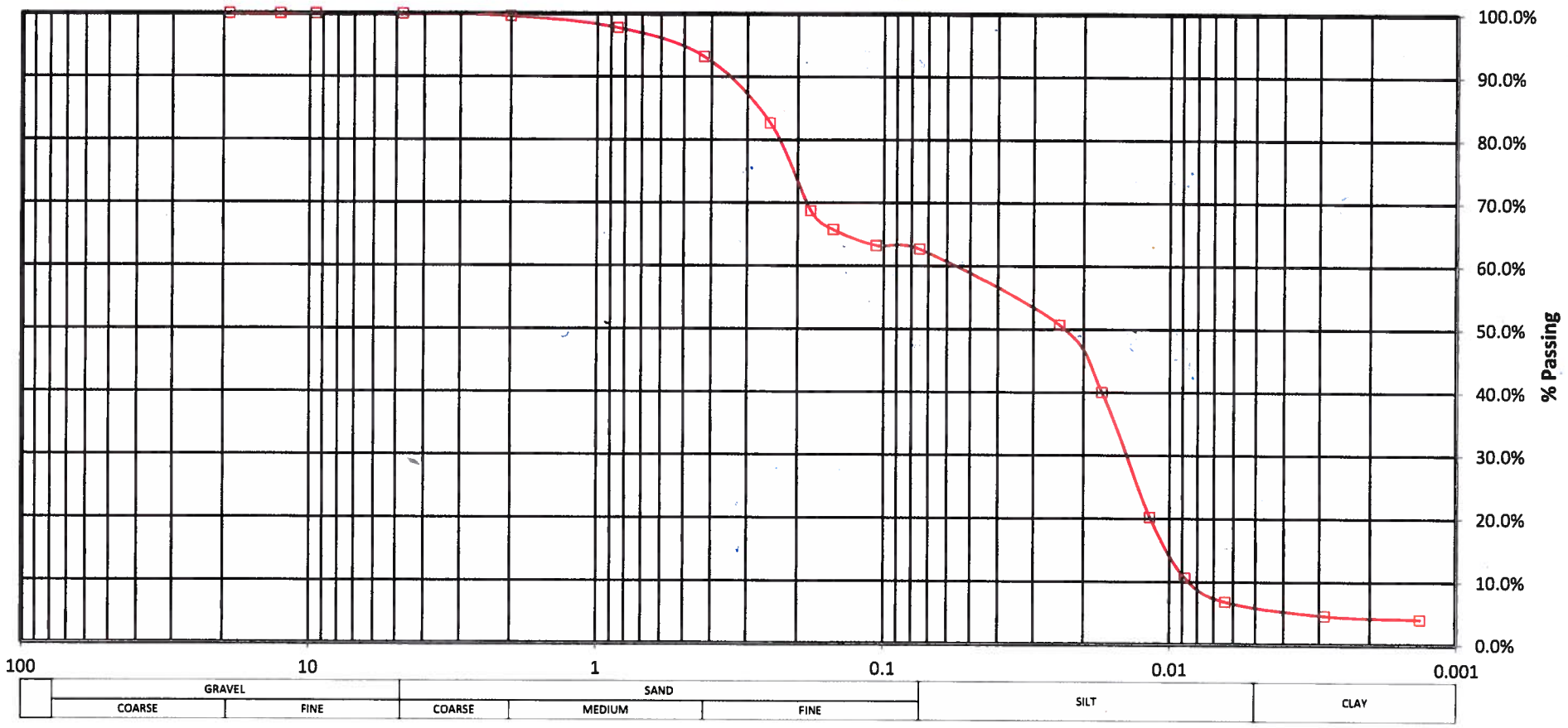
Gray Clayey FS with Shells

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Particle Size, mm

Sample #	SB6-21 88.5-90.0'
Moisture Content	27.0%

% Silt	56.7%
% Clay	6.0%

Comments

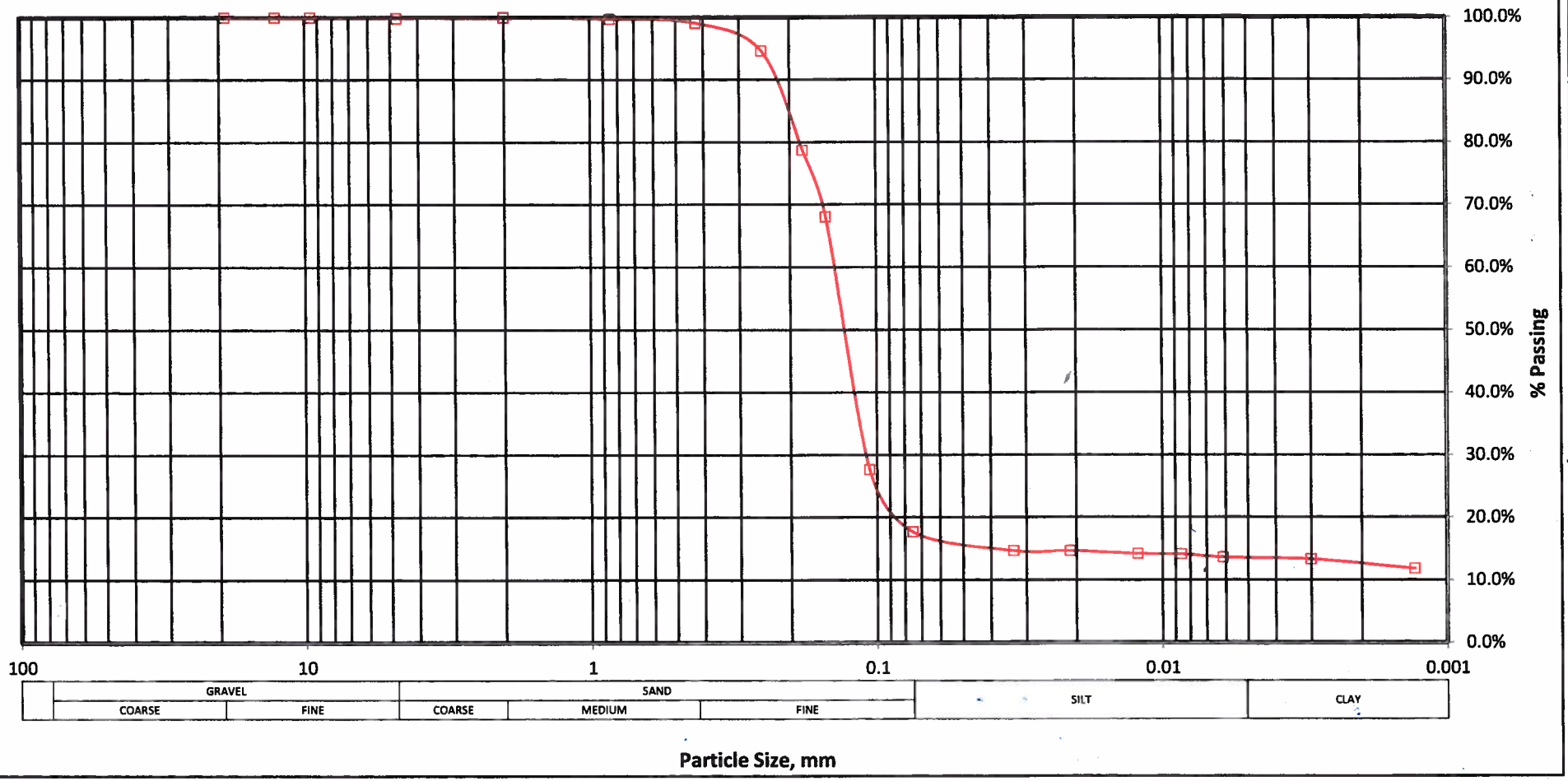
Gray Silty FS with Shells (Marl)

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB8-14 53.5-55.0'
Moisture Content	28.0%

% Silt	4.2%
% Clay	13.5%

Comments

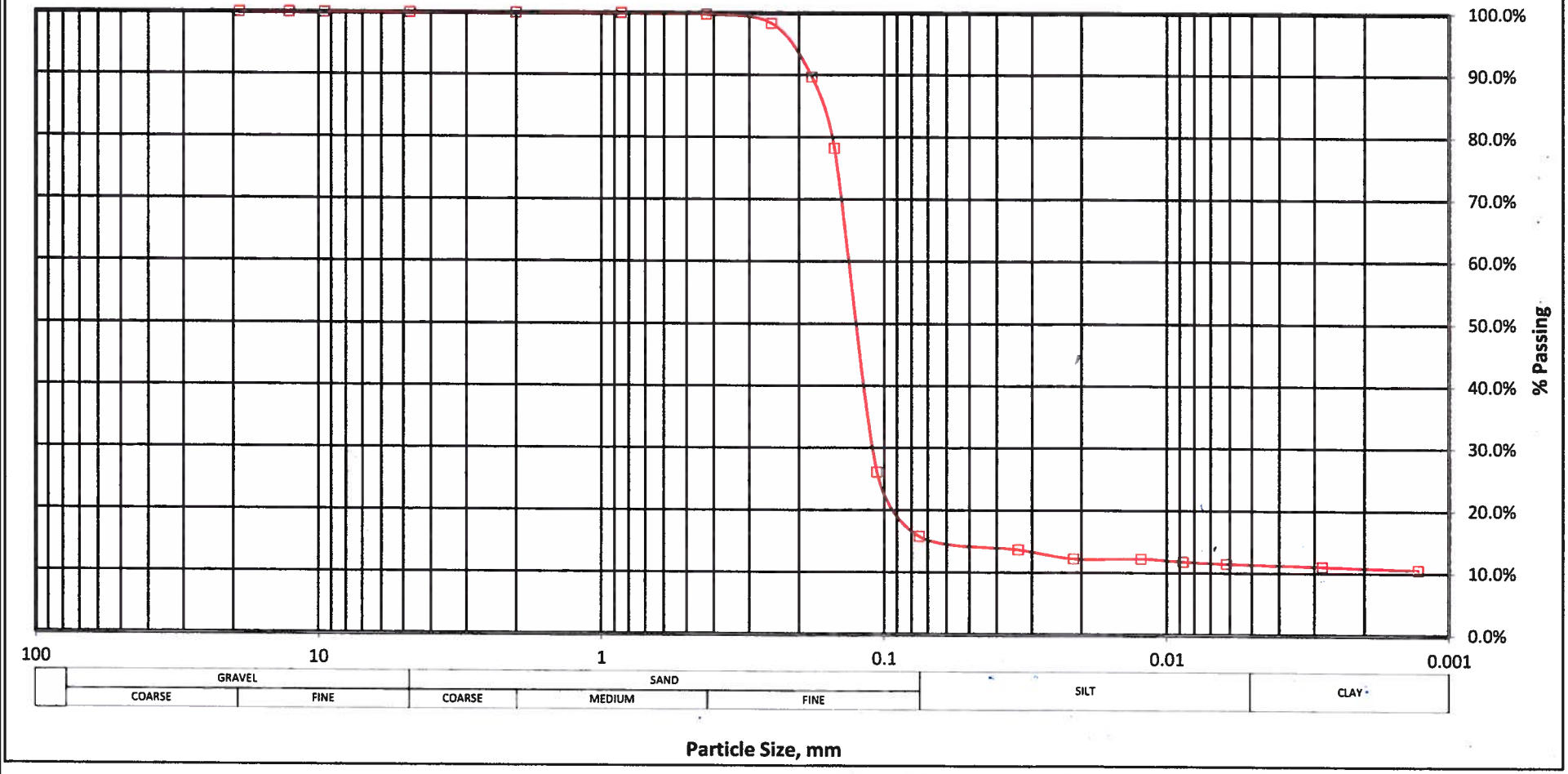
Gray Clayey FS

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Particle Size, mm

Sample #	SB9-13 58.5-60.0'
Moisture Content	32.0%

% Silt	4.4%
% Clay	11.3%

Comments

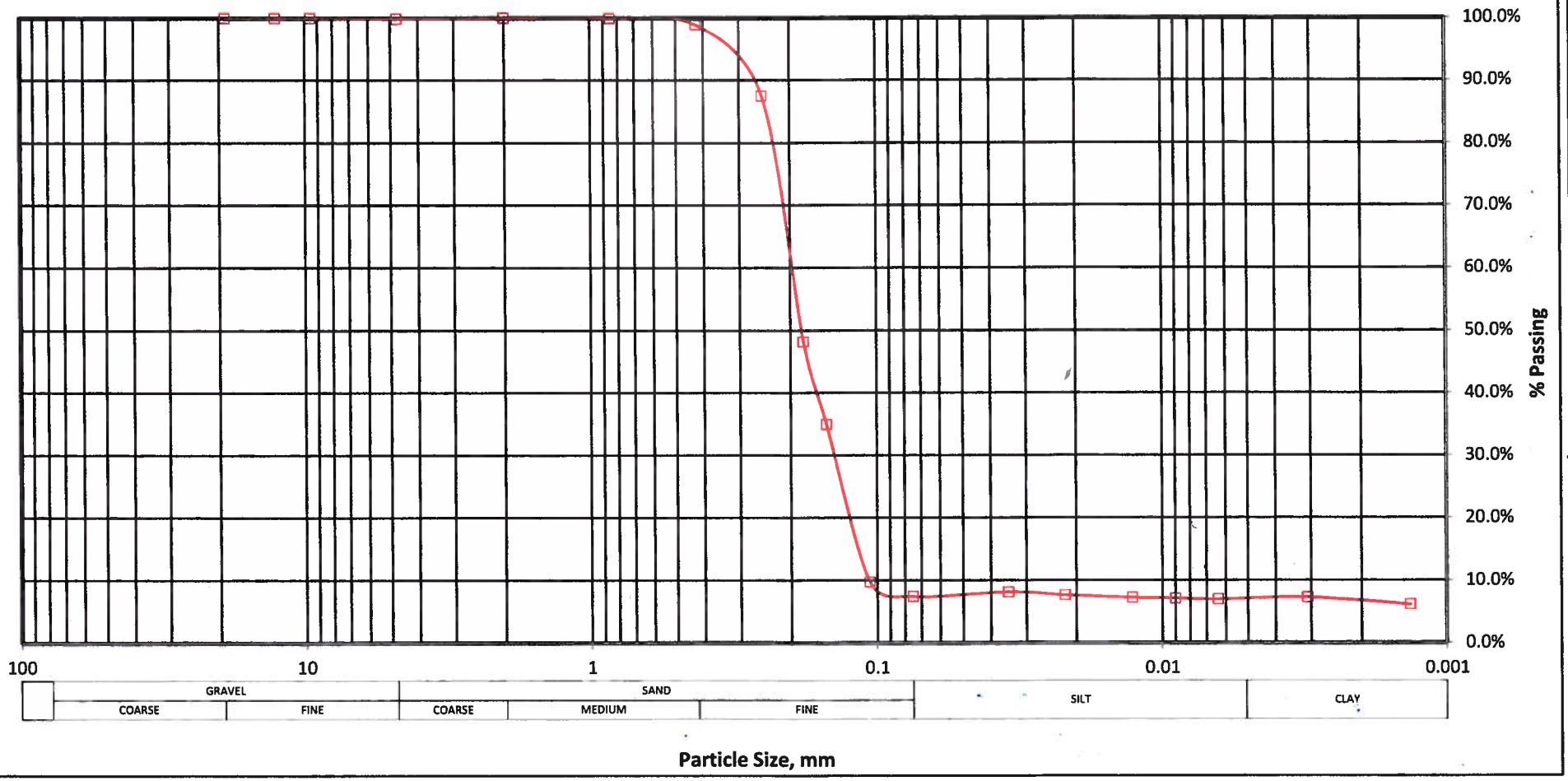
Gray Silty FS

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB10-11 38.5-40.0'
Moisture Content	24.0%

% Silt	0.3%
% Clay	7.1%

Comments

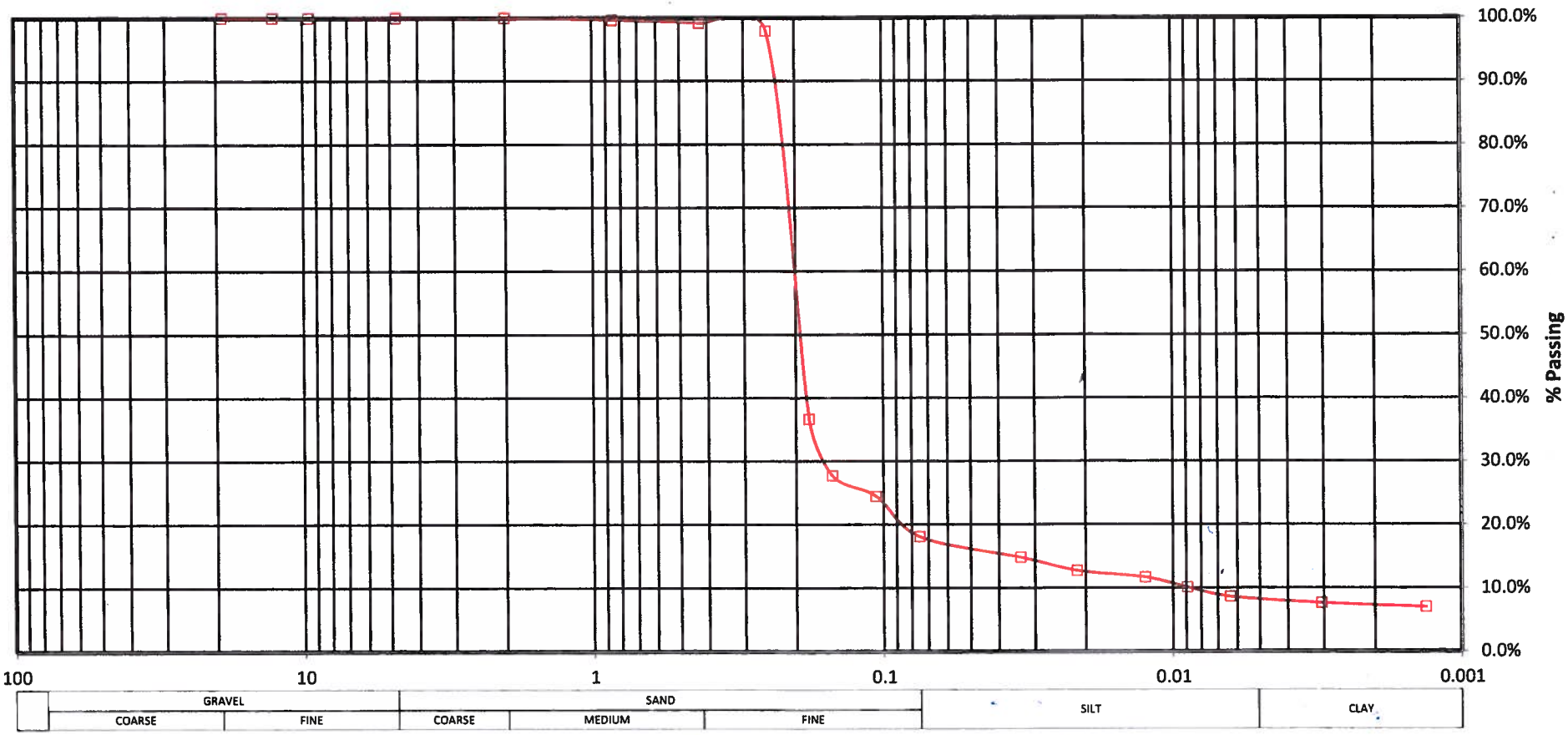
Gray FS w/ CL

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB11-18 73.5-75.0'
Moisture Content	37.0%

% Silt	9.9%
% Clay	8.2%

Comments

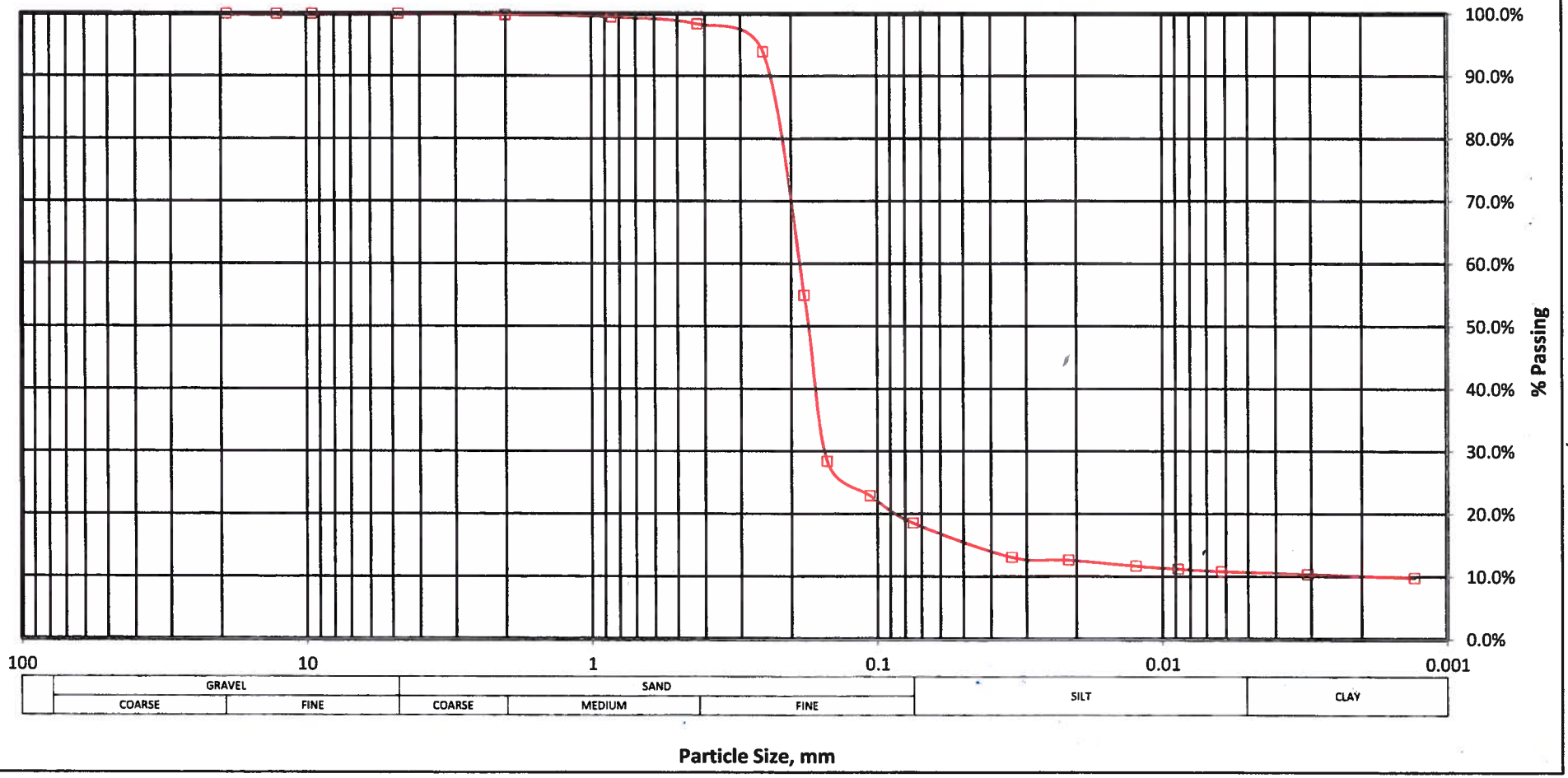
DR Gray Silty FS

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB12-19 78.5-80.0'
Moisture Content	42.0%

% Silt	7.9%
% Clay	10.6%

Comments

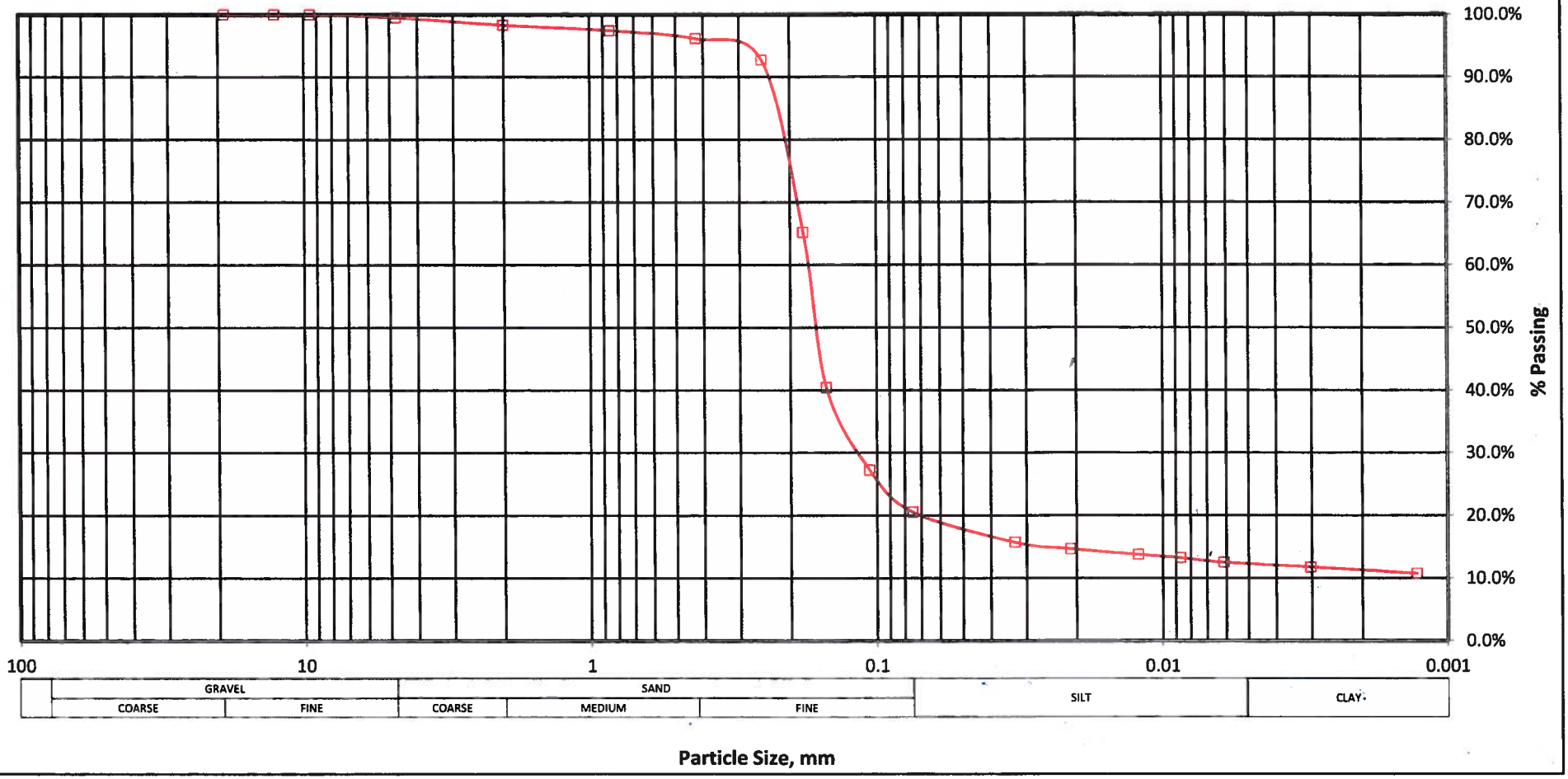
Gray Silty/Clayey FS

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB13-19 78.5-80.0'
Moisture Content	27.0%

% Silt	8.3%
% Clay	12.2%

Comments

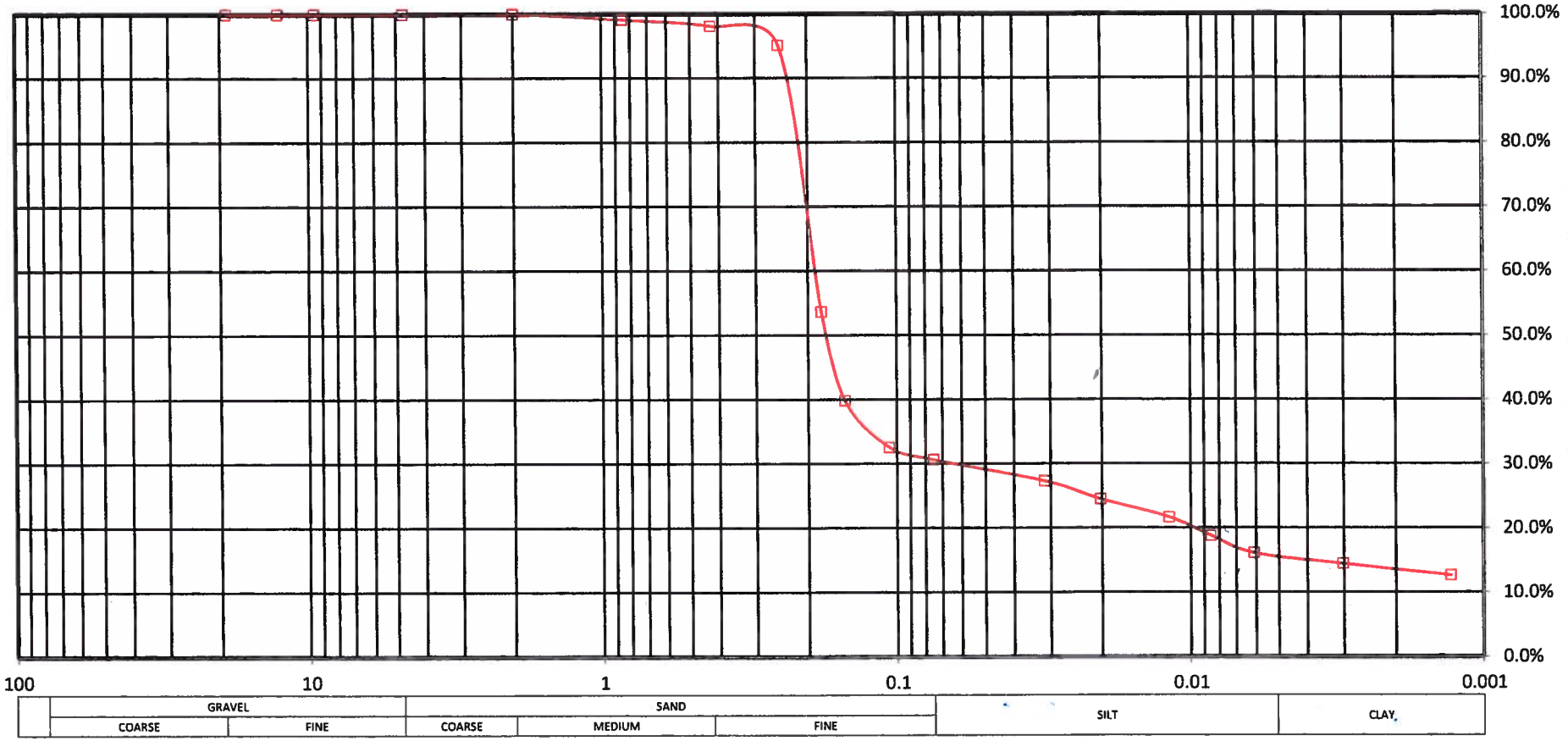
DK Gray/Brown FS w/ Clay & Shell

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB14-13 48.5-50.0
Moisture Content	38.0%

% Silt	15.1%
% Clay	15.5%

Comments

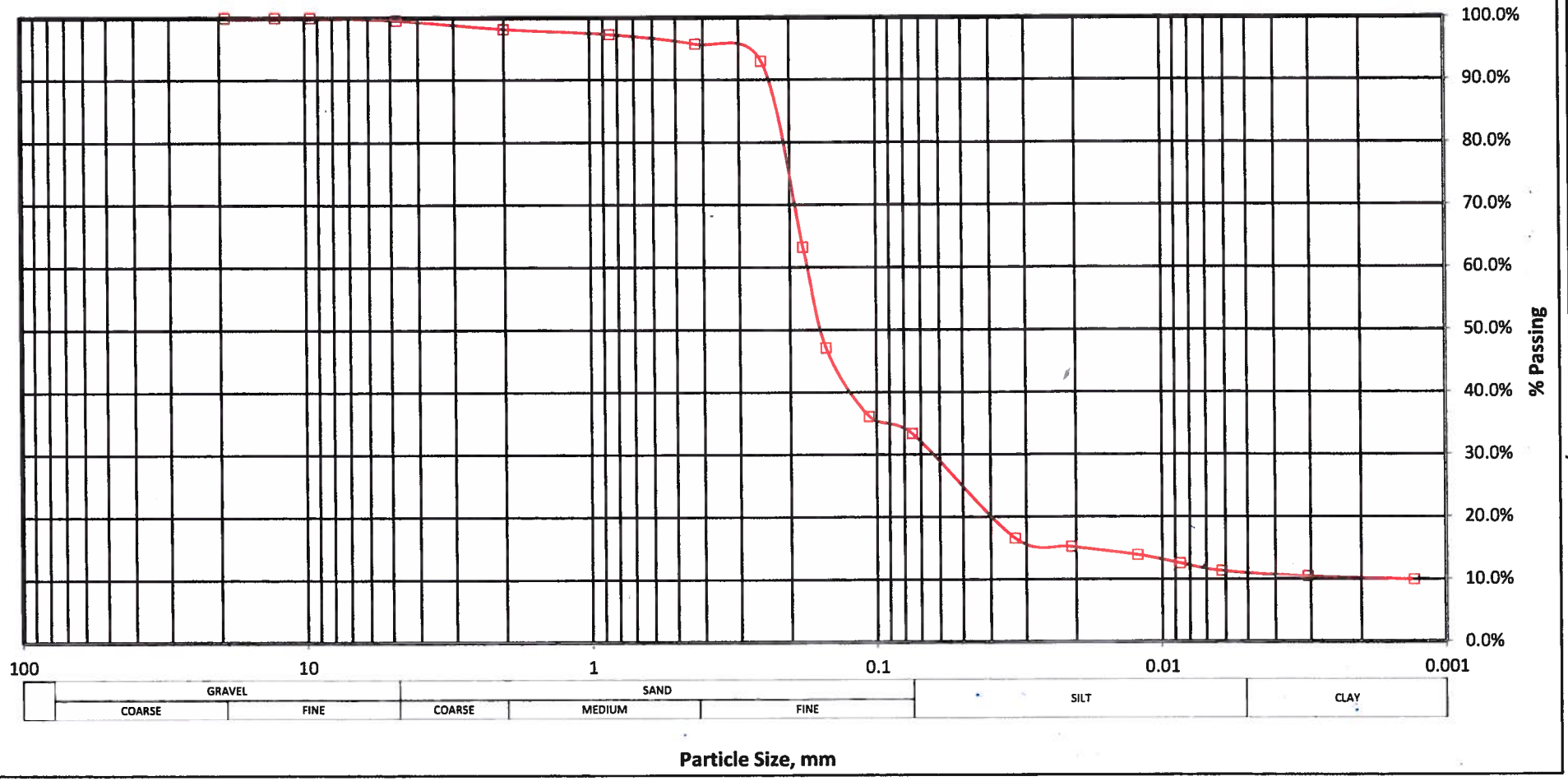
Dk Gray Clayey FS

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB14-21 88.5-90.0'
Moisture Content	23.0%

% Silt	22.4%
% Clay	11.0%

Comments

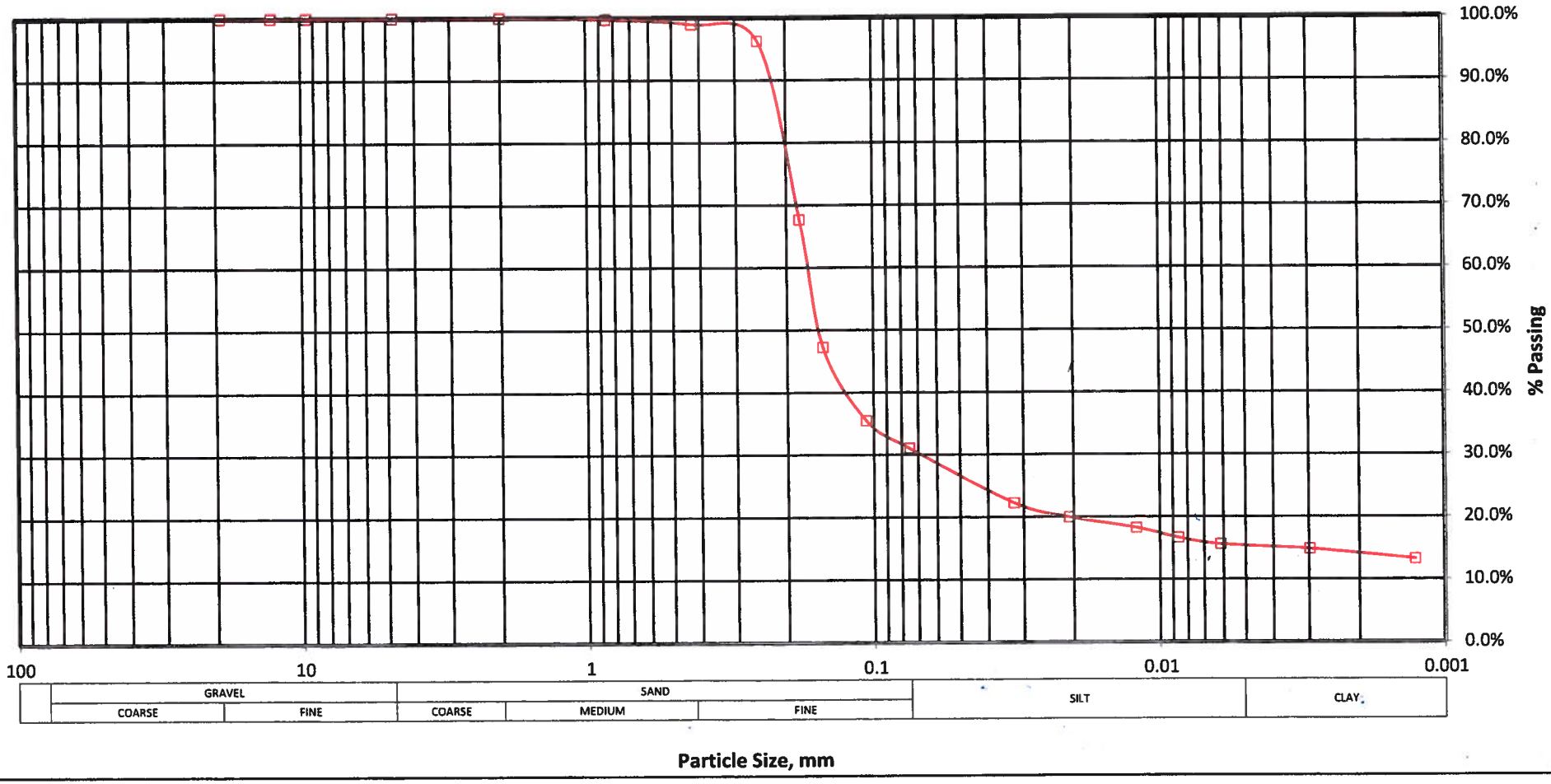
LT Tan Silty Sand w/ Weathered Limestone (Marl)

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

Grain Size Distribution



Sample #	SB15-9A 29.5-30.0'
Moisture Content	49.0%

% Silt	15.7%
% Clay	15.3%

Comments

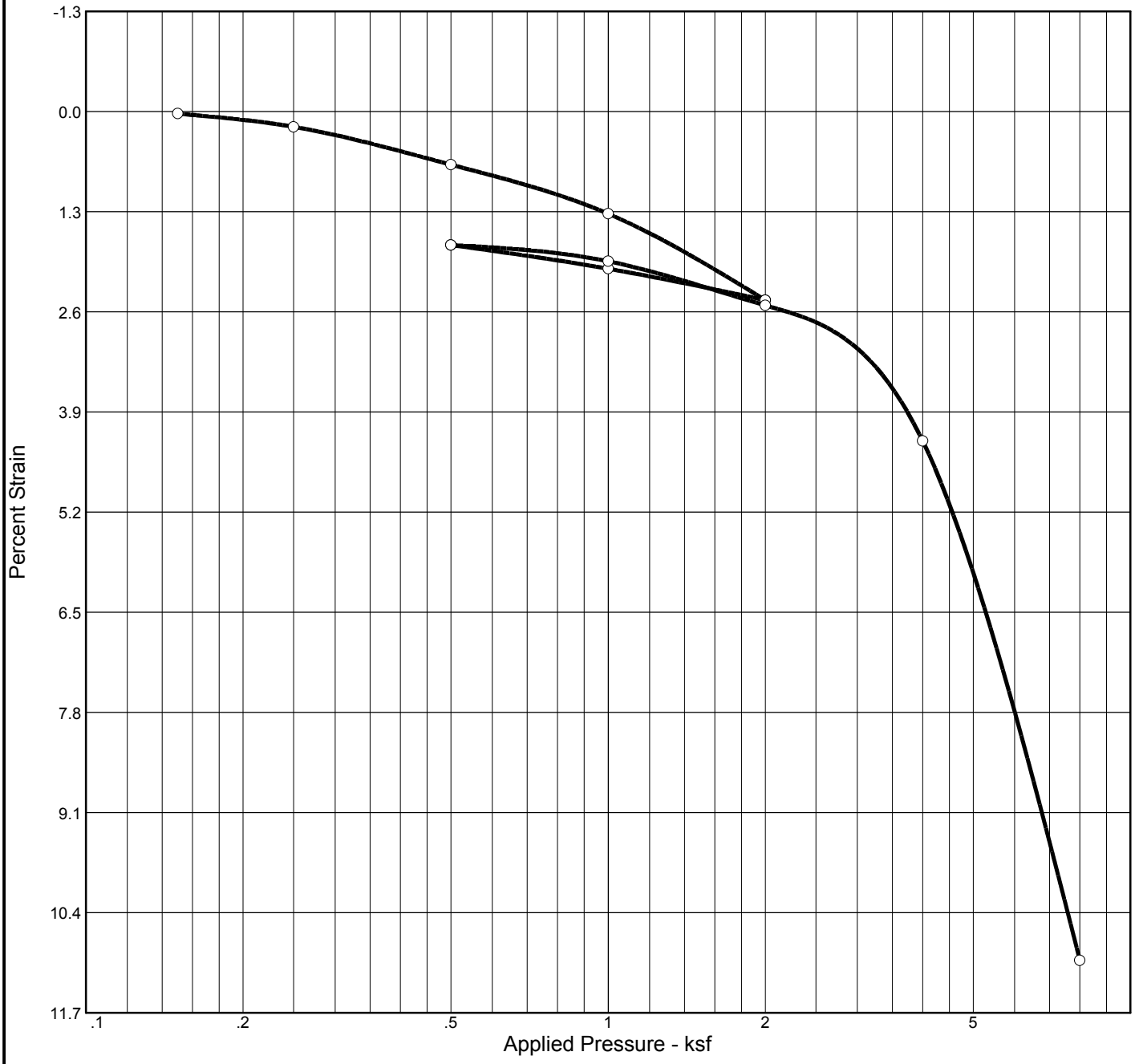
Gray Sandy Clay

Particle Size Distribution Report

Client	Seminole Electric
Project	Seminole Electric
Project No.	2593-0002

Ellis & Associates, Inc.

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (ksf)	P_c (ksf)	C_c	C_r	Swell Press. (ksf)	Swell %	e_o
Sat.	Moist.											
93.6 %	88.6 %	47.1	110	84	2.64		3.97	0.82	0.04			2.499

MATERIAL DESCRIPTION	USCS	AASHTO
GR CL	CH	A-7-6

Project No. 35-22956 **Client:** Seminole Electric

Project: Seminole Electric Gas Plant

Location: SB1

Ellis & Associates, Inc.

Jacksonville, FL

Remarks:

Figure

LABORATORY TEST PROCEDURES

Percent Fines Content

The percent fines or material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with the latest revision of ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Natural Moisture Content

The water content of the sample tests was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

Atterberg Limits

The Atterberg Limits consist of the Liquid Limit (LL) and the Plastic Limit (PL). The LL and PL were determined in general accordance with the latest revision of ASTM D 4318. The LL is the water content of the material denoting the boundary between the liquid and plastic states. The PL is the water content denoting the boundary between the plastic and semi-solid states. The Plasticity Index (PI) is the range of water content over which a soil behaves plastically and is denoted numerically by the difference between the LL and the PL. The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ration of "pore" or "free" water in a given mass of material to the mass of solid material particles.

APPENDIX C

DOUBLE RING INFILTROMETER (DRI) TEST CALC. RESULTS

Ellis & Associates inc.

DOUBLE RING INFILTROMETER TEST RESULTS

Project: Seminole Electric Gas Plant

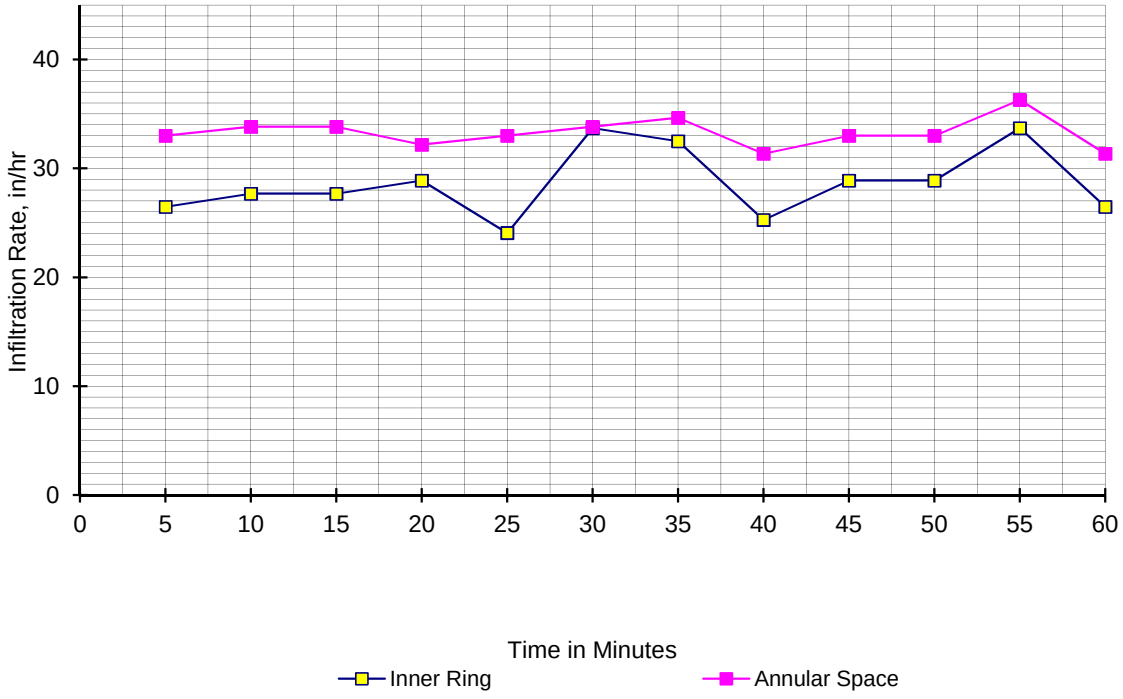
E&A Project No.: 2593-0002
Test No.: DRI-1
Date Performed: 5/27/2016
Performed by: DK

DOUBLE RING INFILTROMETER TEST RESULTS:

Groundwater Depth: 9.0 feet

Test Depth: 5 feet
Test Location: field test

Average Stabilized Infiltration Rate, In/Hr 26.5 52.9 ft/day



Ellis & Associates inc.

DOUBLE RING INFILTROMETER TEST RESULTS

Project: Seminole Electric Gas Plant

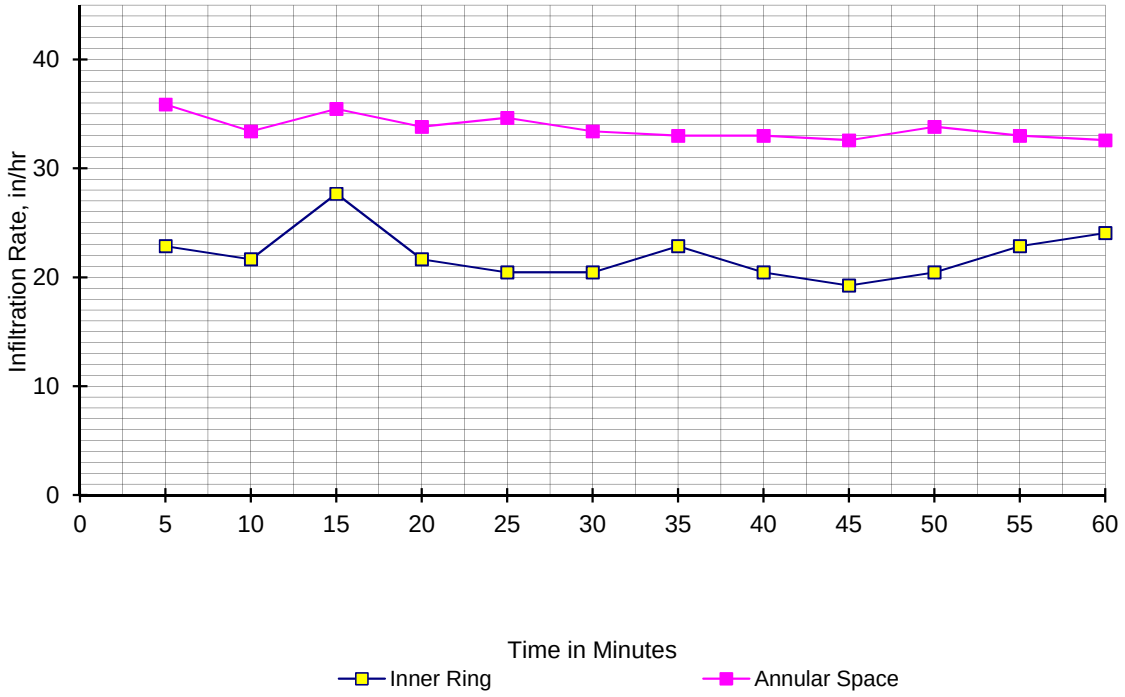
E&A Project No.: 2593-0002
Test No.: DRI-2
Date Performed: 5/27/2016
Performed by: DK

DOUBLE RING INFILTROMETER TEST RESULTS:

Groundwater Depth: 9.0 feet

Test Depth: 5 feet
Test Location: field test

Average Stabilized Infiltration Rate, In/Hr 22.1 44.1 ft/day



APPENDIX D

SURVEY REPORT

Steven L. Anderson, Jr., PSM, PLS
Charles M. Arnett, PSM
Russell G. Daly, PSM, PLS
Michael L. Dougherty, PSM
Bruce C. Ducker, PSM
James M. Dunn, II, PSM
Mark J. Efird, PSM
Thomas F. Ferguson, PSM
Ronnie A. Figueroa, PSM, GISP
Tate B. Flowers, PLS
Robert W. Gardner, PSM
Brian R. Garvey, PE
Daniel J. Henry, PSM, PLS
Mathew G. Jennings, RLS
Gary B. Krick, PSM
Brad J. Lashley, PSM, PLS
Myron F. Lucas, PSM
James E. Mazurak, PSM

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John S. Thomas, PSM
Edward W. Wackerman, PLS (FL)
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Brad A. Stroppel, EI, GISP
Catherine E. Galgano, GISP
Cheryl A. Isenberg, GISP
Patrick J. Phillips, GISP
Thomas P. Young, Jr., SIT, GISP
Donna L. Canney, CST IV
Frank B. Henry, CST IV
David M. Rentfrow, CST IV
Steve D. Smith, CST IV
Celeste B. van Gelder, CST IV

Land Surveying & Mapping Services • Sub-Surface Utility Designation & Location Services • Geographic Information Systems • GPS Asset Inventories

June 15th, 2016

Mr. Raoaa F. Essa, P.E.
Ellis & Associates, Inc.
7064 Davis Creek Road
Jacksonville, Florida 32256

RE: Seminole Electric
Soil Boring Survey
Part of Section 7, Township 9 South, Range 27 East, Putnam County, Florida
(Address: 161 S. Electric Avenue)

Dear Mr. Essa,

Southeastern Surveying and Mapping Corporation performed a field survey of 17 Soil Borings listed below on June 10th, 2016, at Seminole Electric, 161 S. Electric Avenue. I hereby certify that the survey information was collected in accordance with Chapter 5J-17 F.A.C. Horizontal coordinates were established in a State Plain Coordinate System (Florida East) North American Datum of 1983/1990 adjustment in U.S. Survey feet meeting or exceeding a horizontal tolerance of +/- 0.1 feet. Elevations were established in North American Vertical Datum of 1988 in U.S. Survey feet, meeting or exceeding a vertical tolerance of +/- 0.01 feet.

Sincerely,
Southeastern Surveying and Mapping Corporation

John S. Thomas

John S. Thomas, PSM

Mr. Raoaa F. Essa, P.E.
Seminole Electric
June 15th, 2016

DESCRIPTION	NORTHING	EASTING	LATITUDE	LONGITUDE	TOP OF LID	N. RIM OF PVC	GROUND
INF-02	1960679.21	455889.44	N29°43'32.07668"	W81°37'51.52285"		70.74	69.0
SB-1	1961557.31	456256.24	N29°43'40.78876"	W81°37'47.41711"	76.23		76.2
SB-2	1961552.46	456087.33	N29°43'40.73169"	W81°37'49.33251"	76.61		76.6
SB-3	1961576.56	455879.46	N29°43'40.95899"	W81°37'51.69153"	80.60		80.6
SB-4	1961403.73	456247.30	N29°43'39.26799"	W81°37'47.50902"	74.85		74.8
SB-5	1961412.82	456095.22	N29°43'39.34984"	W81°37'49.23439"	75.96		75.9
SB-6	1961266.80	456089.77	N29°43'37.90404"	W81°37'49.28715"	74.61		74.6
SB-7	1961284.42	455917.66	N29°43'38.06920"	W81°37'51.24023"	74.90		74.9
SB-8	1960984.62	456375.06	N29°43'35.12611"	W81°37'46.03410"	69.03		69.0
SB-9	1960633.57	456167.87	N29°43'31.63993"	W81°37'48.36219"	66.58		66.5
SB-10	1961299.38	456431.04	N29°43'38.24495"	W81°37'45.41864"	72.21		72.2
SB-11	1961498.20	456395.31	N29°43'40.21114"	W81°37'45.83616"		75.93	74.4
SB-12	1961566.78	455549.22	N29°43'40.84435"	W81°37'55.43644"	78.85		78.8
SB-12A	1961574.12	455548.94	N29°43'40.91697"	W81°37'55.44006"		80.41	78.8
SB-13	1961385.45	455494.32	N29°43'39.04632"	W81°37'56.04786"	77.43		77.4
SB-14	1960896.46	455610.61	N29°43'34.21218"	W81°37'54.69857"	72.04		72.0
SB-15	1960670.07	455884.72	N29°43'31.98599"	W81°37'51.57572"	69.00		69.0

Southeastern Surveying®

APPENDIX E

Settlement Calculation

Ellis & Associates inc.
Environmental ■ Geotechnical ■ Materials Testing
Integrated Engineering Services Since 1970.
ellisassoc.com

Corporate
7064 Davis Creek Road, **Jacksonville, FL** 32256 P: (904) 880-0960 F: (904) 880-0970

Branch Locations:
Brunswick: 227 Rose Drive, Brunswick, GA 31520 P: (912) 279-0085 F: (912) 279-0086

PROJECT: Seminole Electric Gas Plant PROJECT NO.: 35-22956

CALC'D BY: Racaa Essa DATE: 7/10/16 CHK'D BY: D. Spangler DATE: 7/14/16

* Combustion Turbine Generator (CTG) 46' x 141.3' Footprint

Borings (SB2, SB5) Weight of foundation & equip = 9,897 kips

Pressure = $\frac{9897 \text{ Kips}}{(46 \times 141.3)\ ft^2}$ = 1.53 KSF

total Settlement = 0.99 in see attach SettlG output.

---

* Steam Turbine Generator (STG) 58.5 x 130.75 Footprint

Borings (SB6) Weight of foundation & equip. 10,490 kips

Pressure = $\frac{10,490}{58.5 \times 130.75}$ = 1.37 KSF

total Settlement = 0.96 in see attach SettlG out put.

HRSG & Stack (SB1, SB4) 56 x 172 Footprint

weight of foundation & equip 15,813 kips

Pressure = $\frac{15,813}{56 \times 172}$ = 1.64 KSF

total Settlement = 1.1 in see attach SettlG out put.

Tank (SB10) estimated @ 100 ft diameter
40 ft high.

water weight 62.4 x 40 = 2,496 ≈ 2.5 KSF

total Settlement = 1.5 in See attached SettlG out put.

---

5 Ft of Fill + concrete slab/shallow foundation area (SB8, SB9) $5 \times 115_{soil} + (2 \times 150)_{concrete} = 875$ used 0.9 KSF

Total Settlement = 0.67 in

see attached SettlG out put

```
*********************************************
*                                           *
*         SETTLEMENT ANALYSIS               *
*                                           *
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*                                           *
*    ORANGE, CA 92665.  (714) 998-4030      *
*                                           *
*********************************************
```

NUMBER OF LOADED AREAS = 1

NUMBER OF SOIL LAYERS = 7

NUMBER OF STRESS POINTS = 2

POISSONS RATIO = .35

STRESS DISTRIBUTION CODE = 3

0"2593-0002, CTG Structure "

0 LOADED SURFACES

SURFACE NUMBER	LOADING INTENSITY KSF	DEPTH FEET	CORNER CO-ORDINATES X1	Y1	X2	Y2	X3	Y3	X4	Y4
1	1.530	5.0	.0	.0	.0	46.0	140.0	46.0	140.0	.0

SETTLEMENT ANALYSIS

TABLE OF STRESS POINT COORDINATES

POINT NO.	X-COORDINATE	Y-COORDINATE, FEET
1	.0	.0
2	70.0	23.0

SETTLEMENT ANALYSIS

**** WESTERGAARD STRESS DISTRIBUTION ****

0 STRESS POINT NO. 1 2

DEPTH FEET	STRESS KSF	
8.5	.373	1.455
27.0	.325	1.087
39.5	.294	.886
57.0	.255	.674
74.5	.221	.524
79.5	.212	.489
91.0	.193	.421

SETTLEMENT ANALYSIS

0STRATUM	Z FT	H FT	G KCF	PO KSF	SOURCE AND OTHER INFORMATION
1	8.50	17.00	.1050	.892	Sands
2	27.00	20.00	.0530	2.315	Sands
3	39.50	5.00	.0380	2.940	clay
4	57.00	30.00	.0580	3.905	Sands
5	74.50	5.00	.0380	4.870	Silty/clayey
6	79.50	5.00	.0530	5.097	Sands
7	91.00	18.00	.0630	5.797	Marls

SETTLEMENT ANALYSIS

0 COMPRESSIBILITY DATA
LAYER

0 1 SLOPE OF F-P CURVE = .0021, FT.*FT./KIP
0 2 SLOPE OF F-P CURVE = .0015, FT.*FT./KIP
0 3 P, ksf .250 .500 1.000 2.000 4.000
0 F, in./in. .002 .017 .019 .025 .043
0 4 SLOPE OF F-P CURVE = .0004, FT.*FT./KIP
0 5 SLOPE OF F-P CURVE = .0086, FT.*FT./KIP
0 6 SLOPE OF F-P CURVE = .0012, FT.*FT./KIP
0 7 SLOPE OF F-P CURVE = .0006, FT.*FT./KIP

SETTLEMENT ANALYSIS

0SETTLEMENT (IN.)

0STRESS POINT NO.	1	2
0 STRATUM		
1	.16	.62
2	.12	.39
3	.16	.50
4	.04	.10
5	.11	.27
6	.02	.04
7	.03	.05
TOTAL SETTLEMENT	.63	1.97

****

**** Based on our experiance, correction factor of 1/3 is applied to the sands layers; thus total estimated settlment is =0.5+ (1.47/3) = 0.99 inch.

```
*********************************************
*                                           *
*          SETTLEMENT ANALYSIS              *
*                                           *
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*                                           *
*********************************************
```

NUMBER OF LOADED AREAS = 1

NUMBER OF SOIL LAYERS = 7

NUMBER OF STRESS POINTS = 2

POISSONS RATIO = .35

STRESS DISTRIBUTION CODE = 3

0"2593-0002, HRSG and Stacks"

0 LOADED SURFACES

SURFACE NUMBER	LOADING INTENSITY KSF	DEPTH FEET	CORNER CO-ORDINATES X1	Y1	X2	Y2	X3	Y3	X4	Y4
1	1.640	5.0	.0	.0	.0	56.0	172.0	56.0	172.0	.0

SETTLEMENT ANALYSIS

TABLE OF STRESS POINT COORDINATES

POINT NO.	X-COORDINATE	Y-COORDINATE, FEET
1	.0	.0
2	86.0	28.0

SETTLEMENT ANALYSIS

**** WESTERGAARD STRESS DISTRIBUTION ****

0 STRESS POINT NO. 1 2

DEPTH FEET	STRESS KSF	
6.0	.408	1.621
24.5	.364	1.285
39.5	.331	1.051
57.0	.295	.834
74.5	.262	.671
82.0	.249	.614
93.5	.231	.538

SETTLEMENT ANALYSIS

0STRATUM	Z FT	H FT	G KCF	PO KSF	SOURCE AND OTHER INFORMATION
1	6.00	12.00	.1050	.630	Sands
2	24.50	25.00	.0530	1.923	Sands
3	39.50	5.00	.0380	2.680	clay
4	57.00	30.00	.0580	3.645	Sands
5	74.50	5.00	.0380	4.610	Silty/clayey
6	82.00	10.00	.0530	4.970	Sands
7	93.50	13.00	.0630	5.644	Marls

SETTLEMENT ANALYSIS

0 COMPRESSIBILITY DATA
LAYER

0 1 SLOPE OF F-P CURVE = .0021, FT.*FT./KIP
0 2 SLOPE OF F-P CURVE = .0014, FT.*FT./KIP
0 3 P, ksf .250 .500 1.000 2.000 4.000
0 F, in./in. .002 .017 .019 .025 .043
0 4 SLOPE OF F-P CURVE = .0004, FT.*FT./KIP
0 5 SLOPE OF F-P CURVE = .0081, FT.*FT./KIP
0 6 SLOPE OF F-P CURVE = .0012, FT.*FT./KIP
0 7 SLOPE OF F-P CURVE = .0006, FT.*FT./KIP

SETTLEMENT ANALYSIS

0SETTLEMENT (IN.)

0STRESS POINT NO.	1	2
0 STRATUM		
1	.12	.49
2	.15	.54
3	.18	.59
4	.04	.12
5	.13	.33
6	.04	.09
7	.02	.05
TOTAL SETTLEMENT	.69	2.20

****

**** Based on our experiance, correction factor of 1/3 is applied to the sands layers; thus total estimated settlment is =0.59+ (1.62/3) = 1.13 inch.

```
*********************************************
*                                           *
*         SETTLEMENT ANALYSIS               *
*                                           *
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*                                           *
*********************************************
```

NUMBER OF LOADED AREAS = 1

NUMBER OF SOIL LAYERS = 7

NUMBER OF STRESS POINTS = 2

POISSONS RATIO = .35

STRESS DISTRIBUTION CODE = 3

0"2593-0002, STG "

0 LOADED SURFACES

SURFACE NUMBER	LOADING INTENSITY KSF	DEPTH FEET	CORNER CO-ORDINATES X1	Y1	X2	Y2	X3	Y3	X4	Y4
1	1.370	5.0	.0	.0	.0	60.0	130.0	60.0	130.0	.0

SETTLEMENT ANALYSIS

TABLE OF STRESS POINT COORDINATES

POINT NO.	X-COORDINATE	Y-COORDINATE, FEET
1	.0	.0
2	65.0	30.0

SETTLEMENT ANALYSIS

**** WESTERGAARD STRESS DISTRIBUTION ****

0 STRESS POINT NO. 1 2

DEPTH FEET	STRESS KSF	
6.0	.341	1.355
24.5	.305	1.079
39.5	.278	.883
57.0	.248	.698
74.5	.220	.555
79.5	.213	.521
91.0	.197	.453

SETTLEMENT ANALYSIS

0STRATUM	Z FT	H FT	G KCF	PO KSF	SOURCE AND OTHER INFORMATION
1	6.00	12.00	.1050	.630	Sands
2	24.50	25.00	.0530	1.923	Sands
3	39.50	5.00	.0380	2.680	clay
4	57.00	30.00	.0580	3.645	Sands
5	74.50	5.00	.0380	4.610	Silty/clayey
6	79.50	5.00	.0530	4.837	Sands
7	91.00	18.00	.0630	5.537	Marls

SETTLEMENT ANALYSIS

0 COMPRESSIBILITY DATA
LAYER

0 1 SLOPE OF F-P CURVE = .0022, FT.*FT./KIP
0 2 SLOPE OF F-P CURVE = .0015, FT.*FT./KIP
0 3 P, ksf .250 .500 1.000 2.000 4.000
0 F, in./in. .002 .017 .019 .025 .043
0 4 SLOPE OF F-P CURVE = .0004, FT.*FT./KIP
0 5 SLOPE OF F-P CURVE = .0091, FT.*FT./KIP
0 6 SLOPE OF F-P CURVE = .0013, FT.*FT./KIP
0 7 SLOPE OF F-P CURVE = .0006, FT.*FT./KIP

SETTLEMENT ANALYSIS

0SETTLEMENT (IN.)

0STRESS POINT NO.	1	2
0 STRATUM		
1	.11	.43
2	.14	.49
3	.15	.49
4	.04	.10
5	.12	.30
6	.02	.04
7	.03	.06
TOTAL SETTLEMENT	.60	1.91

****

**** Based on our experiance, correction factor of 1/3 is applied to the sands layers; thus total estimated settlment is =0.49+ (1.42/3) = 0.96 inch.

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*                                           *
*         SETTLEMENT ANALYSIS               *
*                                           *
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*                                           *
*    ORANGE, CA 92665.  (714) 998-4030      *
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```

NUMBER OF LOADED AREAS = 1

NUMBER OF SOIL LAYERS = 5

NUMBER OF STRESS POINTS = 2

POISSONS RATIO = .35

STRESS DISTRIBUTION CODE = 3

0"2593-0002, 500 by 140, 5 feet of fill, SB8/9 "

0 LOADED SURFACES

SURFACE NUMBER	LOADING INTENSITY KSF	DEPTH FEET	CORNER CO-ORDINATES X1	Y1	X2	Y2	X3	Y3	X4	Y4
1	.900	.0	.0	.0	.0	500.0	140.0	500.0	140.0	.0

SETTLEMENT ANALYSIS

TABLE OF STRESS POINT COORDINATES

POINT NO.	X-COORDINATE	Y-COORDINATE, FEET
1	.0	.0
2	70.0	250.0

SETTLEMENT ANALYSIS

**** WESTERGAARD STRESS DISTRIBUTION ****

0 STRESS POINT NO. 1 2

DEPTH FEET	STRESS KSF	
6.0	.222	.876
24.5	.213	.801
39.5	.205	.742
64.5	.193	.652
93.5	.179	.559

SETTLEMENT ANALYSIS

0STRATUM	Z FT	H FT	G KCF	PO KSF	SOURCE AND OTHER INFORMATION
1	6.00	12.00	.1050	.630	Sands
2	24.50	25.00	.0530	1.923	Sands
3	39.50	5.00	.0380	2.680	clay
4	64.50	45.00	.0530	3.967	Sands
5	93.50	13.00	.0630	5.569	Marls

SETTLEMENT ANALYSIS

0 COMPRESSIBILITY DATA
LAYER

0 1 SLOPE OF F-P CURVE = .0020, FT.*FT./KIP
0 2 SLOPE OF F-P CURVE = .0010, FT.*FT./KIP

0 3	P, ksf	.250	.500	1.000	2.000	4.000
0	F, in./in.	.002	.017	.019	.025	.043

0 4 SLOPE OF F-P CURVE = .0007, FT.*FT./KIP
0 5 SLOPE OF F-P CURVE = .0005, FT.*FT./KIP

SETTLEMENT ANALYSIS

0SETTLEMENT (IN.)

0STRESS POINT NO.	1	2
0 STRATUM		
1	.06	.25
2	.06	.24
3	.11	.41
4	.07	.25
5	.01	.04
TOTAL SETTLEMENT	.33	1.20

****

**** Based on our experiance, correction factor of 1/3 is applied to the sands layers; thus total estimated settlment is =0.41+ (0.79/3) = 0.67 inch.

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*         SETTLEMENT ANALYSIS               *
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NUMBER OF LOADED AREAS = 1

NUMBER OF SOIL LAYERS = 6

NUMBER OF STRESS POINTS = 2

POISSONS RATIO = .35

STRESS DISTRIBUTION CODE = 3

0"2593-0002, shallow foundations near SB12, SB13 "

0 LOADED SURFACES

SURFACE NUMBER	LOADING INTENSITY KSF	DEPTH FEET	CORNER CO-ORDINATES X1	Y1	X2	Y2	X3	Y3	X4	Y4
1	2.500	.0	.0	.0	.0	5.0	5.0	5.0	5.0	.0

SETTLEMENT ANALYSIS

TABLE OF STRESS POINT COORDINATES

POINT NO.	X-COORDINATE	Y-COORDINATE, FEET
1	.0	.0
2	2.5	2.5

SETTLEMENT ANALYSIS

**** WESTERGAARD STRESS DISTRIBUTION ****

0 STRESS POINT NO. 1 2

DEPTH FEET	STRESS KSF	
6.0	.338	.706
24.5	.061	.069
39.5	.026	.027
57.0	.013	.013
79.5	.007	.007
93.5	.005	.005

SETTLEMENT ANALYSIS

0STRATUM	Z FT	H FT	G KCF	PO KSF	SOURCE AND OTHER INFORMATION
1	6.00	12.00	.1050	.630	Sands
2	24.50	25.00	.0530	1.923	Sands
3	39.50	5.00	.0380	2.680	clay
4	57.00	30.00	.0580	3.645	Sands
5	79.50	15.00	.0380	4.800	Silty/clayey
6	93.50	13.00	.0630	5.494	Marls

SETTLEMENT ANALYSIS

0 COMPRESSIBILITY DATA
LAYER

0 1 SLOPE OF F-P CURVE = .0021, FT.*FT./KIP
0 2 SLOPE OF F-P CURVE = .0011, FT.*FT./KIP

0 3 P, ksf	.250	.500	1.000	2.000	4.000

0 F, in./in. .002 .017 .019 .025 .043
0 4 SLOPE OF F-P CURVE = .0004, FT.*FT./KIP
0 5 SLOPE OF F-P CURVE = .0091, FT.*FT./KIP
0 6 SLOPE OF F-P CURVE = .0006, FT.*FT./KIP

SETTLEMENT ANALYSIS

0SETTLEMENT (IN.)

0STRESS POINT NO.	1	2
0 STRATUM		
1	.10	.21
2	.02	.02
3	.01	.02
4	.00	.00
5	.01	.01
6	.00	.00
TOTAL SETTLEMENT	.15	.26

****

**** Based on our experiance, correction factor of 1/3 is applied to the sands layers; thus total estimated settlment is =0.02+ (0.24/3) = 0.1 inch.

```
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*         SETTLEMENT ANALYSIS               *
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*                                           *
*********************************************
```

NUMBER OF LOADED AREAS = 1

NUMBER OF SOIL LAYERS = 5

NUMBER OF STRESS POINTS = 2

POISSONS RATIO = .35

STRESS DISTRIBUTION CODE = 3

0"2593-0002, 100 foot diameter 40 high tank "

0 LOADED SURFACES

SURFACE NUMBER	LOADING INTENSITY KSF	DEPTH FEET	CORNER CO-ORDINATES X1	Y1	X2	Y2	X3	Y3	X4	Y4
1	2.500	.0	.0	.0	.0	100.0	100.0	100.0	100.0	.0

SETTLEMENT ANALYSIS

TABLE OF STRESS POINT COORDINATES

POINT NO.	X-COORDINATE	Y-COORDINATE, FEET
1	.0	.0
2	50.0	50.0

SETTLEMENT ANALYSIS

**** WESTERGAARD STRESS DISTRIBUTION ****

0 STRESS POINT NO. 1 2

DEPTH FEET	STRESS KSF	
6.0	.609	2.370
27.0	.553	1.932
44.5	.507	1.603
67.0	.451	1.250
93.5	.391	.933

SETTLEMENT ANALYSIS

0STRATUM	Z FT	H FT	G KCF	PO KSF	SOURCE AND OTHER INFORMATION
1	6.00	12.00	.1050	.630	Sands
2	27.00	30.00	.0530	2.055	Sands
3	44.50	5.00	.0380	2.945	clay
4	67.00	40.00	.0530	4.100	Sands
5	93.50	13.00	.0630	5.570	Marls

SETTLEMENT ANALYSIS

0 COMPRESSIBILITY DATA
LAYER

0 1 SLOPE OF F-P CURVE = .0022, FT.*FT./KIP
0 2 SLOPE OF F-P CURVE = .0011, FT.*FT./KIP

0 3 P, ksf	.250	.500	1.000	2.000	4.000	6.000
0 F, in./in.	.002	.017	.019	.025	.043	.050

0 4 SLOPE OF F-P CURVE = .0011, FT.*FT./KIP
0 5 SLOPE OF F-P CURVE = .0015, FT.*FT./KIP

SETTLEMENT ANALYSIS

0SETTLEMENT (IN.)

0STRESS POINT NO.	1	2
0 STRATUM		
1	.19	.75
2	.22	.76
3	.28	.71
4	.24	.66
5	.09	.22
TOTAL SETTLEMENT	1.02	3.10

****

**** Based on our experiance, correction factor of 1/3 is applied to the sands layers; thus total estimated settlment is =0.71+ (2.39/3) = 1.5 inch.

APPENDIX C

STORMWATER MANAGEMENT REPORT

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12740 GRAN BAY PARKWAY, SUITE 2140
JACKSONVILLE, FL 32258 USA

November 21st, 2017

SECI SGS SCCF Combined Cycle
Storm Water Management Summary Report

Overall Project Description

Seminole Electric Cooperative, Inc (SECI) is proposing to construct a 2-on-1 combined cycle power plant in Palatka, FL adjacent to the existing Seminole Generation Station (SGS) facility. The proposed plant consists of two (2) natural gas fired combustion turbines and one (1) steam turbine to produce energy for SECI users.

The project consists of three areas; the Seminole Combined Cycle Facility (SCCF) plant area, a construction laydown area, and a temporary construction parking area. The SCCF plant area consists of approximately 32-acres on the southeast portion of the Seminole Generating Station site. This area is currently wooded and is bordered by an existing plant to the north, northwest, and northeast, by delineated wetlands to the southeast, and by a wooded area to the south and southwest. The SCCF will be outside the limits of the existing delineated wetlands, maintaining a minimum buffer of 25-feet. An approximately 17.4-acre area located north of the SCCF plant area will be disturbed for construction laydown. Following construction, the construction laydown area will be utilized for future outages. The Stormwater Management system is designed to manage runoff from the SCCF plant area and the construction laydown area (total of approximately 50-acres) and will also receive runoff from a 5.6-acre area outside of the site boundary for a total basin area of approximately 55-acres.

The temporary craft parking area is approximately 5.6-acres and located north of the SCCF plant area. The construction parking area is currently composed of aggregate overgrown with vegetation. The construction parking area is south of an existing parking area, west of undisturbed uplands, north of the SCCF plant area, and northwest of the existing Seminole Generating Station cooling towers. A temporary stormwater management system is proposed to handle the runoff from this parking area during project construction.

Following completion of construction activities, the aggregate will be removed and the area will be seeded and allowed to revegetate. Because this area is minor and temporary in nature, the following report primarily describes the stormwater management system (SWMS) designed to handle the Site runoff. Detailed analysis of the temporary construction parking area is provided at the end of the report.

Pre-Development Storm Water System

The Site in the existing state is made up of four sub-basins, with runoff from each sub-basin predominately draining to the southeast. The pre-development storm water system consists of overland flow that either feeds in to existing plant south entrance roadside ditches or to the existing wetlands and wooded areas southeast of the proposed development area. In addition, an existing ditch adjacent to the existing substation contributes runoff to the entrance roadside ditches. The total pre-development basin area within proposed Site area that contributes runoff offsite is 50.1-acres. An additional offsite basin of 5.6-acres contributes runoff to the Site and ultimately discharges off site. The sub-basin areas and their impervious and pervious makeup are summarized in the table below.

Pre Development Phase Site Acreage & Surfacing						
Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	5.69	0%	5.69	0	0	0
SB-2	26.64	0%	26.64	0	0	0
SB-3	16.9	2%	16.64	0.26	0	0
SB-4	0.83	0%	0.83	0	0	0
Total Site	50.06	1%	49.8	0.26	0	0
OSB-1**	5.63	95%	0.28	5.35	0	0
Total Basin	55.69	10%	50.08	5.61	0	0
*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.						
**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing will be unchanged from pre-development condition.						

Reference Black & Veatch Calculation 190285.58.5406.1101 “Pre-Development Storm Water Analysis” for further details.

Proposed Storm Water Management System

The SCCF will be located in Putnam County, Florida. As such, the SCCF's stormwater management system (SWMS) must meet the Environmental Resource Permitting (ERP) criteria of Chapter 62-330, F.A.C., including the Environmental Resource Permit Applicant's Handbook, Volume II: for Use within the Geographic Limits of the St. Johns River Water Management District. The SCCF SWMS has been designed to meet all of the applicable criteria contained within these rules and established Best Management Practices (BMPs)

The storm water runoff from the proposed development area is designed to be routed via overland flow, ditches, and an underground storm sewer system to a dry retention pond, identified as Pond P-1 within the design drawings and calculations. The proposed location of the dry retention pond is of such that it is not located within 100 feet of any drinking water supply wells. The new storm water dry retention pond is designed with an emergency overflow structure to provide control of events that exceed the 25-year – 24-hour design storm event. As a best practice for power plant design, an analysis check was also performed for the 100-year – 24-hour storm event to ensure that equipment foundations and buildings would not flood during this event. The tables below provide a summary of the proposed sub-basin areas for the Post-Development condition.

Operation Phase Site Acreage & Surfacing						
Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	18.31	52%	8.86	8.72	0.00	0.73
SB-2	6.53	83%	1.08	5.45	0.00	0.00
SB-3	6.46	100%	0.00	6.46	0.00	0.00
SB-4	4.11	77%	0.95	3.06	0.10	0.00
SB-5	13.82	61%	5.41	3.84	0.47	4.10
SB-6	0.83	100%	0.00	0.83	0.00	0.00
Total Site	50.06	67%	16.30	28.36	0.57	4.83
OSB-1**	5.63	95%	0.28	5.35	0.00	0.00
Total Basin	55.69	70%	16.58	33.71	0.57	4.83
*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.						
**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from the pre-development condition.						

The dry retention pond is designed to provide water quality treatment through retention and infiltration. The storm water pond design criterion is to provide treatment for the greater of either 1.0-inch of runoff over the disturbed area, or 1.75-inches over the impervious area for online treatment systems. The 1.75-inches over the impervious area criteria was determined to be the governing design case for the Project; therefore, the proposed storm water pond retention volume was analyzed to accommodate this condition.

The storm water system was also designed to provide retention for the full 25-year – 24-hour storm event, and provide draw down of the treatment volume and the 25-year – 24 hour design storm event volume within 72-hours. The pond was also verified to ensure it is capable of providing retention for the 100-year – 24-hour storm event runoff without over topping the equipment/building foundations or discharging offsite except through the control structure.

A plant loop road will surround the main equipment areas (power block), and will be asphalt surfaced. Maintenance access roads will also be asphalt surfaced. The area inside the plant loop road around the equipment foundations will be aggregate surfaced, along with the switchyard, balance of plant equipment, and maintenance/laydown areas outside of the plant loop road. Areas outside the equipment areas will be grass vegetated along with the long term laydown areas except for associated access roads that will be aggregate surfaced. Areas to be vegetated will be vegetated with a Bahia grass mix, including the exterior embankment of the plant area and the pond slopes.

Non-Contact storm water (storm water runoff from areas not containing oil sources) from the power block and switchyard areas will be conveyed to the dry retention ponds via storm water sewer system, ditches and culverts. Non-Contact storm water from the areas outside of the power block including the Construction Laydown/Maintenance areas will be conveyed to the ponds via the combination of overland flow and the storm sewer system.

See Black & Veatch Drawing 185922-DS-1102 for a layout of the proposed Storm Water Management System Plan, and Black & Veatch Calculation 190285.58.5406.1102 Post Development Stormwater Analysis, for analysis of the storm water management system.

Contact Storm Water (Oily Waste Water): Contact storm water from areas with oil containing sources will be routed to an oil/water separator via an oil/water waste piping system. Secondary containment at the source will be provided for areas with large oil storage volumes. A normally closed valve will be provided on the secondary containments. After storm events in excess of 0.5-inches, secondary containments will be inspected for large presence of free-product or organic phase hydrocarbons. In the event no large presence is observed, the valve will be opened and the secondary containment will be drained to the oil/water separator. If a large presence is observed, it will be determined to either drain the containment to the oil/water separator or provide cleanup directly at the containment. Large presence of hydrocarbons will be defined during operation based on the economics of cleaning the spill up locally, or processing through the oil/water separator. The oil/water separator will be also used as the secondary containment for smaller oil storage volumes and sources. The oil/water separator will be sized during detail design to handle the largest single emergency spill from an open curbed area (non-normally closed valve containment), in addition to fire water and precipitation from the design storm event. The oil/water separator will be designed to provide treatment with an effluent concentration of 10 ppm or less within the effluent. The oily waste will be retained in the oil/water separator and transported offsite to an approved disposal or recycling facility in accordance with local regulatory requirements. The treated oil/water separator effluent will be discharged to the St. John's River after mixing with other waste streams within the existing plant waste water treatment facility. The oil/water separator will be equipped with oil content monitoring on the discharge. In the event the oil/water separator effluent approaches 10 ppm, the valve on the oil/water discharge will be closed. In the extreme event one of the secondary containment areas are breached, the contact storm water will be captured in the dry retention pond, and immediate cleanup will be provided. A detailed Spill Prevention Control and Countermeasure (SPCC) plan will be maintained on-site during construction activities, and further revised for plant operation.

Reference Black & Veatch Drawing 185922-DS-1103 "Contact Storm Water Management Plan" for further details

Earthwork Fill Operations: The plant area will be filled to a nominal elevation of 74.0-feet (NAVD88), with the "Top of Concrete" of the buildings and structures set at 75.0-feet (NAVD88), at a minimum. In addition, the roads are proposed with a Top of Pavement elevation of 74.5-feet. Plant areas outside the Plant Loop area will have a minimum perimeter berm elevation of 74.5-feet (NAVD88).

Proposed site elevations are designed to provide a balanced cut and fill site to the extent practical. After topsoil stripping, the northern sections of the site will cut down to the site elevations and the southern areas will be filled up to the site elevations. In addition, suitable clean fill material will be excavated from the pond and used to elevate and grade the plant area. If any additional fill material is required to be imported from off-site sources, the plant construction contractor will be required to appropriately test the imported fill material to assure that it is free of contamination per applicable requirements.

Dewatering Operations: During installation of deep foundations and deep underground utilities, well point and sock systems will be utilized to dewater the excavations to facilitate installation and backfill operations. The dewatering effluent waters will be released to the storm water retention pond. The ponds will allow for infiltration of the dewatering effluent, without release through the pond emergency overflow weir. Surface waters entering excavations will be collected in turbidity filtered sumps and released to the storm water retention ponds for further treatment. Further specific dewatering means and methods will be determined by the construction contractor.

Construction Storm Water Management System Establishment: The storm water retention pond will be developed after clearing and grubbing of the plant area, to provide a source of fill material and allow for management of the storm water during construction. The proposed dry retention pond is designed considering the construction laydown will remain permanently; therefore, the ponds are designed with the worst case impervious area condition. Temporary sumps and lift stations will be used during construction to manage the storm water until the permanent storm water management system is established.

A temporary craft parking area is proposed within the boundaries of the existing SGS facility. The proposed craft parking area is adjacent to an existing craft parking area that supports maintenance and outage work for the existing plant. The proposed craft parking area contains remnants of old aggregate surfacing and is overgrown with vegetation. To support craft parking during construction, the area will be surfaced with aggregate surfacing. A proposed temporary dry retention pond is designed along the west edge of the parking area to provide water quality treatment during the construction period. The retention pond is design to discharge via percolation with a factor safety of 4 against the field measured infiltration rates. At the end of construction the aggregate surfacing will be removed and the area will be re-vegetated.

At the end of construction once the majority of the grass vegetation and surfacing has been established, the temporary BMP devices will be removed. In addition the Contractor will be required to remove any sediment build up from the pond that occurred during construction activities, and a final infiltration test will be performed on the pond prior to placing the pond in to permanent operation.

Flood Protection: The site is located outside the 100-year flood plain as represented on FEMA Flood Insurance Rate Map 12107C0185C (see attached). The proposed nominal site elevation of 74-feet NAVD88 (74.97 NGVD29) is well above the nearest Base Flood Elevation of 4.03-feet NAVD88 (5.0 NGVD29, Reference FEMA Flood Insurance Rate Map 12107C0185C). The proposed dry retention pond is designed to contain the 100-year – 24-hour design storm event without overtopping of the pond bank and has a maximum peak elevation of 72.93-feet NAVD88 (73.9 NGVD29). As a power plant design best practice, the storm water management system is designed to stage the 100-year – 24-hour storm event below the road elevation of 74.50-feet NAVD88 (75.47 NGVD 29) without flooding of the equipment or building foundations.

Attachments

Drawings

The following listed drawings are included as supporting documents to the storm water design.

Drawing No.	Title
190285-1GAU-G1000	Overall Plot Plan
190285-1GAU-G1001A	Site Arrangement
190285-DS-1101	Pre-Development Storm Water Management Plan
190285-DS-1102	Proposed Storm Water Management Plan
190285-DS-1103	Contact Storm Water Management Plan
190285-DS-1104	Proposed Storm Water Management - Sections and Details
190285-DS-1105	Stormwater Pollution Prevention Plan
190285-DS-1106	Stormwater Pollution Prevention Plan – Sections and Details

Calculations

The following listed Calculations are included as supporting documents to the storm water design.

Calculation File No.	Title
190285.58.5406.1101	Pre-Development Storm Water Analysis
190285.58.5406.1102	Post- Development Storm Water Analysis
190285.58.5406.1103	Temporary Craft Parking Treatment Volume Analysis

PREDEVELOPMENT STORMWATER ANALYSIS

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CALCULATION RECORD

Client Name Seminole Electric Cooperative, Inc. Page 1 of 6

Project Name P2021 Combined Cycle Project No. 190285

Calculation Title Pre-Development Storm Water Analysis

Calculation No./File No. 58.5406.1101

Verification Method: ☒ Check and Review ☐ Alternate Calculations

Objective: The objective of this calculation is to analyze the Project site for a mean annual (2.3yr-24hr) storm event and a 25 year – 24 hour design storm event during the pre-development condition.

Unverified Assumptions Requiring Subsequent Verification

No.	Assumption	Verified By	Date
N/A	N/A	N/A	N/A

Refer to Page _____ of this calculation for additional assumptions.

This Section Used for Software-Generated Calculations

Program Name/Number HydroCAD Version 10.00

Standard B&V Application Used? ☒ Yes ☐ No

If no, list approved deviation permit number below and attach approved deviation permit.

JOHN C. BARRANCO, JR. LICENSE No 72091 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Barranco Jr., John
Date: 2017.11.21 11:49:37-05'00'

Review and Approval

Rev	Prepared By	Date	Verified By	Date	Approved By	Date
0	Mark Koegel	11/14/16	O Jankauskaite	11/15/16	J C Barranco, Jr.	11/15/16
1	Orinta Jankauskaite	12/15/16	J C Barranco, Jr.	12/15/16	J C Barranco, Jr.	12/15/16
2	Orinta Camacho	11/20/17	J C Barranco, Jr.	11/20/17	J C Barranco, Jr.	11/20/17
	Camacho	11/20/17	JCB	11/20/17	JCB	

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4.0 Conclustions	3
5.0 Defintion of Units & Constants	4
6.0 Analysis	5

Attachments
Attachment 1 - Rainfall Maps ..... 1 - 5
Attachment 2 - Basin Drawings ..... 1 - 2
Attachment 3 - HydroCad Report ..... 1 - 19

1.0 Objective

The purpose of this calculation is to analyze the Project site for both a mean annual (2.3yr -24hr) design storm event and a 25yr - 24hr design storm event during the pre-development conditions.

2.0 References

2.1 St. Johns River Water Management District, Permit Information Manual. October 1, 2013
2.2 Hydrology - Water Quantity and Quality Control. Wanielista, Martin.
2.3 Urban Hydrology for Small Watersheds, US Department of Agriculture, Soil Conservation Service, Technical Release 55, 1986
2.4 US Department of Agriculture, NRCS, Custom Soil Resource Report for Putnam County Area, Florida
2.5 Google Earth
2.6 AutoCAD MEP 2012
2.7 HydroCAD Ver 10.0 Software Solutions, LLC
2.8 Aerial Cartographics of America, Topographic Survey of the Seminole Generating Station, 6 Oct 2016

3.0 Design Basis

As a design basis, the existing site conditions were determined from the existing site survey (Ref. 2.8), a soils report (Ref. 2.4. Attch 3), and current aerial imagery from Google Earth (Ref. 2.5). Pre-development drainage basins were mapped in AutocCAD (Ref. 2.6) to determine basin delineation and acreage. The design storm event depths were determined from the data provided by NOAA Atlas Maps (Attch 1).

Using inputs from the design basis, HydroCAD was used to create the existing conditions model. Following the guidelines of Reference 2.1, both the mean annual (2.3-year, 24-hour) and 25-year, 24-hour storm event were modeled under existing conditions. Five outlet points were analyzed, 1S, 2S, 3S, 4S and 5S (Attch. 2). These are the five points where the pre-development flow concentrates at the proposed site boundaries.

4.0 Conclusions

The pre-development condition flow rate was calulated to be 33.25 cfs at Outfall 1S, 0.11 cfs at 2S, and 0.10 cfs at Outfall 3S for the 2.3 yr - 24 hr design storm event. The pre-development condition flow rate for the 25 yr - 24 hr design storm event was 63.28 cfs at Outfall 1S, 4.00 cfs at 2S, and 1.65 cfs at Outfall 3S.

Table 1 presents a summary of the sub basin acreage and surfacing. Table 2 presents a summary of the peak discharge rates for all 3 outfall locations.

Table 1

Pre Development Phase Site Acreage & Surfacing

Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	5.69	0%	5.69	0	0	0
SB-2	26.64	0%	26.64	0	0	0
SB-3	16.9	2%	16.64	0.26	0	0
SB-4	0.83	0%	0.83	0	0	0
Total Site	50.06	1%	49.8	0.26	0	0
OSB-1**	5.63	95%	0.28	5.35	0	0
Total Basin	55.69	10%	50.08	5.61	0	0

*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.

**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing will be unchanged from pre-development condition.

Table 2

OUTFALL	2.3 YR - 24 HR PRE DEVELOPMENT FLOW RATE TO OUTFALL	25 YR - 24 HR PRE DEVELOPMENT FLOW RATE TO OUTFALL	CONTRIBUTING BASINS
	CFS	CFS	
1S	33.25	63.28	*OSB-1 and SB-2
2S	0.11	4.00	SB-3 and SB-4
3S	0.10	1.65	SB-1

5.0 Definitions of Units and Constants

CN = NRCS Curve Number for Storm Water Runoff

CFS = Cubic feet per second

T_C = Time of Concentration

6.0 Analysis

General Drainage Design Criteria

Applicable Regulations:

The SCCF will be located in Putnam County, Florida. As such, the SCCF's stormwater management system (SWMS) must meet the Environmental resource Permittting (ERP) criteria of Chapter 62-330, F.A.C., including the Environmental Resource Permit Applicant's Handbook Volume I (General and Environmental) and the Environmental resource Permit Applicant's Handbook, Volume II: for Use within the Geographic Limits of the St. John's River Water Management District. The SCCF SWMS meets all of the applicable criteria contained within these rules.

6.1 Existing Conditions

Below are the inputs for the basins directly affected by the development. See the model files for the remaining input information. See the results in Attachment 3 for a flow diagram of the model.

6.1.1 General Inputs:

Rainfall: 4.45 inches (Mean Annual - 2.3 yr, 24hr)**

Rainfall: 7.68 inches (25yr, 24hr) (Att. 1)

Storm Type: Type II 24-hr

Unit Hydrograph: SCS (Ref.1)

**Mean Annual rainfall depth was interpolated between the 2 year- 24 hour rainfall depth and 5 year - 24 hour rainfall depth (Att 1)

2 year - 24 hr : 4.35 inches
5 year - 24 hr : 5.31 inches

$X_{2yr} := 2$ $Y_{2yr} := 4.35$

$X_{5yr} := 5$ $Y_{5yr} := 5.31$

Solve for Rainfall Depth at 2.3 years, using the linear interpolation equation:

$X_{2.3yr} := 2.3$ $Y_{2.3yr} := Y_{2yr} + \left(X_{2.3yr} - X_{2yr}\right) \cdot \frac{\left(Y_{5yr} - Y_{2yr}\right)}{\left(X_{5yr} - X_{2yr}\right)}$

$Y_{2.3yr} = 4.446$

6.1.2 Basin Information:

6.1.2.1 SB-1

Area = 5.69 Acres

CN = 41

Tc = 107.7 minutes

Description: SB-1 is an undeveloped area which is partially wooded and partially cleared.

6.1.2.2 SB-2

Area = 26.64 Acres

CN = 37

Tc = 108.7 minutes

Description: SB-2 is partially wooded and partially grassed area.

6.1.2.3 SB-3

Area = 16.90 Acres

CN = 37

Tc = 75 minutes

Description: SB-3 is an all wooded area with a small patch of aggregate surfaced area.

6.1.2.4 SB-4

Area = 0.83 Acres

CN = 36

Tc = 52.3 minutes

Description : SB-4 is an all wooded area.

6.1.2.5 OBS-1

Area = 5.63 Acres

CN = 95

Tc = 6.4 minutes

Description: OSB-1 is an existing switch yard with aggregate surfacing. The southeast corner has a small patch of a wooded area.

BLACK & VEATCH

Owner: Seminole Electric Cooperative, Inc.
Plant: P2021 Combined Cycle
Project No. 190285
File No. 58.5406.1101
Title: Pre-Development Stormwater Analysis

Prepared by: O. Camacho
Date: 11/20/17
Verified by:
Date:
Page No.

Attachments

(Existing Conditions REV 2 .xmcd)

BLACK & VEATCH

Owner: Seminole Electric Cooperative, Inc.
Plant: P2021 Combined Cycle
Project No. 190285
File No. 58.5406.1101
Title: Pre-Development Stormwater Analysis

Prepared by: M.Koegel
Date: 10/27/16
Verified by:
Date:
Page No.

Attachment 1

Rainfall Maps

NOAA Atlas 14, Volume 9, Version 2
Location name: Palatka, Florida, USA*
Latitude: 29.7446°, Longitude: -81.6425°
Elevation: 54.62 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

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	**0.527** (0.427-0.643)	**0.595** (0.482-0.726)	**0.702** (0.566-0.859)	**0.787** (0.631-0.966)	**0.898** (0.695-1.12)	**0.979** (0.743-1.24)	**1.06** (0.777-1.36)	**1.13** (0.800-1.50)	**1.23** (0.834-1.66)	**1.29** (0.861-1.78)
10-min	**0.772** (0.626-0.942)	**0.871** (0.705-1.06)	**1.03** (0.829-1.26)	**1.15** (0.925-1.41)	**1.31** (1.02-1.64)	**1.43** (1.09-1.81)	**1.55** (1.14-2.00)	**1.66** (1.17-2.19)	**1.79** (1.22-2.43)	**1.89** (1.26-2.60)
15-min	**0.941** (0.763-1.15)	**1.06** (0.860-1.30)	**1.25** (1.01-1.53)	**1.41** (1.13-1.73)	**1.60** (1.24-2.00)	**1.75** (1.33-2.21)	**1.89** (1.39-2.44)	**2.02** (1.43-2.67)	**2.19** (1.49-2.96)	**2.30** (1.54-3.18)
30-min	**1.42** (1.15-1.73)	**1.61** (1.30-1.97)	**1.91** (1.54-2.34)	**2.15** (1.72-2.64)	**2.45** (1.90-3.06)	**2.68** (2.03-3.39)	**2.89** (2.12-3.73)	**3.09** (2.19-4.08)	**3.34** (2.28-4.52)	**3.52** (2.35-4.85)
60-min	**1.82** (1.48-2.22)	**2.08** (1.69-2.54)	**2.51** (2.02-3.07)	**2.87** (2.30-3.52)	**3.36** (2.62-4.24)	**3.75** (2.86-4.78)	**4.14** (3.05-5.38)	**4.54** (3.22-6.04)	**5.08** (3.47-6.91)	**5.49** (3.66-7.56)
2-hr	**2.23** (1.82-2.69)	**2.55** (2.08-3.09)	**3.11** (2.53-3.77)	**3.59** (2.90-4.37)	**4.27** (3.36-5.37)	**4.82** (3.71-6.12)	**5.39** (4.01-6.99)	**5.99** (4.29-7.94)	**6.81** (4.69-9.23)	**7.45** (5.00-10.2)
3-hr	**2.42** (1.98-2.91)	**2.77** (2.28-3.35)	**3.41** (2.79-4.12)	**3.98** (3.24-4.83)	**4.83** (3.84-6.08)	**5.54** (4.29-7.04)	**6.29** (4.71-8.15)	**7.09** (5.11-9.40)	**8.23** (5.71-11.2)	**9.15** (6.16-12.5)
6-hr	**2.80** (2.32-3.35)	**3.20** (2.65-3.82)	**3.94** (3.25-4.71)	**4.63** (3.80-5.57)	**5.71** (4.61-7.20)	**6.65** (5.21-8.44)	**7.67** (5.81-9.93)	**8.80** (6.40-11.6)	**10.4** (7.30-14.1)	**11.8** (7.97-15.9)
12-hr	**3.31** (2.77-3.92)	**3.72** (3.11-4.42)	**4.52** (3.76-5.37)	**5.30** (4.38-6.32)	**6.54** (5.33-8.20)	**7.62** (6.04-9.62)	**8.83** (6.75-11.4)	**10.2** (7.47-13.4)	**12.1** (8.56-16.3)	**13.8** (9.39-18.5)
24-hr	**3.85** (3.25-4.52)	**4.35** (3.67-5.12)	**5.31** (4.46-6.25)	**6.22** (5.20-7.36)	**7.68** (6.30-9.55)	**8.95** (7.14-11.2)	**10.3** (7.97-13.2)	**11.9** (8.79-15.5)	**14.2** (10.1-18.9)	**16.0** (11.0-21.4)
2-day	**4.39** (3.74-5.11)	**5.09** (4.33-5.93)	**6.38** (5.40-7.45)	**7.58** (6.38-8.88)	**9.41** (7.76-11.6)	**11.0** (8.81-13.6)	**12.7** (9.82-16.0)	**14.5** (10.8-18.8)	**17.2** (12.3-22.8)	**19.4** (13.4-25.8)
3-day	**4.83** (4.13-5.59)	**5.63** (4.81-6.52)	**7.08** (6.03-8.22)	**8.42** (7.13-9.82)	**10.5** (8.67-12.8)	**12.2** (9.84-15.0)	**14.1** (11.0-17.7)	**16.1** (12.0-20.8)	**19.1** (13.7-25.1)	**21.5** (14.9-28.4)
4-day	**5.24** (4.50-6.05)	**6.06** (5.20-7.01)	**7.57** (6.47-8.77)	**8.97** (7.63-10.4)	**11.1** (9.24-13.5)	**12.9** (10.5-15.9)	**14.9** (11.6-18.7)	**17.1** (12.8-21.9)	**20.2** (14.5-26.5)	**22.7** (15.8-30.0)
7-day	**6.35** (5.50-7.28)	**7.15** (6.18-8.21)	**8.63** (7.43-9.93)	**10.0** (8.58-11.6)	**12.2** (10.2-14.7)	**14.0** (11.4-17.1)	**16.0** (12.6-20.0)	**18.2** (13.7-23.3)	**21.4** (15.5-28.0)	**24.0** (16.8-31.6)
10-day	**7.31** (6.36-8.35)	**8.13** (7.05-9.28)	**9.62** (8.32-11.0)	**11.0** (9.46-12.6)	**13.1** (11.0-15.8)	**14.9** (12.2-18.1)	**16.9** (13.3-20.9)	**19.1** (14.4-24.2)	**22.1** (16.1-28.8)	**24.7** (17.3-32.3)
20-day	**9.93** (8.71-11.2)	**11.0** (9.65-12.5)	**12.8** (11.2-14.6)	**14.4** (12.5-16.4)	**16.6** (14.0-19.6)	**18.4** (15.1-21.9)	**20.3** (16.0-24.7)	**22.2** (16.8-27.7)	**24.8** (18.1-31.8)	**26.9** (19.0-34.9)
30-day	**12.1** (10.7-13.7)	**13.5** (11.9-15.2)	**15.7** (13.8-17.7)	**17.5** (15.2-19.8)	**19.9** (16.7-23.1)	**21.7** (17.8-25.6)	**23.5** (18.6-28.3)	**25.3** (19.2-31.3)	**27.6** (20.1-35.1)	**29.3** (20.8-38.0)
45-day	**15.0** (13.3-16.8)	**16.7** (14.8-18.7)	**19.3** (17.0-21.7)	**21.4** (18.7-24.1)	**24.0** (20.2-27.6)	**25.9** (21.4-30.3)	**27.7** (22.1-33.2)	**29.5** (22.4-36.2)	**31.5** (23.0-39.8)	**33.0** (23.5-42.5)
60-day	**17.6** (15.6-19.6)	**19.5** (17.3-21.7)	**22.4** (19.9-25.1)	**24.7** (21.7-27.7)	**27.6** (23.3-31.5)	**29.6** (24.5-34.4)	**31.5** (25.1-37.4)	**33.2** (25.3-40.5)	**35.2** (25.7-44.2)	**36.5** (26.1-46.9)

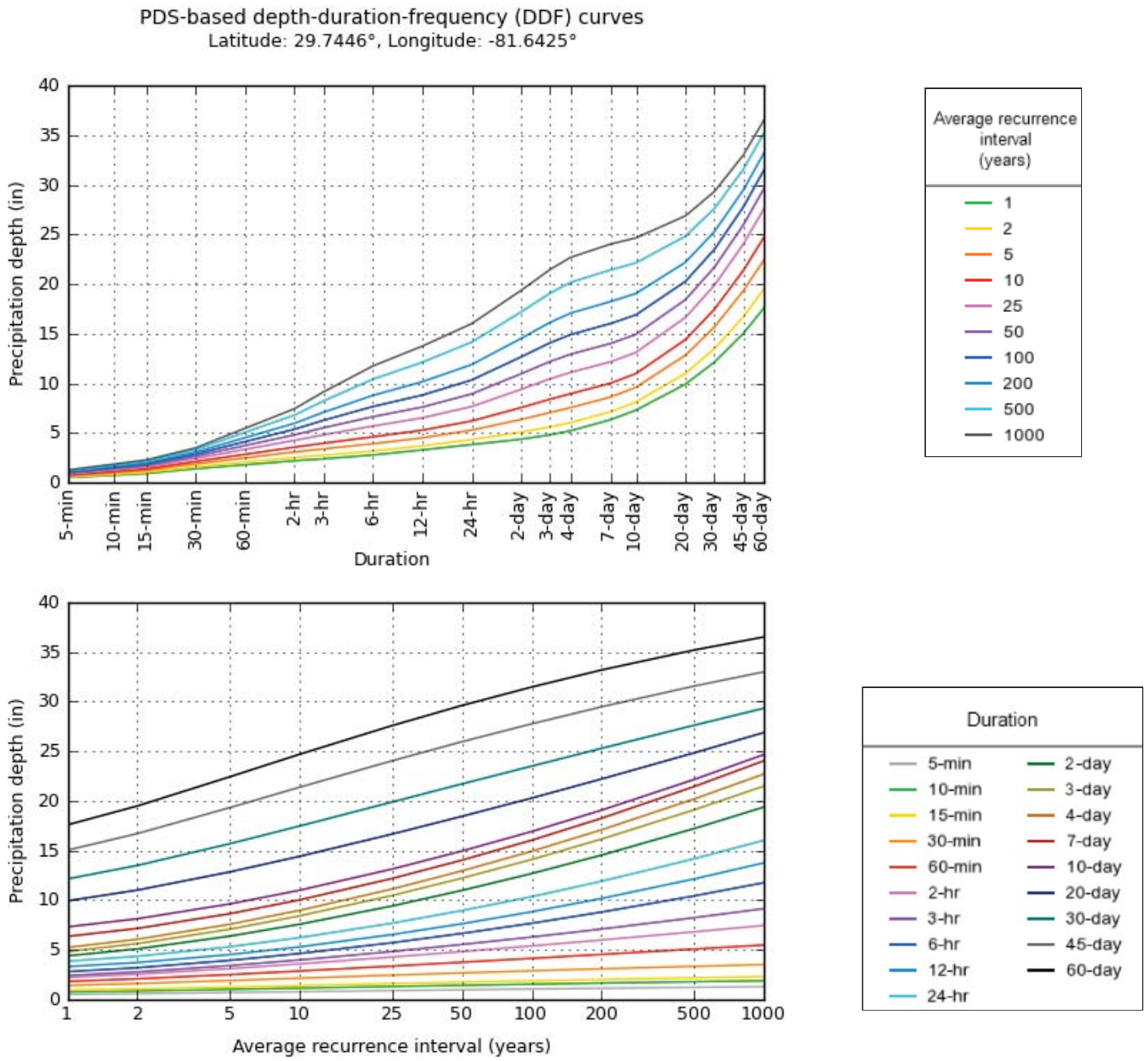
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



NOAA Atlas 14, Volume 9, Version 2

Created (GMT): Tue Oct 25 13:53:05 2016

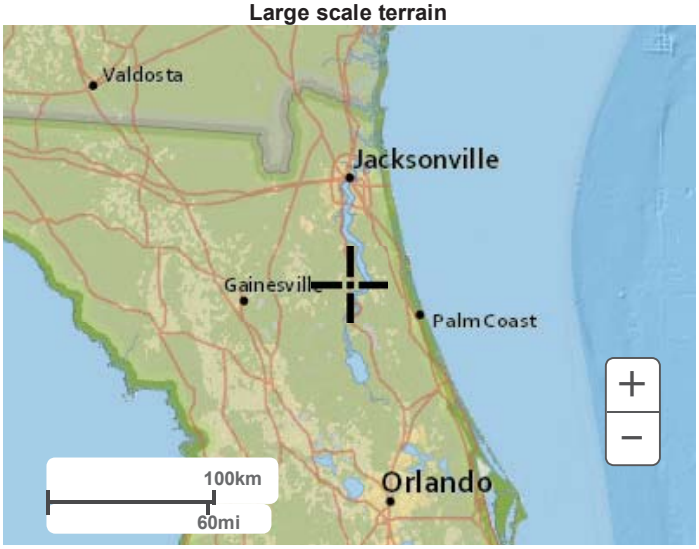
Back to Top

Maps & aerials

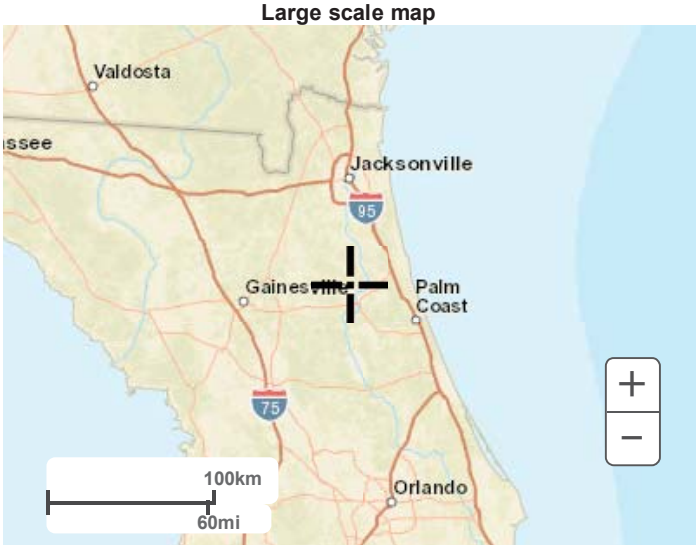
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



Back to Top

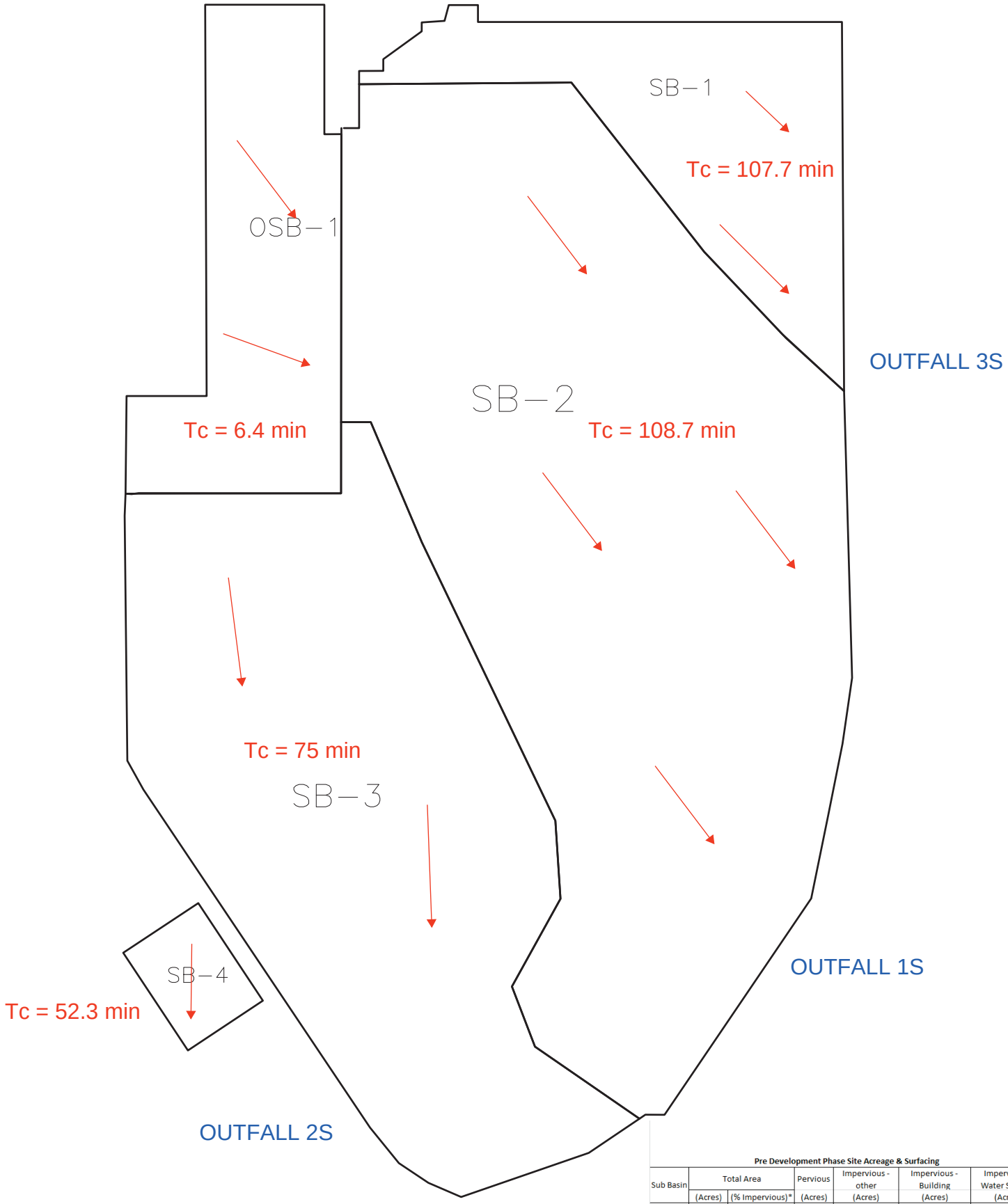
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Attachment 2

Basin Sketch

(Existing Conditions.xmcd)



Pre Development Phase Site Acreage & Surfacing

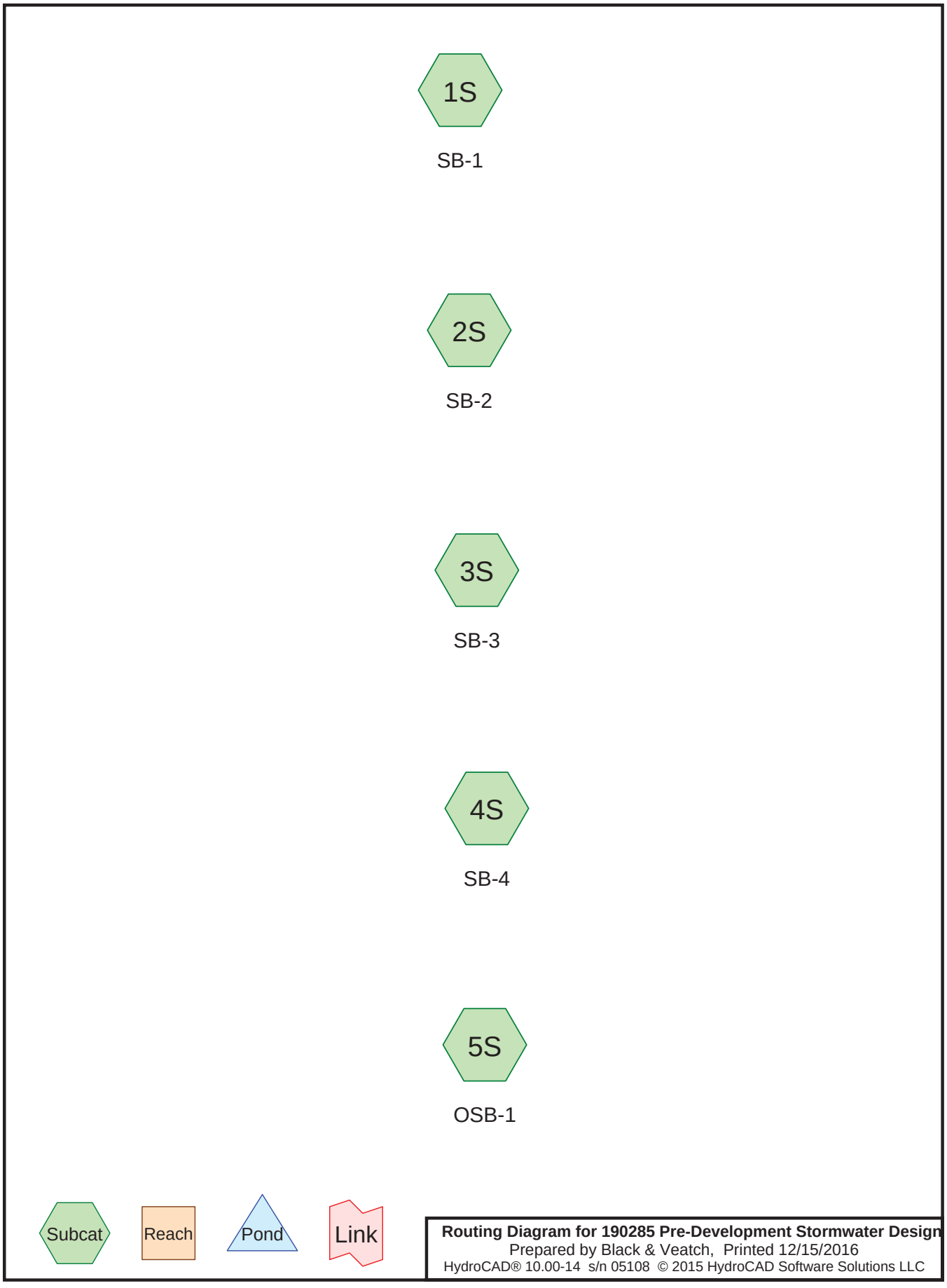
Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	5.69	0%	5.69	0	0	0
SB-2	26.64	0%	26.64	0	0	0
SB-3	16.9	2%	16.64	0.26	0	0
SB-4	0.83	0%	0.83	0	0	0
OSB-1**	5.63	95%	0.28	5.35	0	0
Total Site	55.69	10%	50.08	5.61	0	0

*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.

**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing will be unchanged from pre-development condition.

Attachment 3

HydroCAD Report



Routing Diagram for 190285 Pre-Development Stormwater Design
Prepared by Black & Veatch, Printed 12/15/2016
HydroCAD® 10.00-14 s/n 05108 © 2015 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.320	49	50-75% Grass cover, Fair, HSG A (2S)
5.350	98	Gravel surface, HSG A (5S)
0.260	98	Impervious Area, HSG A (3S)
2.100	49	Open Space, Fair, HSG A (1S)
46.660	36	Woods, Fair, HSG A (1S, 2S, 3S, 4S, 5S)
55.690	**43**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
55.690	HSG A	1S, 2S, 3S, 4S, 5S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
55.690		**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
1.320	0.000	0.000	0.000	0.000	1.320	50-75% Grass cover, Fair	2S
5.350	0.000	0.000	0.000	0.000	5.350	Gravel surface	5S
0.260	0.000	0.000	0.000	0.000	0.260	Impervious Area	3S
2.100	0.000	0.000	0.000	0.000	2.100	Open Space, Fair	1S
46.660	0.000	0.000	0.000	0.000	46.660	Woods, Fair	1S, 2S, 3S, 4S, 5S
55.690	**0.000**	**0.000**	**0.000**	**0.000**	**55.690**	**TOTAL AREA**	

Time span=2.00-50.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SB-1 Runoff Area=5.690 ac 0.00% Impervious Runoff Depth=0.15"
Flow Length=1,190' Tc=107.7 min CN=41 Runoff=0.10 cfs 0.073 af

Subcatchment2S: SB-2 Runoff Area=26.640 ac 0.00% Impervious Runoff Depth=0.06"
Flow Length=1,810' Tc=108.7 min CN=37 Runoff=0.16 cfs 0.134 af

Subcatchment3S: SB-3 Runoff Area=16.900 ac 1.54% Impervious Runoff Depth=0.06"
Flow Length=1,320' Tc=75.0 min CN=37 Runoff=0.11 cfs 0.085 af

Subcatchment4S: SB-4 Runoff Area=0.830 ac 0.00% Impervious Runoff Depth=0.04"
Flow Length=266' Slope=0.0100 '/' Tc=52.3 min CN=36 Runoff=0.00 cfs 0.003 af

Subcatchment5S: OSB-1 Runoff Area=5.630 ac 95.03% Impervious Runoff Depth=3.88"
Flow Length=396' Slope=0.0040 '/' Tc=6.4 min CN=95 Runoff=33.09 cfs 1.818 af

Total Runoff Area = 55.690 ac Runoff Volume = 2.114 af Average Runoff Depth = 0.46"
89.93% Pervious = 50.080 ac 10.07% Impervious = 5.610 ac

Summary for Subcatchment 1S: SB-1

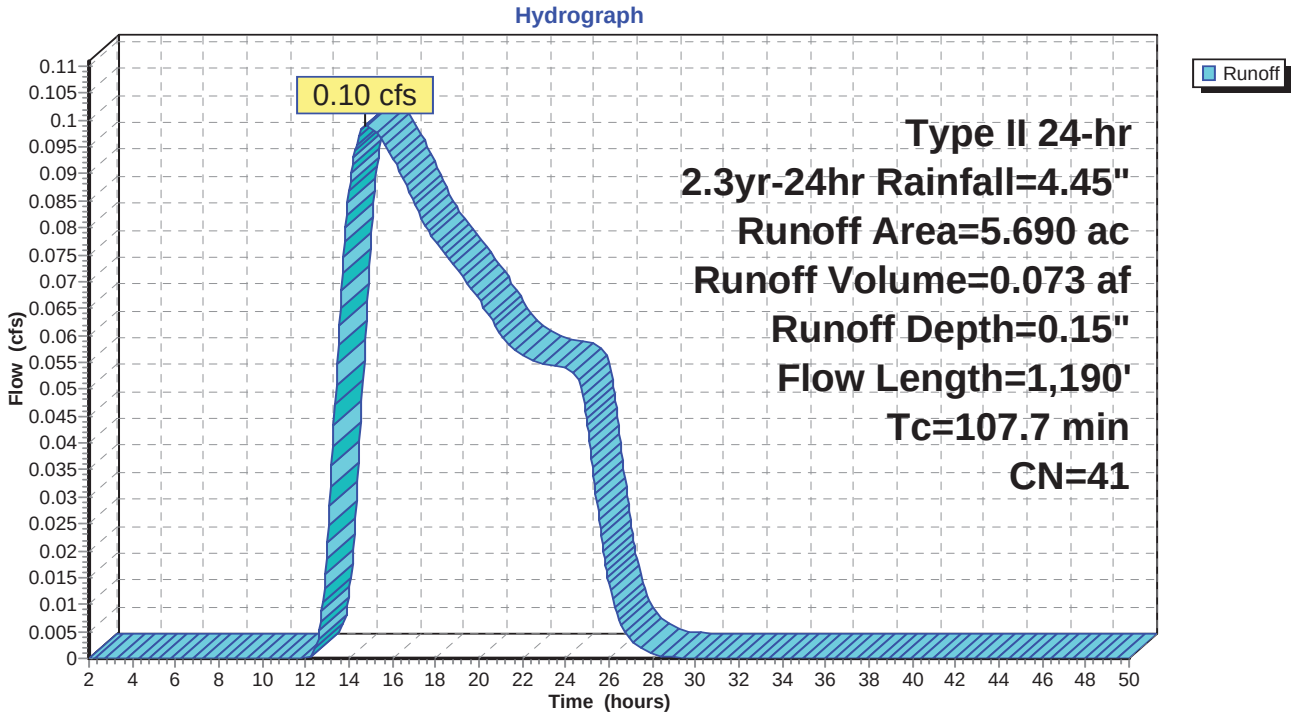
Runoff = 0.10 cfs @ 14.76 hrs, Volume= 0.073 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
*	2.100	49	Open Space, Fair, HSG A
	3.590	36	Woods, Fair, HSG A
	5.690	41	Weighted Average
	5.690		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
93.1	300	0.0030	0.05		**Sheet Flow, WOODS - LIGHT UNDERBRUSH** Woods: Light underbrush n= 0.400 P2= 4.50"
14.6	890	0.0040	1.02		**Shallow Concentrated Flow, UNPAVED AREA** Unpaved Kv= 16.1 fps
107.7	1,190	Total			

Subcatchment 1S: SB-1



Hydrograph for Subcatchment 1S: SB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.10	0.00	0.00	4.65	0.26	0.00	0.00
2.05	0.10	0.00	0.00	4.70	0.26	0.00	0.00
2.10	0.10	0.00	0.00	4.75	0.26	0.00	0.00
2.15	0.11	0.00	0.00	4.80	0.27	0.00	0.00
2.20	0.11	0.00	0.00	4.85	0.27	0.00	0.00
2.25	0.11	0.00	0.00	4.90	0.27	0.00	0.00
2.30	0.11	0.00	0.00	4.95	0.28	0.00	0.00
2.35	0.12	0.00	0.00	5.00	0.28	0.00	0.00
2.40	0.12	0.00	0.00	5.05	0.28	0.00	0.00
2.45	0.12	0.00	0.00	5.10	0.29	0.00	0.00
2.50	0.13	0.00	0.00	5.15	0.29	0.00	0.00
2.55	0.13	0.00	0.00	5.20	0.29	0.00	0.00
2.60	0.13	0.00	0.00	5.25	0.30	0.00	0.00
2.65	0.13	0.00	0.00	5.30	0.30	0.00	0.00
2.70	0.14	0.00	0.00	5.35	0.31	0.00	0.00
2.75	0.14	0.00	0.00	5.40	0.31	0.00	0.00
2.80	0.14	0.00	0.00	5.45	0.31	0.00	0.00
2.85	0.14	0.00	0.00	5.50	0.32	0.00	0.00
2.90	0.15	0.00	0.00	5.55	0.32	0.00	0.00
2.95	0.15	0.00	0.00	5.60	0.32	0.00	0.00
3.00	0.15	0.00	0.00	5.65	0.33	0.00	0.00
3.05	0.16	0.00	0.00	5.70	0.33	0.00	0.00
3.10	0.16	0.00	0.00	5.75	0.34	0.00	0.00
3.15	0.16	0.00	0.00	5.80	0.34	0.00	0.00
3.20	0.17	0.00	0.00	5.85	0.34	0.00	0.00
3.25	0.17	0.00	0.00	5.90	0.35	0.00	0.00
3.30	0.17	0.00	0.00	5.95	0.35	0.00	0.00
3.35	0.17	0.00	0.00	6.00	0.36	0.00	0.00
3.40	0.18	0.00	0.00	6.05	0.36	0.00	0.00
3.45	0.18	0.00	0.00	6.10	0.36	0.00	0.00
3.50	0.18	0.00	0.00	6.15	0.37	0.00	0.00
3.55	0.19	0.00	0.00	6.20	0.37	0.00	0.00
3.60	0.19	0.00	0.00	6.25	0.38	0.00	0.00
3.65	0.19	0.00	0.00	6.30	0.38	0.00	0.00
3.70	0.20	0.00	0.00	6.35	0.38	0.00	0.00
3.75	0.20	0.00	0.00	6.40	0.39	0.00	0.00
3.80	0.20	0.00	0.00	6.45	0.39	0.00	0.00
3.85	0.20	0.00	0.00	6.50	0.40	0.00	0.00
3.90	0.21	0.00	0.00	6.55	0.40	0.00	0.00
3.95	0.21	0.00	0.00	6.60	0.41	0.00	0.00
4.00	0.21	0.00	0.00	6.65	0.41	0.00	0.00
4.05	0.22	0.00	0.00	6.70	0.41	0.00	0.00
4.10	0.22	0.00	0.00	6.75	0.42	0.00	0.00
4.15	0.22	0.00	0.00	6.80	0.42	0.00	0.00
4.20	0.23	0.00	0.00	6.85	0.43	0.00	0.00
4.25	0.23	0.00	0.00	6.90	0.43	0.00	0.00
4.30	0.23	0.00	0.00	6.95	0.44	0.00	0.00
4.35	0.24	0.00	0.00	7.00	0.44	0.00	0.00
4.40	0.24	0.00	0.00	7.05	0.45	0.00	0.00
4.45	0.24	0.00	0.00	7.10	0.45	0.00	0.00
4.50	0.25	0.00	0.00	7.15	0.45	0.00	0.00
4.55	0.25	0.00	0.00	7.20	0.46	0.00	0.00
4.60	0.25	0.00	0.00	7.25	0.46	0.00	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.47	0.00	0.00	9.95	0.80	0.00	0.00
7.35	0.47	0.00	0.00	10.00	0.81	0.00	0.00
7.40	0.48	0.00	0.00	10.05	0.81	0.00	0.00
7.45	0.48	0.00	0.00	10.10	0.82	0.00	0.00
7.50	0.49	0.00	0.00	10.15	0.83	0.00	0.00
7.55	0.49	0.00	0.00	10.20	0.84	0.00	0.00
7.60	0.50	0.00	0.00	10.25	0.85	0.00	0.00
7.65	0.50	0.00	0.00	10.30	0.86	0.00	0.00
7.70	0.51	0.00	0.00	10.35	0.87	0.00	0.00
7.75	0.51	0.00	0.00	10.40	0.89	0.00	0.00
7.80	0.51	0.00	0.00	10.45	0.90	0.00	0.00
7.85	0.52	0.00	0.00	10.50	0.91	0.00	0.00
7.90	0.52	0.00	0.00	10.55	0.92	0.00	0.00
7.95	0.53	0.00	0.00	10.60	0.93	0.00	0.00
8.00	0.53	0.00	0.00	10.65	0.94	0.00	0.00
8.05	0.54	0.00	0.00	10.70	0.96	0.00	0.00
8.10	0.54	0.00	0.00	10.75	0.97	0.00	0.00
8.15	0.55	0.00	0.00	10.80	0.99	0.00	0.00
8.20	0.55	0.00	0.00	10.85	1.00	0.00	0.00
8.25	0.56	0.00	0.00	10.90	1.01	0.00	0.00
8.30	0.57	0.00	0.00	10.95	1.03	0.00	0.00
8.35	0.57	0.00	0.00	11.00	1.05	0.00	0.00
8.40	0.58	0.00	0.00	11.05	1.06	0.00	0.00
8.45	0.58	0.00	0.00	11.10	1.08	0.00	0.00
8.50	0.59	0.00	0.00	11.15	1.10	0.00	0.00
8.55	0.59	0.00	0.00	11.20	1.12	0.00	0.00
8.60	0.60	0.00	0.00	11.25	1.14	0.00	0.00
8.65	0.61	0.00	0.00	11.30	1.16	0.00	0.00
8.70	0.61	0.00	0.00	11.35	1.18	0.00	0.00
8.75	0.62	0.00	0.00	11.40	1.21	0.00	0.00
8.80	0.63	0.00	0.00	11.45	1.23	0.00	0.00
8.85	0.63	0.00	0.00	11.50	1.26	0.00	0.00
8.90	0.64	0.00	0.00	11.55	1.30	0.00	0.00
8.95	0.65	0.00	0.00	11.60	1.37	0.00	0.00
9.00	0.65	0.00	0.00	11.65	1.46	0.00	0.00
9.05	0.66	0.00	0.00	11.70	1.58	0.00	0.00
9.10	0.67	0.00	0.00	11.75	1.72	0.00	0.00
9.15	0.68	0.00	0.00	11.80	1.92	0.00	0.00
9.20	0.68	0.00	0.00	11.85	2.19	0.00	0.00
9.25	0.69	0.00	0.00	11.90	2.53	0.00	0.00
9.30	0.70	0.00	0.00	11.95	2.82	0.00	0.00
9.35	0.70	0.00	0.00	12.00	2.95	0.00	0.00
9.40	0.71	0.00	0.00	12.05	2.99	0.00	0.00
9.45	0.72	0.00	0.00	12.10	3.03	0.00	0.00
9.50	0.73	0.00	0.00	12.15	3.07	0.00	0.00
9.55	0.73	0.00	0.00	12.20	3.11	0.00	0.00
9.60	0.74	0.00	0.00	12.25	3.14	0.00	0.00
9.65	0.75	0.00	0.00	12.30	3.17	0.01	0.00
9.70	0.76	0.00	0.00	12.35	3.20	0.01	0.00
9.75	0.76	0.00	0.00	12.40	3.23	0.01	0.00
9.80	0.77	0.00	0.00	12.45	3.25	0.01	0.00
9.85	0.78	0.00	0.00	12.50	3.27	0.01	0.00
9.90	0.79	0.00	0.00	12.55	3.29	0.01	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	3.31	0.01	0.00	15.25	3.83	0.06	0.10
12.65	3.33	0.01	0.01	15.30	3.84	0.06	0.10
12.70	3.34	0.01	0.01	15.35	3.84	0.06	0.10
12.75	3.36	0.02	0.01	15.40	3.85	0.06	0.10
12.80	3.38	0.02	0.01	15.45	3.85	0.06	0.10
12.85	3.39	0.02	0.01	15.50	3.86	0.06	0.10
12.90	3.41	0.02	0.02	15.55	3.87	0.06	0.10
12.95	3.42	0.02	0.02	15.60	3.87	0.06	0.10
13.00	3.44	0.02	0.02	15.65	3.88	0.07	0.10
13.05	3.45	0.02	0.02	15.70	3.88	0.07	0.10
13.10	3.46	0.02	0.03	15.75	3.89	0.07	0.09
13.15	3.47	0.02	0.03	15.80	3.89	0.07	0.09
13.20	3.49	0.02	0.04	15.85	3.90	0.07	0.09
13.25	3.50	0.03	0.04	15.90	3.91	0.07	0.09
13.30	3.51	0.03	0.04	15.95	3.91	0.07	0.09
13.35	3.52	0.03	0.05	16.00	3.92	0.07	0.09
13.40	3.53	0.03	0.05	16.05	3.92	0.07	0.09
13.45	3.54	0.03	0.05	16.10	3.93	0.07	0.09
13.50	3.56	0.03	0.06	16.15	3.93	0.07	0.09
13.55	3.57	0.03	0.06	16.20	3.94	0.07	0.09
13.60	3.58	0.03	0.07	16.25	3.94	0.07	0.09
13.65	3.59	0.03	0.07	16.30	3.95	0.07	0.09
13.70	3.60	0.03	0.07	16.35	3.95	0.07	0.09
13.75	3.61	0.03	0.07	16.40	3.96	0.08	0.09
13.80	3.61	0.04	0.08	16.45	3.96	0.08	0.09
13.85	3.62	0.04	0.08	16.50	3.97	0.08	0.09
13.90	3.63	0.04	0.08	16.55	3.97	0.08	0.09
13.95	3.64	0.04	0.08	16.60	3.98	0.08	0.09
14.00	3.65	0.04	0.09	16.65	3.98	0.08	0.09
14.05	3.66	0.04	0.09	16.70	3.98	0.08	0.09
14.10	3.67	0.04	0.09	16.75	3.99	0.08	0.09
14.15	3.67	0.04	0.09	16.80	3.99	0.08	0.09
14.20	3.68	0.04	0.09	16.85	4.00	0.08	0.09
14.25	3.69	0.04	0.09	16.90	4.00	0.08	0.09
14.30	3.70	0.04	0.10	16.95	4.01	0.08	0.09
14.35	3.70	0.04	0.10	17.00	4.01	0.08	0.08
14.40	3.71	0.05	0.10	17.05	4.02	0.08	0.08
14.45	3.72	0.05	0.10	17.10	4.02	0.08	0.08
14.50	3.73	0.05	0.10	17.15	4.03	0.08	0.08
14.55	3.73	0.05	0.10	17.20	4.03	0.09	0.08
14.60	3.74	0.05	0.10	17.25	4.04	0.09	0.08
14.65	3.75	0.05	0.10	17.30	4.04	0.09	0.08
14.70	3.76	0.05	0.10	17.35	4.04	0.09	0.08
14.75	3.76	0.05	**0.10**	17.40	4.05	0.09	0.08
14.80	3.77	0.05	0.10	17.45	4.05	0.09	0.08
14.85	3.78	0.05	0.10	17.50	4.06	0.09	0.08
14.90	3.78	0.05	0.10	17.55	4.06	0.09	0.08
14.95	3.79	0.05	0.10	17.60	4.07	0.09	0.08
15.00	3.80	0.06	0.10	17.65	4.07	0.09	0.08
15.05	3.80	0.06	0.10	17.70	4.07	0.09	0.08
15.10	3.81	0.06	0.10	17.75	4.08	0.09	0.08
15.15	3.82	0.06	0.10	17.80	4.08	0.09	0.08
15.20	3.82	0.06	0.10	17.85	4.09	0.09	0.08

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	4.09	0.09	0.08	20.55	4.27	0.12	0.06
17.95	4.09	0.09	0.08	20.60	4.27	0.12	0.06
18.00	4.10	0.10	0.08	20.65	4.27	0.12	0.06
18.05	4.10	0.10	0.08	20.70	4.28	0.12	0.06
18.10	4.11	0.10	0.08	20.75	4.28	0.12	0.06
18.15	4.11	0.10	0.08	20.80	4.28	0.12	0.06
18.20	4.11	0.10	0.08	20.85	4.28	0.13	0.06
18.25	4.12	0.10	0.08	20.90	4.29	0.13	0.06
18.30	4.12	0.10	0.08	20.95	4.29	0.13	0.06
18.35	4.13	0.10	0.08	21.00	4.29	0.13	0.06
18.40	4.13	0.10	0.08	21.05	4.30	0.13	0.06
18.45	4.13	0.10	0.07	21.10	4.30	0.13	0.06
18.50	4.14	0.10	0.07	21.15	4.30	0.13	0.06
18.55	4.14	0.10	0.07	21.20	4.30	0.13	0.06
18.60	4.14	0.10	0.07	21.25	4.31	0.13	0.06
18.65	4.15	0.10	0.07	21.30	4.31	0.13	0.06
18.70	4.15	0.10	0.07	21.35	4.31	0.13	0.06
18.75	4.16	0.10	0.07	21.40	4.32	0.13	0.06
18.80	4.16	0.10	0.07	21.45	4.32	0.13	0.06
18.85	4.16	0.11	0.07	21.50	4.32	0.13	0.06
18.90	4.17	0.11	0.07	21.55	4.32	0.13	0.06
18.95	4.17	0.11	0.07	21.60	4.33	0.13	0.06
19.00	4.17	0.11	0.07	21.65	4.33	0.13	0.06
19.05	4.18	0.11	0.07	21.70	4.33	0.13	0.06
19.10	4.18	0.11	0.07	21.75	4.33	0.13	0.06
19.15	4.18	0.11	0.07	21.80	4.34	0.13	0.06
19.20	4.19	0.11	0.07	21.85	4.34	0.13	0.06
19.25	4.19	0.11	0.07	21.90	4.34	0.14	0.06
19.30	4.19	0.11	0.07	21.95	4.34	0.14	0.06
19.35	4.20	0.11	0.07	22.00	4.35	0.14	0.06
19.40	4.20	0.11	0.07	22.05	4.35	0.14	0.06
19.45	4.20	0.11	0.07	22.10	4.35	0.14	0.06
19.50	4.21	0.11	0.07	22.15	4.36	0.14	0.06
19.55	4.21	0.11	0.07	22.20	4.36	0.14	0.06
19.60	4.21	0.11	0.07	22.25	4.36	0.14	0.06
19.65	4.22	0.11	0.07	22.30	4.36	0.14	0.06
19.70	4.22	0.11	0.07	22.35	4.37	0.14	0.06
19.75	4.22	0.11	0.07	22.40	4.37	0.14	0.06
19.80	4.22	0.12	0.07	22.45	4.37	0.14	0.06
19.85	4.23	0.12	0.07	22.50	4.37	0.14	0.06
19.90	4.23	0.12	0.07	22.55	4.38	0.14	0.06
19.95	4.23	0.12	0.07	22.60	4.38	0.14	0.06
20.00	4.24	0.12	0.07	22.65	4.38	0.14	0.06
20.05	4.24	0.12	0.07	22.70	4.38	0.14	0.06
20.10	4.24	0.12	0.07	22.75	4.39	0.14	0.05
20.15	4.25	0.12	0.07	22.80	4.39	0.14	0.05
20.20	4.25	0.12	0.07	22.85	4.39	0.14	0.05
20.25	4.25	0.12	0.07	22.90	4.39	0.14	0.05
20.30	4.25	0.12	0.06	22.95	4.40	0.15	0.05
20.35	4.26	0.12	0.06	23.00	4.40	0.15	0.05
20.40	4.26	0.12	0.06	23.05	4.40	0.15	0.05
20.45	4.26	0.12	0.06	23.10	4.41	0.15	0.05
20.50	4.27	0.12	0.06	23.15	4.41	0.15	0.05

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	4.41	0.15	0.05	25.85	4.45	0.15	0.02
23.25	4.41	0.15	0.05	25.90	4.45	0.15	0.02
23.30	4.42	0.15	0.05	25.95	4.45	0.15	0.02
23.35	4.42	0.15	0.05	26.00	4.45	0.15	0.01
23.40	4.42	0.15	0.05	26.05	4.45	0.15	0.01
23.45	4.42	0.15	0.05	26.10	4.45	0.15	0.01
23.50	4.43	0.15	0.05	26.15	4.45	0.15	0.01
23.55	4.43	0.15	0.05	26.20	4.45	0.15	0.01
23.60	4.43	0.15	0.05	26.25	4.45	0.15	0.01
23.65	4.43	0.15	0.05	26.30	4.45	0.15	0.01
23.70	4.44	0.15	0.05	26.35	4.45	0.15	0.01
23.75	4.44	0.15	0.05	26.40	4.45	0.15	0.01
23.80	4.44	0.15	0.05	26.45	4.45	0.15	0.01
23.85	4.44	0.15	0.05	26.50	4.45	0.15	0.01
23.90	4.45	0.15	0.05	26.55	4.45	0.15	0.01
23.95	4.45	0.15	0.05	26.60	4.45	0.15	0.01
24.00	**4.45**	**0.15**	0.05	26.65	4.45	0.15	0.01
24.05	4.45	0.15	0.05	26.70	4.45	0.15	0.01
24.10	4.45	0.15	0.05	26.75	4.45	0.15	0.01
24.15	4.45	0.15	0.05	26.80	4.45	0.15	0.00
24.20	4.45	0.15	0.05	26.85	4.45	0.15	0.00
24.25	4.45	0.15	0.05	26.90	4.45	0.15	0.00
24.30	4.45	0.15	0.05	26.95	4.45	0.15	0.00
24.35	4.45	0.15	0.05	27.00	4.45	0.15	0.00
24.40	4.45	0.15	0.05	27.05	4.45	0.15	0.00
24.45	4.45	0.15	0.05	27.10	4.45	0.15	0.00
24.50	4.45	0.15	0.05	27.15	4.45	0.15	0.00
24.55	4.45	0.15	0.05	27.20	4.45	0.15	0.00
24.60	4.45	0.15	0.05	27.25	4.45	0.15	0.00
24.65	4.45	0.15	0.05	27.30	4.45	0.15	0.00
24.70	4.45	0.15	0.05	27.35	4.45	0.15	0.00
24.75	4.45	0.15	0.05	27.40	4.45	0.15	0.00
24.80	4.45	0.15	0.05	27.45	4.45	0.15	0.00
24.85	4.45	0.15	0.05	27.50	4.45	0.15	0.00
24.90	4.45	0.15	0.05	27.55	4.45	0.15	0.00
24.95	4.45	0.15	0.04	27.60	4.45	0.15	0.00
25.00	4.45	0.15	0.04	27.65	4.45	0.15	0.00
25.05	4.45	0.15	0.04	27.70	4.45	0.15	0.00
25.10	4.45	0.15	0.04	27.75	4.45	0.15	0.00
25.15	4.45	0.15	0.04	27.80	4.45	0.15	0.00
25.20	4.45	0.15	0.04	27.85	4.45	0.15	0.00
25.25	4.45	0.15	0.04	27.90	4.45	0.15	0.00
25.30	4.45	0.15	0.03	27.95	4.45	0.15	0.00
25.35	4.45	0.15	0.03	28.00	4.45	0.15	0.00
25.40	4.45	0.15	0.03	28.05	4.45	0.15	0.00
25.45	4.45	0.15	0.03	28.10	4.45	0.15	0.00
25.50	4.45	0.15	0.03	28.15	4.45	0.15	0.00
25.55	4.45	0.15	0.03	28.20	4.45	0.15	0.00
25.60	4.45	0.15	0.02	28.25	4.45	0.15	0.00
25.65	4.45	0.15	0.02	28.30	4.45	0.15	0.00
25.70	4.45	0.15	0.02	28.35	4.45	0.15	0.00
25.75	4.45	0.15	0.02	28.40	4.45	0.15	0.00
25.80	4.45	0.15	0.02	28.45	4.45	0.15	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	4.45	0.15	0.00	31.15	4.45	0.15	0.00
28.55	4.45	0.15	0.00	31.20	4.45	0.15	0.00
28.60	4.45	0.15	0.00	31.25	4.45	0.15	0.00
28.65	4.45	0.15	0.00	31.30	4.45	0.15	0.00
28.70	4.45	0.15	0.00	31.35	4.45	0.15	0.00
28.75	4.45	0.15	0.00	31.40	4.45	0.15	0.00
28.80	4.45	0.15	0.00	31.45	4.45	0.15	0.00
28.85	4.45	0.15	0.00	31.50	4.45	0.15	0.00
28.90	4.45	0.15	0.00	31.55	4.45	0.15	0.00
28.95	4.45	0.15	0.00	31.60	4.45	0.15	0.00
29.00	4.45	0.15	0.00	31.65	4.45	0.15	0.00
29.05	4.45	0.15	0.00	31.70	4.45	0.15	0.00
29.10	4.45	0.15	0.00	31.75	4.45	0.15	0.00
29.15	4.45	0.15	0.00	31.80	4.45	0.15	0.00
29.20	4.45	0.15	0.00	31.85	4.45	0.15	0.00
29.25	4.45	0.15	0.00	31.90	4.45	0.15	0.00
29.30	4.45	0.15	0.00	31.95	4.45	0.15	0.00
29.35	4.45	0.15	0.00	32.00	4.45	0.15	0.00
29.40	4.45	0.15	0.00	32.05	4.45	0.15	0.00
29.45	4.45	0.15	0.00	32.10	4.45	0.15	0.00
29.50	4.45	0.15	0.00	32.15	4.45	0.15	0.00
29.55	4.45	0.15	0.00	32.20	4.45	0.15	0.00
29.60	4.45	0.15	0.00	32.25	4.45	0.15	0.00
29.65	4.45	0.15	0.00	32.30	4.45	0.15	0.00
29.70	4.45	0.15	0.00	32.35	4.45	0.15	0.00
29.75	4.45	0.15	0.00	32.40	4.45	0.15	0.00
29.80	4.45	0.15	0.00	32.45	4.45	0.15	0.00
29.85	4.45	0.15	0.00	32.50	4.45	0.15	0.00
29.90	4.45	0.15	0.00	32.55	4.45	0.15	0.00
29.95	4.45	0.15	0.00	32.60	4.45	0.15	0.00
30.00	4.45	0.15	0.00	32.65	4.45	0.15	0.00
30.05	4.45	0.15	0.00	32.70	4.45	0.15	0.00
30.10	4.45	0.15	0.00	32.75	4.45	0.15	0.00
30.15	4.45	0.15	0.00	32.80	4.45	0.15	0.00
30.20	4.45	0.15	0.00	32.85	4.45	0.15	0.00
30.25	4.45	0.15	0.00	32.90	4.45	0.15	0.00
30.30	4.45	0.15	0.00	32.95	4.45	0.15	0.00
30.35	4.45	0.15	0.00	33.00	4.45	0.15	0.00
30.40	4.45	0.15	0.00	33.05	4.45	0.15	0.00
30.45	4.45	0.15	0.00	33.10	4.45	0.15	0.00
30.50	4.45	0.15	0.00	33.15	4.45	0.15	0.00
30.55	4.45	0.15	0.00	33.20	4.45	0.15	0.00
30.60	4.45	0.15	0.00	33.25	4.45	0.15	0.00
30.65	4.45	0.15	0.00	33.30	4.45	0.15	0.00
30.70	4.45	0.15	0.00	33.35	4.45	0.15	0.00
30.75	4.45	0.15	0.00	33.40	4.45	0.15	0.00
30.80	4.45	0.15	0.00	33.45	4.45	0.15	0.00
30.85	4.45	0.15	0.00	33.50	4.45	0.15	0.00
30.90	4.45	0.15	0.00	33.55	4.45	0.15	0.00
30.95	4.45	0.15	0.00	33.60	4.45	0.15	0.00
31.00	4.45	0.15	0.00	33.65	4.45	0.15	0.00
31.05	4.45	0.15	0.00	33.70	4.45	0.15	0.00
31.10	4.45	0.15	0.00	33.75	4.45	0.15	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	4.45	0.15	0.00	36.45	4.45	0.15	0.00
33.85	4.45	0.15	0.00	36.50	4.45	0.15	0.00
33.90	4.45	0.15	0.00	36.55	4.45	0.15	0.00
33.95	4.45	0.15	0.00	36.60	4.45	0.15	0.00
34.00	4.45	0.15	0.00	36.65	4.45	0.15	0.00
34.05	4.45	0.15	0.00	36.70	4.45	0.15	0.00
34.10	4.45	0.15	0.00	36.75	4.45	0.15	0.00
34.15	4.45	0.15	0.00	36.80	4.45	0.15	0.00
34.20	4.45	0.15	0.00	36.85	4.45	0.15	0.00
34.25	4.45	0.15	0.00	36.90	4.45	0.15	0.00
34.30	4.45	0.15	0.00	36.95	4.45	0.15	0.00
34.35	4.45	0.15	0.00	37.00	4.45	0.15	0.00
34.40	4.45	0.15	0.00	37.05	4.45	0.15	0.00
34.45	4.45	0.15	0.00	37.10	4.45	0.15	0.00
34.50	4.45	0.15	0.00	37.15	4.45	0.15	0.00
34.55	4.45	0.15	0.00	37.20	4.45	0.15	0.00
34.60	4.45	0.15	0.00	37.25	4.45	0.15	0.00
34.65	4.45	0.15	0.00	37.30	4.45	0.15	0.00
34.70	4.45	0.15	0.00	37.35	4.45	0.15	0.00
34.75	4.45	0.15	0.00	37.40	4.45	0.15	0.00
34.80	4.45	0.15	0.00	37.45	4.45	0.15	0.00
34.85	4.45	0.15	0.00	37.50	4.45	0.15	0.00
34.90	4.45	0.15	0.00	37.55	4.45	0.15	0.00
34.95	4.45	0.15	0.00	37.60	4.45	0.15	0.00
35.00	4.45	0.15	0.00	37.65	4.45	0.15	0.00
35.05	4.45	0.15	0.00	37.70	4.45	0.15	0.00
35.10	4.45	0.15	0.00	37.75	4.45	0.15	0.00
35.15	4.45	0.15	0.00	37.80	4.45	0.15	0.00
35.20	4.45	0.15	0.00	37.85	4.45	0.15	0.00
35.25	4.45	0.15	0.00	37.90	4.45	0.15	0.00
35.30	4.45	0.15	0.00	37.95	4.45	0.15	0.00
35.35	4.45	0.15	0.00	38.00	4.45	0.15	0.00
35.40	4.45	0.15	0.00	38.05	4.45	0.15	0.00
35.45	4.45	0.15	0.00	38.10	4.45	0.15	0.00
35.50	4.45	0.15	0.00	38.15	4.45	0.15	0.00
35.55	4.45	0.15	0.00	38.20	4.45	0.15	0.00
35.60	4.45	0.15	0.00	38.25	4.45	0.15	0.00
35.65	4.45	0.15	0.00	38.30	4.45	0.15	0.00
35.70	4.45	0.15	0.00	38.35	4.45	0.15	0.00
35.75	4.45	0.15	0.00	38.40	4.45	0.15	0.00
35.80	4.45	0.15	0.00	38.45	4.45	0.15	0.00
35.85	4.45	0.15	0.00	38.50	4.45	0.15	0.00
35.90	4.45	0.15	0.00	38.55	4.45	0.15	0.00
35.95	4.45	0.15	0.00	38.60	4.45	0.15	0.00
36.00	4.45	0.15	0.00	38.65	4.45	0.15	0.00
36.05	4.45	0.15	0.00	38.70	4.45	0.15	0.00
36.10	4.45	0.15	0.00	38.75	4.45	0.15	0.00
36.15	4.45	0.15	0.00	38.80	4.45	0.15	0.00
36.20	4.45	0.15	0.00	38.85	4.45	0.15	0.00
36.25	4.45	0.15	0.00	38.90	4.45	0.15	0.00
36.30	4.45	0.15	0.00	38.95	4.45	0.15	0.00
36.35	4.45	0.15	0.00	39.00	4.45	0.15	0.00
36.40	4.45	0.15	0.00	39.05	4.45	0.15	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	4.45	0.15	0.00	41.75	4.45	0.15	0.00
39.15	4.45	0.15	0.00	41.80	4.45	0.15	0.00
39.20	4.45	0.15	0.00	41.85	4.45	0.15	0.00
39.25	4.45	0.15	0.00	41.90	4.45	0.15	0.00
39.30	4.45	0.15	0.00	41.95	4.45	0.15	0.00
39.35	4.45	0.15	0.00	42.00	4.45	0.15	0.00
39.40	4.45	0.15	0.00	42.05	4.45	0.15	0.00
39.45	4.45	0.15	0.00	42.10	4.45	0.15	0.00
39.50	4.45	0.15	0.00	42.15	4.45	0.15	0.00
39.55	4.45	0.15	0.00	42.20	4.45	0.15	0.00
39.60	4.45	0.15	0.00	42.25	4.45	0.15	0.00
39.65	4.45	0.15	0.00	42.30	4.45	0.15	0.00
39.70	4.45	0.15	0.00	42.35	4.45	0.15	0.00
39.75	4.45	0.15	0.00	42.40	4.45	0.15	0.00
39.80	4.45	0.15	0.00	42.45	4.45	0.15	0.00
39.85	4.45	0.15	0.00	42.50	4.45	0.15	0.00
39.90	4.45	0.15	0.00	42.55	4.45	0.15	0.00
39.95	4.45	0.15	0.00	42.60	4.45	0.15	0.00
40.00	4.45	0.15	0.00	42.65	4.45	0.15	0.00
40.05	4.45	0.15	0.00	42.70	4.45	0.15	0.00
40.10	4.45	0.15	0.00	42.75	4.45	0.15	0.00
40.15	4.45	0.15	0.00	42.80	4.45	0.15	0.00
40.20	4.45	0.15	0.00	42.85	4.45	0.15	0.00
40.25	4.45	0.15	0.00	42.90	4.45	0.15	0.00
40.30	4.45	0.15	0.00	42.95	4.45	0.15	0.00
40.35	4.45	0.15	0.00	43.00	4.45	0.15	0.00
40.40	4.45	0.15	0.00	43.05	4.45	0.15	0.00
40.45	4.45	0.15	0.00	43.10	4.45	0.15	0.00
40.50	4.45	0.15	0.00	43.15	4.45	0.15	0.00
40.55	4.45	0.15	0.00	43.20	4.45	0.15	0.00
40.60	4.45	0.15	0.00	43.25	4.45	0.15	0.00
40.65	4.45	0.15	0.00	43.30	4.45	0.15	0.00
40.70	4.45	0.15	0.00	43.35	4.45	0.15	0.00
40.75	4.45	0.15	0.00	43.40	4.45	0.15	0.00
40.80	4.45	0.15	0.00	43.45	4.45	0.15	0.00
40.85	4.45	0.15	0.00	43.50	4.45	0.15	0.00
40.90	4.45	0.15	0.00	43.55	4.45	0.15	0.00
40.95	4.45	0.15	0.00	43.60	4.45	0.15	0.00
41.00	4.45	0.15	0.00	43.65	4.45	0.15	0.00
41.05	4.45	0.15	0.00	43.70	4.45	0.15	0.00
41.10	4.45	0.15	0.00	43.75	4.45	0.15	0.00
41.15	4.45	0.15	0.00	43.80	4.45	0.15	0.00
41.20	4.45	0.15	0.00	43.85	4.45	0.15	0.00
41.25	4.45	0.15	0.00	43.90	4.45	0.15	0.00
41.30	4.45	0.15	0.00	43.95	4.45	0.15	0.00
41.35	4.45	0.15	0.00	44.00	4.45	0.15	0.00
41.40	4.45	0.15	0.00	44.05	4.45	0.15	0.00
41.45	4.45	0.15	0.00	44.10	4.45	0.15	0.00
41.50	4.45	0.15	0.00	44.15	4.45	0.15	0.00
41.55	4.45	0.15	0.00	44.20	4.45	0.15	0.00
41.60	4.45	0.15	0.00	44.25	4.45	0.15	0.00
41.65	4.45	0.15	0.00	44.30	4.45	0.15	0.00
41.70	4.45	0.15	0.00	44.35	4.45	0.15	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	4.45	0.15	0.00	47.05	4.45	0.15	0.00
44.45	4.45	0.15	0.00	47.10	4.45	0.15	0.00
44.50	4.45	0.15	0.00	47.15	4.45	0.15	0.00
44.55	4.45	0.15	0.00	47.20	4.45	0.15	0.00
44.60	4.45	0.15	0.00	47.25	4.45	0.15	0.00
44.65	4.45	0.15	0.00	47.30	4.45	0.15	0.00
44.70	4.45	0.15	0.00	47.35	4.45	0.15	0.00
44.75	4.45	0.15	0.00	47.40	4.45	0.15	0.00
44.80	4.45	0.15	0.00	47.45	4.45	0.15	0.00
44.85	4.45	0.15	0.00	47.50	4.45	0.15	0.00
44.90	4.45	0.15	0.00	47.55	4.45	0.15	0.00
44.95	4.45	0.15	0.00	47.60	4.45	0.15	0.00
45.00	4.45	0.15	0.00	47.65	4.45	0.15	0.00
45.05	4.45	0.15	0.00	47.70	4.45	0.15	0.00
45.10	4.45	0.15	0.00	47.75	4.45	0.15	0.00
45.15	4.45	0.15	0.00	47.80	4.45	0.15	0.00
45.20	4.45	0.15	0.00	47.85	4.45	0.15	0.00
45.25	4.45	0.15	0.00	47.90	4.45	0.15	0.00
45.30	4.45	0.15	0.00	47.95	4.45	0.15	0.00
45.35	4.45	0.15	0.00	48.00	4.45	0.15	0.00
45.40	4.45	0.15	0.00	48.05	4.45	0.15	0.00
45.45	4.45	0.15	0.00	48.10	4.45	0.15	0.00
45.50	4.45	0.15	0.00	48.15	4.45	0.15	0.00
45.55	4.45	0.15	0.00	48.20	4.45	0.15	0.00
45.60	4.45	0.15	0.00	48.25	4.45	0.15	0.00
45.65	4.45	0.15	0.00	48.30	4.45	0.15	0.00
45.70	4.45	0.15	0.00	48.35	4.45	0.15	0.00
45.75	4.45	0.15	0.00	48.40	4.45	0.15	0.00
45.80	4.45	0.15	0.00	48.45	4.45	0.15	0.00
45.85	4.45	0.15	0.00	48.50	4.45	0.15	0.00
45.90	4.45	0.15	0.00	48.55	4.45	0.15	0.00
45.95	4.45	0.15	0.00	48.60	4.45	0.15	0.00
46.00	4.45	0.15	0.00	48.65	4.45	0.15	0.00
46.05	4.45	0.15	0.00	48.70	4.45	0.15	0.00
46.10	4.45	0.15	0.00	48.75	4.45	0.15	0.00
46.15	4.45	0.15	0.00	48.80	4.45	0.15	0.00
46.20	4.45	0.15	0.00	48.85	4.45	0.15	0.00
46.25	4.45	0.15	0.00	48.90	4.45	0.15	0.00
46.30	4.45	0.15	0.00	48.95	4.45	0.15	0.00
46.35	4.45	0.15	0.00	49.00	4.45	0.15	0.00
46.40	4.45	0.15	0.00	49.05	4.45	0.15	0.00
46.45	4.45	0.15	0.00	49.10	4.45	0.15	0.00
46.50	4.45	0.15	0.00	49.15	4.45	0.15	0.00
46.55	4.45	0.15	0.00	49.20	4.45	0.15	0.00
46.60	4.45	0.15	0.00	49.25	4.45	0.15	0.00
46.65	4.45	0.15	0.00	49.30	4.45	0.15	0.00
46.70	4.45	0.15	0.00	49.35	4.45	0.15	0.00
46.75	4.45	0.15	0.00	49.40	4.45	0.15	0.00
46.80	4.45	0.15	0.00	49.45	4.45	0.15	0.00
46.85	4.45	0.15	0.00	49.50	4.45	0.15	0.00
46.90	4.45	0.15	0.00	49.55	4.45	0.15	0.00
46.95	4.45	0.15	0.00	49.60	4.45	0.15	0.00
47.00	4.45	0.15	0.00	49.65	4.45	0.15	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	4.45	0.15	0.00
49.75	4.45	0.15	0.00
49.80	4.45	0.15	0.00
49.85	4.45	0.15	0.00
49.90	4.45	0.15	0.00
49.95	4.45	0.15	0.00
50.00	4.45	0.15	0.00

Summary for Subcatchment 2S: SB-2

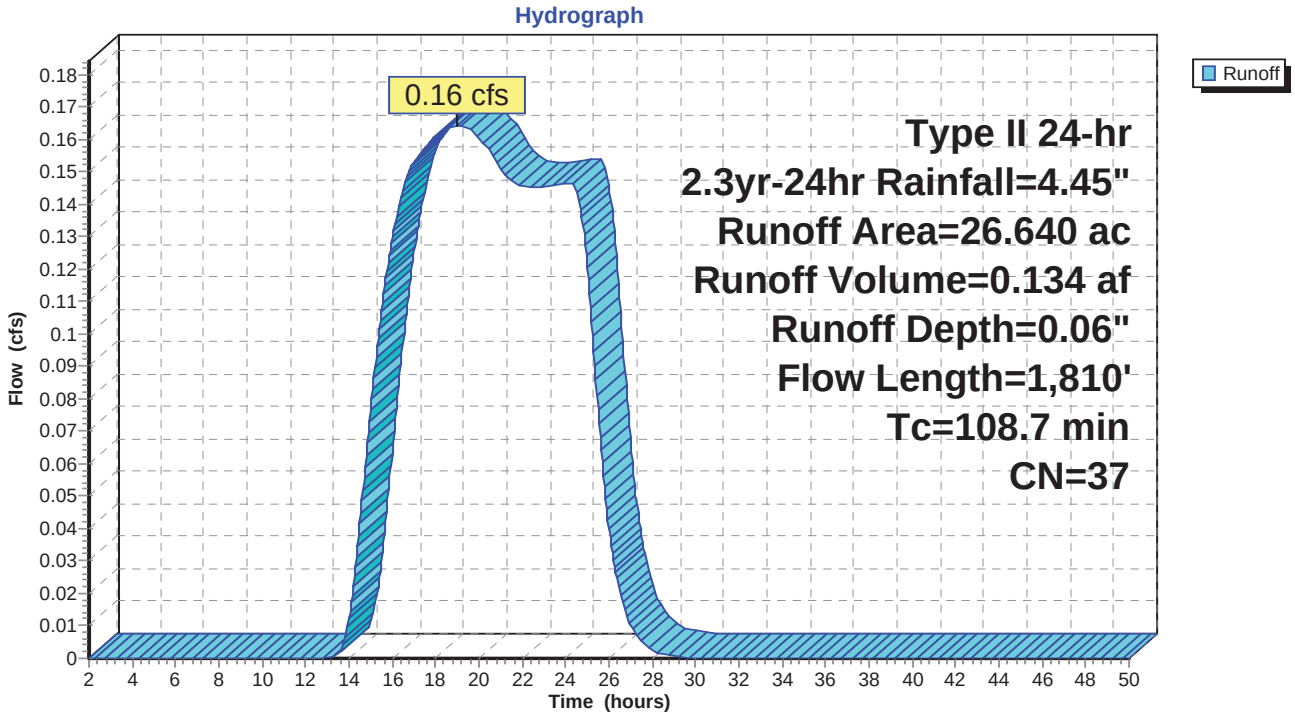
Runoff = 0.16 cfs @ 18.96 hrs, Volume= 0.134 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

Area (ac)	CN	Description
1.320	49	50-75% Grass cover, Fair, HSG A
25.320	36	Woods, Fair, HSG A
26.640	37	Weighted Average
26.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
93.1	300	0.0030	0.05		**Sheet Flow, WOODS, LIGHT UNDERBRUSH** Woods: Light underbrush n= 0.400 P2= 4.50"
15.6	1,510	0.0100	1.61		**Shallow Concentrated Flow, UNPAVED AREA** Unpaved Kv= 16.1 fps
108.7	1,810	Total			

Subcatchment 2S: SB-2



Hydrograph for Subcatchment 2S: SB-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.10	0.00	0.00	4.65	0.26	0.00	0.00
2.05	0.10	0.00	0.00	4.70	0.26	0.00	0.00
2.10	0.10	0.00	0.00	4.75	0.26	0.00	0.00
2.15	0.11	0.00	0.00	4.80	0.27	0.00	0.00
2.20	0.11	0.00	0.00	4.85	0.27	0.00	0.00
2.25	0.11	0.00	0.00	4.90	0.27	0.00	0.00
2.30	0.11	0.00	0.00	4.95	0.28	0.00	0.00
2.35	0.12	0.00	0.00	5.00	0.28	0.00	0.00
2.40	0.12	0.00	0.00	5.05	0.28	0.00	0.00
2.45	0.12	0.00	0.00	5.10	0.29	0.00	0.00
2.50	0.13	0.00	0.00	5.15	0.29	0.00	0.00
2.55	0.13	0.00	0.00	5.20	0.29	0.00	0.00
2.60	0.13	0.00	0.00	5.25	0.30	0.00	0.00
2.65	0.13	0.00	0.00	5.30	0.30	0.00	0.00
2.70	0.14	0.00	0.00	5.35	0.31	0.00	0.00
2.75	0.14	0.00	0.00	5.40	0.31	0.00	0.00
2.80	0.14	0.00	0.00	5.45	0.31	0.00	0.00
2.85	0.14	0.00	0.00	5.50	0.32	0.00	0.00
2.90	0.15	0.00	0.00	5.55	0.32	0.00	0.00
2.95	0.15	0.00	0.00	5.60	0.32	0.00	0.00
3.00	0.15	0.00	0.00	5.65	0.33	0.00	0.00
3.05	0.16	0.00	0.00	5.70	0.33	0.00	0.00
3.10	0.16	0.00	0.00	5.75	0.34	0.00	0.00
3.15	0.16	0.00	0.00	5.80	0.34	0.00	0.00
3.20	0.17	0.00	0.00	5.85	0.34	0.00	0.00
3.25	0.17	0.00	0.00	5.90	0.35	0.00	0.00
3.30	0.17	0.00	0.00	5.95	0.35	0.00	0.00
3.35	0.17	0.00	0.00	6.00	0.36	0.00	0.00
3.40	0.18	0.00	0.00	6.05	0.36	0.00	0.00
3.45	0.18	0.00	0.00	6.10	0.36	0.00	0.00
3.50	0.18	0.00	0.00	6.15	0.37	0.00	0.00
3.55	0.19	0.00	0.00	6.20	0.37	0.00	0.00
3.60	0.19	0.00	0.00	6.25	0.38	0.00	0.00
3.65	0.19	0.00	0.00	6.30	0.38	0.00	0.00
3.70	0.20	0.00	0.00	6.35	0.38	0.00	0.00
3.75	0.20	0.00	0.00	6.40	0.39	0.00	0.00
3.80	0.20	0.00	0.00	6.45	0.39	0.00	0.00
3.85	0.20	0.00	0.00	6.50	0.40	0.00	0.00
3.90	0.21	0.00	0.00	6.55	0.40	0.00	0.00
3.95	0.21	0.00	0.00	6.60	0.41	0.00	0.00
4.00	0.21	0.00	0.00	6.65	0.41	0.00	0.00
4.05	0.22	0.00	0.00	6.70	0.41	0.00	0.00
4.10	0.22	0.00	0.00	6.75	0.42	0.00	0.00
4.15	0.22	0.00	0.00	6.80	0.42	0.00	0.00
4.20	0.23	0.00	0.00	6.85	0.43	0.00	0.00
4.25	0.23	0.00	0.00	6.90	0.43	0.00	0.00
4.30	0.23	0.00	0.00	6.95	0.44	0.00	0.00
4.35	0.24	0.00	0.00	7.00	0.44	0.00	0.00
4.40	0.24	0.00	0.00	7.05	0.45	0.00	0.00
4.45	0.24	0.00	0.00	7.10	0.45	0.00	0.00
4.50	0.25	0.00	0.00	7.15	0.45	0.00	0.00
4.55	0.25	0.00	0.00	7.20	0.46	0.00	0.00
4.60	0.25	0.00	0.00	7.25	0.46	0.00	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.47	0.00	0.00	9.95	0.80	0.00	0.00
7.35	0.47	0.00	0.00	10.00	0.81	0.00	0.00
7.40	0.48	0.00	0.00	10.05	0.81	0.00	0.00
7.45	0.48	0.00	0.00	10.10	0.82	0.00	0.00
7.50	0.49	0.00	0.00	10.15	0.83	0.00	0.00
7.55	0.49	0.00	0.00	10.20	0.84	0.00	0.00
7.60	0.50	0.00	0.00	10.25	0.85	0.00	0.00
7.65	0.50	0.00	0.00	10.30	0.86	0.00	0.00
7.70	0.51	0.00	0.00	10.35	0.87	0.00	0.00
7.75	0.51	0.00	0.00	10.40	0.89	0.00	0.00
7.80	0.51	0.00	0.00	10.45	0.90	0.00	0.00
7.85	0.52	0.00	0.00	10.50	0.91	0.00	0.00
7.90	0.52	0.00	0.00	10.55	0.92	0.00	0.00
7.95	0.53	0.00	0.00	10.60	0.93	0.00	0.00
8.00	0.53	0.00	0.00	10.65	0.94	0.00	0.00
8.05	0.54	0.00	0.00	10.70	0.96	0.00	0.00
8.10	0.54	0.00	0.00	10.75	0.97	0.00	0.00
8.15	0.55	0.00	0.00	10.80	0.99	0.00	0.00
8.20	0.55	0.00	0.00	10.85	1.00	0.00	0.00
8.25	0.56	0.00	0.00	10.90	1.01	0.00	0.00
8.30	0.57	0.00	0.00	10.95	1.03	0.00	0.00
8.35	0.57	0.00	0.00	11.00	1.05	0.00	0.00
8.40	0.58	0.00	0.00	11.05	1.06	0.00	0.00
8.45	0.58	0.00	0.00	11.10	1.08	0.00	0.00
8.50	0.59	0.00	0.00	11.15	1.10	0.00	0.00
8.55	0.59	0.00	0.00	11.20	1.12	0.00	0.00
8.60	0.60	0.00	0.00	11.25	1.14	0.00	0.00
8.65	0.61	0.00	0.00	11.30	1.16	0.00	0.00
8.70	0.61	0.00	0.00	11.35	1.18	0.00	0.00
8.75	0.62	0.00	0.00	11.40	1.21	0.00	0.00
8.80	0.63	0.00	0.00	11.45	1.23	0.00	0.00
8.85	0.63	0.00	0.00	11.50	1.26	0.00	0.00
8.90	0.64	0.00	0.00	11.55	1.30	0.00	0.00
8.95	0.65	0.00	0.00	11.60	1.37	0.00	0.00
9.00	0.65	0.00	0.00	11.65	1.46	0.00	0.00
9.05	0.66	0.00	0.00	11.70	1.58	0.00	0.00
9.10	0.67	0.00	0.00	11.75	1.72	0.00	0.00
9.15	0.68	0.00	0.00	11.80	1.92	0.00	0.00
9.20	0.68	0.00	0.00	11.85	2.19	0.00	0.00
9.25	0.69	0.00	0.00	11.90	2.53	0.00	0.00
9.30	0.70	0.00	0.00	11.95	2.82	0.00	0.00
9.35	0.70	0.00	0.00	12.00	2.95	0.00	0.00
9.40	0.71	0.00	0.00	12.05	2.99	0.00	0.00
9.45	0.72	0.00	0.00	12.10	3.03	0.00	0.00
9.50	0.73	0.00	0.00	12.15	3.07	0.00	0.00
9.55	0.73	0.00	0.00	12.20	3.11	0.00	0.00
9.60	0.74	0.00	0.00	12.25	3.14	0.00	0.00
9.65	0.75	0.00	0.00	12.30	3.17	0.00	0.00
9.70	0.76	0.00	0.00	12.35	3.20	0.00	0.00
9.75	0.76	0.00	0.00	12.40	3.23	0.00	0.00
9.80	0.77	0.00	0.00	12.45	3.25	0.00	0.00
9.85	0.78	0.00	0.00	12.50	3.27	0.00	0.00
9.90	0.79	0.00	0.00	12.55	3.29	0.00	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	3.31	0.00	0.00	15.25	3.83	0.01	0.09
12.65	3.33	0.00	0.00	15.30	3.84	0.01	0.10
12.70	3.34	0.00	0.00	15.35	3.84	0.01	0.10
12.75	3.36	0.00	0.00	15.40	3.85	0.01	0.10
12.80	3.38	0.00	0.00	15.45	3.85	0.01	0.10
12.85	3.39	0.00	0.00	15.50	3.86	0.01	0.11
12.90	3.41	0.00	0.00	15.55	3.87	0.01	0.11
12.95	3.42	0.00	0.00	15.60	3.87	0.01	0.11
13.00	3.44	0.00	0.00	15.65	3.88	0.01	0.11
13.05	3.45	0.00	0.00	15.70	3.88	0.01	0.12
13.10	3.46	0.00	0.00	15.75	3.89	0.01	0.12
13.15	3.47	0.00	0.00	15.80	3.89	0.01	0.12
13.20	3.49	0.00	0.00	15.85	3.90	0.01	0.12
13.25	3.50	0.00	0.00	15.90	3.91	0.01	0.13
13.30	3.51	0.00	0.00	15.95	3.91	0.01	0.13
13.35	3.52	0.00	0.00	16.00	3.92	0.01	0.13
13.40	3.53	0.00	0.00	16.05	3.92	0.02	0.13
13.45	3.54	0.00	0.00	16.10	3.93	0.02	0.13
13.50	3.56	0.00	0.00	16.15	3.93	0.02	0.14
13.55	3.57	0.00	0.00	16.20	3.94	0.02	0.14
13.60	3.58	0.00	0.00	16.25	3.94	0.02	0.14
13.65	3.59	0.00	0.00	16.30	3.95	0.02	0.14
13.70	3.60	0.00	0.00	16.35	3.95	0.02	0.14
13.75	3.61	0.00	0.00	16.40	3.96	0.02	0.14
13.80	3.61	0.00	0.01	16.45	3.96	0.02	0.14
13.85	3.62	0.00	0.01	16.50	3.97	0.02	0.15
13.90	3.63	0.00	0.01	16.55	3.97	0.02	0.15
13.95	3.64	0.00	0.01	16.60	3.98	0.02	0.15
14.00	3.65	0.00	0.01	16.65	3.98	0.02	0.15
14.05	3.66	0.00	0.01	16.70	3.98	0.02	0.15
14.10	3.67	0.00	0.02	16.75	3.99	0.02	0.15
14.15	3.67	0.00	0.02	16.80	3.99	0.02	0.15
14.20	3.68	0.00	0.02	16.85	4.00	0.02	0.15
14.25	3.69	0.00	0.03	16.90	4.00	0.02	0.15
14.30	3.70	0.00	0.03	16.95	4.01	0.02	0.15
14.35	3.70	0.01	0.03	17.00	4.01	0.02	0.15
14.40	3.71	0.01	0.03	17.05	4.02	0.02	0.15
14.45	3.72	0.01	0.04	17.10	4.02	0.02	0.15
14.50	3.73	0.01	0.04	17.15	4.03	0.02	0.15
14.55	3.73	0.01	0.04	17.20	4.03	0.02	0.16
14.60	3.74	0.01	0.05	17.25	4.04	0.02	0.16
14.65	3.75	0.01	0.05	17.30	4.04	0.02	0.16
14.70	3.76	0.01	0.06	17.35	4.04	0.02	0.16
14.75	3.76	0.01	0.06	17.40	4.05	0.02	0.16
14.80	3.77	0.01	0.06	17.45	4.05	0.02	0.16
14.85	3.78	0.01	0.07	17.50	4.06	0.02	0.16
14.90	3.78	0.01	0.07	17.55	4.06	0.02	0.16
14.95	3.79	0.01	0.07	17.60	4.07	0.02	0.16
15.00	3.80	0.01	0.08	17.65	4.07	0.02	0.16
15.05	3.80	0.01	0.08	17.70	4.07	0.03	0.16
15.10	3.81	0.01	0.08	17.75	4.08	0.03	0.16
15.15	3.82	0.01	0.09	17.80	4.08	0.03	0.16
15.20	3.82	0.01	0.09	17.85	4.09	0.03	0.16

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	4.09	0.03	0.16	20.55	4.27	0.04	0.16
17.95	4.09	0.03	0.16	20.60	4.27	0.04	0.16
18.00	4.10	0.03	0.16	20.65	4.27	0.04	0.15
18.05	4.10	0.03	0.16	20.70	4.28	0.04	0.15
18.10	4.11	0.03	0.16	20.75	4.28	0.04	0.15
18.15	4.11	0.03	0.16	20.80	4.28	0.04	0.15
18.20	4.11	0.03	0.16	20.85	4.28	0.04	0.15
18.25	4.12	0.03	0.16	20.90	4.29	0.04	0.15
18.30	4.12	0.03	0.16	20.95	4.29	0.04	0.15
18.35	4.13	0.03	0.16	21.00	4.29	0.04	0.15
18.40	4.13	0.03	0.16	21.05	4.30	0.04	0.15
18.45	4.13	0.03	0.16	21.10	4.30	0.04	0.15
18.50	4.14	0.03	0.16	21.15	4.30	0.04	0.15
18.55	4.14	0.03	0.16	21.20	4.30	0.05	0.15
18.60	4.14	0.03	0.16	21.25	4.31	0.05	0.15
18.65	4.15	0.03	0.16	21.30	4.31	0.05	0.15
18.70	4.15	0.03	0.16	21.35	4.31	0.05	0.15
18.75	4.16	0.03	0.16	21.40	4.32	0.05	0.15
18.80	4.16	0.03	0.16	21.45	4.32	0.05	0.15
18.85	4.16	0.03	0.16	21.50	4.32	0.05	0.15
18.90	4.17	0.03	0.16	21.55	4.32	0.05	0.15
18.95	4.17	0.03	**0.16**	21.60	4.33	0.05	0.15
19.00	4.17	0.03	0.16	21.65	4.33	0.05	0.15
19.05	4.18	0.03	0.16	21.70	4.33	0.05	0.15
19.10	4.18	0.03	0.16	21.75	4.33	0.05	0.15
19.15	4.18	0.03	0.16	21.80	4.34	0.05	0.15
19.20	4.19	0.03	0.16	21.85	4.34	0.05	0.15
19.25	4.19	0.03	0.16	21.90	4.34	0.05	0.15
19.30	4.19	0.03	0.16	21.95	4.34	0.05	0.15
19.35	4.20	0.04	0.16	22.00	4.35	0.05	0.15
19.40	4.20	0.04	0.16	22.05	4.35	0.05	0.15
19.45	4.20	0.04	0.16	22.10	4.35	0.05	0.15
19.50	4.21	0.04	0.16	22.15	4.36	0.05	0.15
19.55	4.21	0.04	0.16	22.20	4.36	0.05	0.15
19.60	4.21	0.04	0.16	22.25	4.36	0.05	0.15
19.65	4.22	0.04	0.16	22.30	4.36	0.05	0.15
19.70	4.22	0.04	0.16	22.35	4.37	0.05	0.15
19.75	4.22	0.04	0.16	22.40	4.37	0.05	0.15
19.80	4.22	0.04	0.16	22.45	4.37	0.05	0.15
19.85	4.23	0.04	0.16	22.50	4.37	0.05	0.15
19.90	4.23	0.04	0.16	22.55	4.38	0.05	0.15
19.95	4.23	0.04	0.16	22.60	4.38	0.05	0.15
20.00	4.24	0.04	0.16	22.65	4.38	0.05	0.15
20.05	4.24	0.04	0.16	22.70	4.38	0.05	0.15
20.10	4.24	0.04	0.16	22.75	4.39	0.05	0.15
20.15	4.25	0.04	0.16	22.80	4.39	0.05	0.15
20.20	4.25	0.04	0.16	22.85	4.39	0.05	0.15
20.25	4.25	0.04	0.16	22.90	4.39	0.05	0.15
20.30	4.25	0.04	0.16	22.95	4.40	0.05	0.15
20.35	4.26	0.04	0.16	23.00	4.40	0.05	0.15
20.40	4.26	0.04	0.16	23.05	4.40	0.06	0.15
20.45	4.26	0.04	0.16	23.10	4.41	0.06	0.15
20.50	4.27	0.04	0.16	23.15	4.41	0.06	0.15

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	4.41	0.06	0.15	25.85	4.45	0.06	0.05
23.25	4.41	0.06	0.15	25.90	4.45	0.06	0.05
23.30	4.42	0.06	0.15	25.95	4.45	0.06	0.04
23.35	4.42	0.06	0.15	26.00	4.45	0.06	0.04
23.40	4.42	0.06	0.15	26.05	4.45	0.06	0.04
23.45	4.42	0.06	0.15	26.10	4.45	0.06	0.03
23.50	4.43	0.06	0.15	26.15	4.45	0.06	0.03
23.55	4.43	0.06	0.15	26.20	4.45	0.06	0.03
23.60	4.43	0.06	0.15	26.25	4.45	0.06	0.03
23.65	4.43	0.06	0.15	26.30	4.45	0.06	0.03
23.70	4.44	0.06	0.15	26.35	4.45	0.06	0.02
23.75	4.44	0.06	0.15	26.40	4.45	0.06	0.02
23.80	4.44	0.06	0.15	26.45	4.45	0.06	0.02
23.85	4.44	0.06	0.15	26.50	4.45	0.06	0.02
23.90	4.45	0.06	0.15	26.55	4.45	0.06	0.02
23.95	4.45	0.06	0.15	26.60	4.45	0.06	0.02
24.00	**4.45**	**0.06**	0.15	26.65	4.45	0.06	0.02
24.05	4.45	0.06	0.15	26.70	4.45	0.06	0.02
24.10	4.45	0.06	0.15	26.75	4.45	0.06	0.01
24.15	4.45	0.06	0.15	26.80	4.45	0.06	0.01
24.20	4.45	0.06	0.15	26.85	4.45	0.06	0.01
24.25	4.45	0.06	0.15	26.90	4.45	0.06	0.01
24.30	4.45	0.06	0.15	26.95	4.45	0.06	0.01
24.35	4.45	0.06	0.15	27.00	4.45	0.06	0.01
24.40	4.45	0.06	0.15	27.05	4.45	0.06	0.01
24.45	4.45	0.06	0.14	27.10	4.45	0.06	0.01
24.50	4.45	0.06	0.14	27.15	4.45	0.06	0.01
24.55	4.45	0.06	0.14	27.20	4.45	0.06	0.01
24.60	4.45	0.06	0.14	27.25	4.45	0.06	0.01
24.65	4.45	0.06	0.14	27.30	4.45	0.06	0.01
24.70	4.45	0.06	0.14	27.35	4.45	0.06	0.01
24.75	4.45	0.06	0.14	27.40	4.45	0.06	0.01
24.80	4.45	0.06	0.13	27.45	4.45	0.06	0.01
24.85	4.45	0.06	0.13	27.50	4.45	0.06	0.01
24.90	4.45	0.06	0.13	27.55	4.45	0.06	0.00
24.95	4.45	0.06	0.12	27.60	4.45	0.06	0.00
25.00	4.45	0.06	0.12	27.65	4.45	0.06	0.00
25.05	4.45	0.06	0.12	27.70	4.45	0.06	0.00
25.10	4.45	0.06	0.11	27.75	4.45	0.06	0.00
25.15	4.45	0.06	0.11	27.80	4.45	0.06	0.00
25.20	4.45	0.06	0.10	27.85	4.45	0.06	0.00
25.25	4.45	0.06	0.10	27.90	4.45	0.06	0.00
25.30	4.45	0.06	0.09	27.95	4.45	0.06	0.00
25.35	4.45	0.06	0.09	28.00	4.45	0.06	0.00
25.40	4.45	0.06	0.09	28.05	4.45	0.06	0.00
25.45	4.45	0.06	0.08	28.10	4.45	0.06	0.00
25.50	4.45	0.06	0.08	28.15	4.45	0.06	0.00
25.55	4.45	0.06	0.07	28.20	4.45	0.06	0.00
25.60	4.45	0.06	0.07	28.25	4.45	0.06	0.00
25.65	4.45	0.06	0.06	28.30	4.45	0.06	0.00
25.70	4.45	0.06	0.06	28.35	4.45	0.06	0.00
25.75	4.45	0.06	0.06	28.40	4.45	0.06	0.00
25.80	4.45	0.06	0.05	28.45	4.45	0.06	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	4.45	0.06	0.00	31.15	4.45	0.06	0.00
28.55	4.45	0.06	0.00	31.20	4.45	0.06	0.00
28.60	4.45	0.06	0.00	31.25	4.45	0.06	0.00
28.65	4.45	0.06	0.00	31.30	4.45	0.06	0.00
28.70	4.45	0.06	0.00	31.35	4.45	0.06	0.00
28.75	4.45	0.06	0.00	31.40	4.45	0.06	0.00
28.80	4.45	0.06	0.00	31.45	4.45	0.06	0.00
28.85	4.45	0.06	0.00	31.50	4.45	0.06	0.00
28.90	4.45	0.06	0.00	31.55	4.45	0.06	0.00
28.95	4.45	0.06	0.00	31.60	4.45	0.06	0.00
29.00	4.45	0.06	0.00	31.65	4.45	0.06	0.00
29.05	4.45	0.06	0.00	31.70	4.45	0.06	0.00
29.10	4.45	0.06	0.00	31.75	4.45	0.06	0.00
29.15	4.45	0.06	0.00	31.80	4.45	0.06	0.00
29.20	4.45	0.06	0.00	31.85	4.45	0.06	0.00
29.25	4.45	0.06	0.00	31.90	4.45	0.06	0.00
29.30	4.45	0.06	0.00	31.95	4.45	0.06	0.00
29.35	4.45	0.06	0.00	32.00	4.45	0.06	0.00
29.40	4.45	0.06	0.00	32.05	4.45	0.06	0.00
29.45	4.45	0.06	0.00	32.10	4.45	0.06	0.00
29.50	4.45	0.06	0.00	32.15	4.45	0.06	0.00
29.55	4.45	0.06	0.00	32.20	4.45	0.06	0.00
29.60	4.45	0.06	0.00	32.25	4.45	0.06	0.00
29.65	4.45	0.06	0.00	32.30	4.45	0.06	0.00
29.70	4.45	0.06	0.00	32.35	4.45	0.06	0.00
29.75	4.45	0.06	0.00	32.40	4.45	0.06	0.00
29.80	4.45	0.06	0.00	32.45	4.45	0.06	0.00
29.85	4.45	0.06	0.00	32.50	4.45	0.06	0.00
29.90	4.45	0.06	0.00	32.55	4.45	0.06	0.00
29.95	4.45	0.06	0.00	32.60	4.45	0.06	0.00
30.00	4.45	0.06	0.00	32.65	4.45	0.06	0.00
30.05	4.45	0.06	0.00	32.70	4.45	0.06	0.00
30.10	4.45	0.06	0.00	32.75	4.45	0.06	0.00
30.15	4.45	0.06	0.00	32.80	4.45	0.06	0.00
30.20	4.45	0.06	0.00	32.85	4.45	0.06	0.00
30.25	4.45	0.06	0.00	32.90	4.45	0.06	0.00
30.30	4.45	0.06	0.00	32.95	4.45	0.06	0.00
30.35	4.45	0.06	0.00	33.00	4.45	0.06	0.00
30.40	4.45	0.06	0.00	33.05	4.45	0.06	0.00
30.45	4.45	0.06	0.00	33.10	4.45	0.06	0.00
30.50	4.45	0.06	0.00	33.15	4.45	0.06	0.00
30.55	4.45	0.06	0.00	33.20	4.45	0.06	0.00
30.60	4.45	0.06	0.00	33.25	4.45	0.06	0.00
30.65	4.45	0.06	0.00	33.30	4.45	0.06	0.00
30.70	4.45	0.06	0.00	33.35	4.45	0.06	0.00
30.75	4.45	0.06	0.00	33.40	4.45	0.06	0.00
30.80	4.45	0.06	0.00	33.45	4.45	0.06	0.00
30.85	4.45	0.06	0.00	33.50	4.45	0.06	0.00
30.90	4.45	0.06	0.00	33.55	4.45	0.06	0.00
30.95	4.45	0.06	0.00	33.60	4.45	0.06	0.00
31.00	4.45	0.06	0.00	33.65	4.45	0.06	0.00
31.05	4.45	0.06	0.00	33.70	4.45	0.06	0.00
31.10	4.45	0.06	0.00	33.75	4.45	0.06	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	4.45	0.06	0.00	36.45	4.45	0.06	0.00
33.85	4.45	0.06	0.00	36.50	4.45	0.06	0.00
33.90	4.45	0.06	0.00	36.55	4.45	0.06	0.00
33.95	4.45	0.06	0.00	36.60	4.45	0.06	0.00
34.00	4.45	0.06	0.00	36.65	4.45	0.06	0.00
34.05	4.45	0.06	0.00	36.70	4.45	0.06	0.00
34.10	4.45	0.06	0.00	36.75	4.45	0.06	0.00
34.15	4.45	0.06	0.00	36.80	4.45	0.06	0.00
34.20	4.45	0.06	0.00	36.85	4.45	0.06	0.00
34.25	4.45	0.06	0.00	36.90	4.45	0.06	0.00
34.30	4.45	0.06	0.00	36.95	4.45	0.06	0.00
34.35	4.45	0.06	0.00	37.00	4.45	0.06	0.00
34.40	4.45	0.06	0.00	37.05	4.45	0.06	0.00
34.45	4.45	0.06	0.00	37.10	4.45	0.06	0.00
34.50	4.45	0.06	0.00	37.15	4.45	0.06	0.00
34.55	4.45	0.06	0.00	37.20	4.45	0.06	0.00
34.60	4.45	0.06	0.00	37.25	4.45	0.06	0.00
34.65	4.45	0.06	0.00	37.30	4.45	0.06	0.00
34.70	4.45	0.06	0.00	37.35	4.45	0.06	0.00
34.75	4.45	0.06	0.00	37.40	4.45	0.06	0.00
34.80	4.45	0.06	0.00	37.45	4.45	0.06	0.00
34.85	4.45	0.06	0.00	37.50	4.45	0.06	0.00
34.90	4.45	0.06	0.00	37.55	4.45	0.06	0.00
34.95	4.45	0.06	0.00	37.60	4.45	0.06	0.00
35.00	4.45	0.06	0.00	37.65	4.45	0.06	0.00
35.05	4.45	0.06	0.00	37.70	4.45	0.06	0.00
35.10	4.45	0.06	0.00	37.75	4.45	0.06	0.00
35.15	4.45	0.06	0.00	37.80	4.45	0.06	0.00
35.20	4.45	0.06	0.00	37.85	4.45	0.06	0.00
35.25	4.45	0.06	0.00	37.90	4.45	0.06	0.00
35.30	4.45	0.06	0.00	37.95	4.45	0.06	0.00
35.35	4.45	0.06	0.00	38.00	4.45	0.06	0.00
35.40	4.45	0.06	0.00	38.05	4.45	0.06	0.00
35.45	4.45	0.06	0.00	38.10	4.45	0.06	0.00
35.50	4.45	0.06	0.00	38.15	4.45	0.06	0.00
35.55	4.45	0.06	0.00	38.20	4.45	0.06	0.00
35.60	4.45	0.06	0.00	38.25	4.45	0.06	0.00
35.65	4.45	0.06	0.00	38.30	4.45	0.06	0.00
35.70	4.45	0.06	0.00	38.35	4.45	0.06	0.00
35.75	4.45	0.06	0.00	38.40	4.45	0.06	0.00
35.80	4.45	0.06	0.00	38.45	4.45	0.06	0.00
35.85	4.45	0.06	0.00	38.50	4.45	0.06	0.00
35.90	4.45	0.06	0.00	38.55	4.45	0.06	0.00
35.95	4.45	0.06	0.00	38.60	4.45	0.06	0.00
36.00	4.45	0.06	0.00	38.65	4.45	0.06	0.00
36.05	4.45	0.06	0.00	38.70	4.45	0.06	0.00
36.10	4.45	0.06	0.00	38.75	4.45	0.06	0.00
36.15	4.45	0.06	0.00	38.80	4.45	0.06	0.00
36.20	4.45	0.06	0.00	38.85	4.45	0.06	0.00
36.25	4.45	0.06	0.00	38.90	4.45	0.06	0.00
36.30	4.45	0.06	0.00	38.95	4.45	0.06	0.00
36.35	4.45	0.06	0.00	39.00	4.45	0.06	0.00
36.40	4.45	0.06	0.00	39.05	4.45	0.06	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	4.45	0.06	0.00	41.75	4.45	0.06	0.00
39.15	4.45	0.06	0.00	41.80	4.45	0.06	0.00
39.20	4.45	0.06	0.00	41.85	4.45	0.06	0.00
39.25	4.45	0.06	0.00	41.90	4.45	0.06	0.00
39.30	4.45	0.06	0.00	41.95	4.45	0.06	0.00
39.35	4.45	0.06	0.00	42.00	4.45	0.06	0.00
39.40	4.45	0.06	0.00	42.05	4.45	0.06	0.00
39.45	4.45	0.06	0.00	42.10	4.45	0.06	0.00
39.50	4.45	0.06	0.00	42.15	4.45	0.06	0.00
39.55	4.45	0.06	0.00	42.20	4.45	0.06	0.00
39.60	4.45	0.06	0.00	42.25	4.45	0.06	0.00
39.65	4.45	0.06	0.00	42.30	4.45	0.06	0.00
39.70	4.45	0.06	0.00	42.35	4.45	0.06	0.00
39.75	4.45	0.06	0.00	42.40	4.45	0.06	0.00
39.80	4.45	0.06	0.00	42.45	4.45	0.06	0.00
39.85	4.45	0.06	0.00	42.50	4.45	0.06	0.00
39.90	4.45	0.06	0.00	42.55	4.45	0.06	0.00
39.95	4.45	0.06	0.00	42.60	4.45	0.06	0.00
40.00	4.45	0.06	0.00	42.65	4.45	0.06	0.00
40.05	4.45	0.06	0.00	42.70	4.45	0.06	0.00
40.10	4.45	0.06	0.00	42.75	4.45	0.06	0.00
40.15	4.45	0.06	0.00	42.80	4.45	0.06	0.00
40.20	4.45	0.06	0.00	42.85	4.45	0.06	0.00
40.25	4.45	0.06	0.00	42.90	4.45	0.06	0.00
40.30	4.45	0.06	0.00	42.95	4.45	0.06	0.00
40.35	4.45	0.06	0.00	43.00	4.45	0.06	0.00
40.40	4.45	0.06	0.00	43.05	4.45	0.06	0.00
40.45	4.45	0.06	0.00	43.10	4.45	0.06	0.00
40.50	4.45	0.06	0.00	43.15	4.45	0.06	0.00
40.55	4.45	0.06	0.00	43.20	4.45	0.06	0.00
40.60	4.45	0.06	0.00	43.25	4.45	0.06	0.00
40.65	4.45	0.06	0.00	43.30	4.45	0.06	0.00
40.70	4.45	0.06	0.00	43.35	4.45	0.06	0.00
40.75	4.45	0.06	0.00	43.40	4.45	0.06	0.00
40.80	4.45	0.06	0.00	43.45	4.45	0.06	0.00
40.85	4.45	0.06	0.00	43.50	4.45	0.06	0.00
40.90	4.45	0.06	0.00	43.55	4.45	0.06	0.00
40.95	4.45	0.06	0.00	43.60	4.45	0.06	0.00
41.00	4.45	0.06	0.00	43.65	4.45	0.06	0.00
41.05	4.45	0.06	0.00	43.70	4.45	0.06	0.00
41.10	4.45	0.06	0.00	43.75	4.45	0.06	0.00
41.15	4.45	0.06	0.00	43.80	4.45	0.06	0.00
41.20	4.45	0.06	0.00	43.85	4.45	0.06	0.00
41.25	4.45	0.06	0.00	43.90	4.45	0.06	0.00
41.30	4.45	0.06	0.00	43.95	4.45	0.06	0.00
41.35	4.45	0.06	0.00	44.00	4.45	0.06	0.00
41.40	4.45	0.06	0.00	44.05	4.45	0.06	0.00
41.45	4.45	0.06	0.00	44.10	4.45	0.06	0.00
41.50	4.45	0.06	0.00	44.15	4.45	0.06	0.00
41.55	4.45	0.06	0.00	44.20	4.45	0.06	0.00
41.60	4.45	0.06	0.00	44.25	4.45	0.06	0.00
41.65	4.45	0.06	0.00	44.30	4.45	0.06	0.00
41.70	4.45	0.06	0.00	44.35	4.45	0.06	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	4.45	0.06	0.00	47.05	4.45	0.06	0.00
44.45	4.45	0.06	0.00	47.10	4.45	0.06	0.00
44.50	4.45	0.06	0.00	47.15	4.45	0.06	0.00
44.55	4.45	0.06	0.00	47.20	4.45	0.06	0.00
44.60	4.45	0.06	0.00	47.25	4.45	0.06	0.00
44.65	4.45	0.06	0.00	47.30	4.45	0.06	0.00
44.70	4.45	0.06	0.00	47.35	4.45	0.06	0.00
44.75	4.45	0.06	0.00	47.40	4.45	0.06	0.00
44.80	4.45	0.06	0.00	47.45	4.45	0.06	0.00
44.85	4.45	0.06	0.00	47.50	4.45	0.06	0.00
44.90	4.45	0.06	0.00	47.55	4.45	0.06	0.00
44.95	4.45	0.06	0.00	47.60	4.45	0.06	0.00
45.00	4.45	0.06	0.00	47.65	4.45	0.06	0.00
45.05	4.45	0.06	0.00	47.70	4.45	0.06	0.00
45.10	4.45	0.06	0.00	47.75	4.45	0.06	0.00
45.15	4.45	0.06	0.00	47.80	4.45	0.06	0.00
45.20	4.45	0.06	0.00	47.85	4.45	0.06	0.00
45.25	4.45	0.06	0.00	47.90	4.45	0.06	0.00
45.30	4.45	0.06	0.00	47.95	4.45	0.06	0.00
45.35	4.45	0.06	0.00	48.00	4.45	0.06	0.00
45.40	4.45	0.06	0.00	48.05	4.45	0.06	0.00
45.45	4.45	0.06	0.00	48.10	4.45	0.06	0.00
45.50	4.45	0.06	0.00	48.15	4.45	0.06	0.00
45.55	4.45	0.06	0.00	48.20	4.45	0.06	0.00
45.60	4.45	0.06	0.00	48.25	4.45	0.06	0.00
45.65	4.45	0.06	0.00	48.30	4.45	0.06	0.00
45.70	4.45	0.06	0.00	48.35	4.45	0.06	0.00
45.75	4.45	0.06	0.00	48.40	4.45	0.06	0.00
45.80	4.45	0.06	0.00	48.45	4.45	0.06	0.00
45.85	4.45	0.06	0.00	48.50	4.45	0.06	0.00
45.90	4.45	0.06	0.00	48.55	4.45	0.06	0.00
45.95	4.45	0.06	0.00	48.60	4.45	0.06	0.00
46.00	4.45	0.06	0.00	48.65	4.45	0.06	0.00
46.05	4.45	0.06	0.00	48.70	4.45	0.06	0.00
46.10	4.45	0.06	0.00	48.75	4.45	0.06	0.00
46.15	4.45	0.06	0.00	48.80	4.45	0.06	0.00
46.20	4.45	0.06	0.00	48.85	4.45	0.06	0.00
46.25	4.45	0.06	0.00	48.90	4.45	0.06	0.00
46.30	4.45	0.06	0.00	48.95	4.45	0.06	0.00
46.35	4.45	0.06	0.00	49.00	4.45	0.06	0.00
46.40	4.45	0.06	0.00	49.05	4.45	0.06	0.00
46.45	4.45	0.06	0.00	49.10	4.45	0.06	0.00
46.50	4.45	0.06	0.00	49.15	4.45	0.06	0.00
46.55	4.45	0.06	0.00	49.20	4.45	0.06	0.00
46.60	4.45	0.06	0.00	49.25	4.45	0.06	0.00
46.65	4.45	0.06	0.00	49.30	4.45	0.06	0.00
46.70	4.45	0.06	0.00	49.35	4.45	0.06	0.00
46.75	4.45	0.06	0.00	49.40	4.45	0.06	0.00
46.80	4.45	0.06	0.00	49.45	4.45	0.06	0.00
46.85	4.45	0.06	0.00	49.50	4.45	0.06	0.00
46.90	4.45	0.06	0.00	49.55	4.45	0.06	0.00
46.95	4.45	0.06	0.00	49.60	4.45	0.06	0.00
47.00	4.45	0.06	0.00	49.65	4.45	0.06	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	4.45	0.06	0.00
49.75	4.45	0.06	0.00
49.80	4.45	0.06	0.00
49.85	4.45	0.06	0.00
49.90	4.45	0.06	0.00
49.95	4.45	0.06	0.00
50.00	4.45	0.06	0.00

Summary for Subcatchment 3S: SB-3

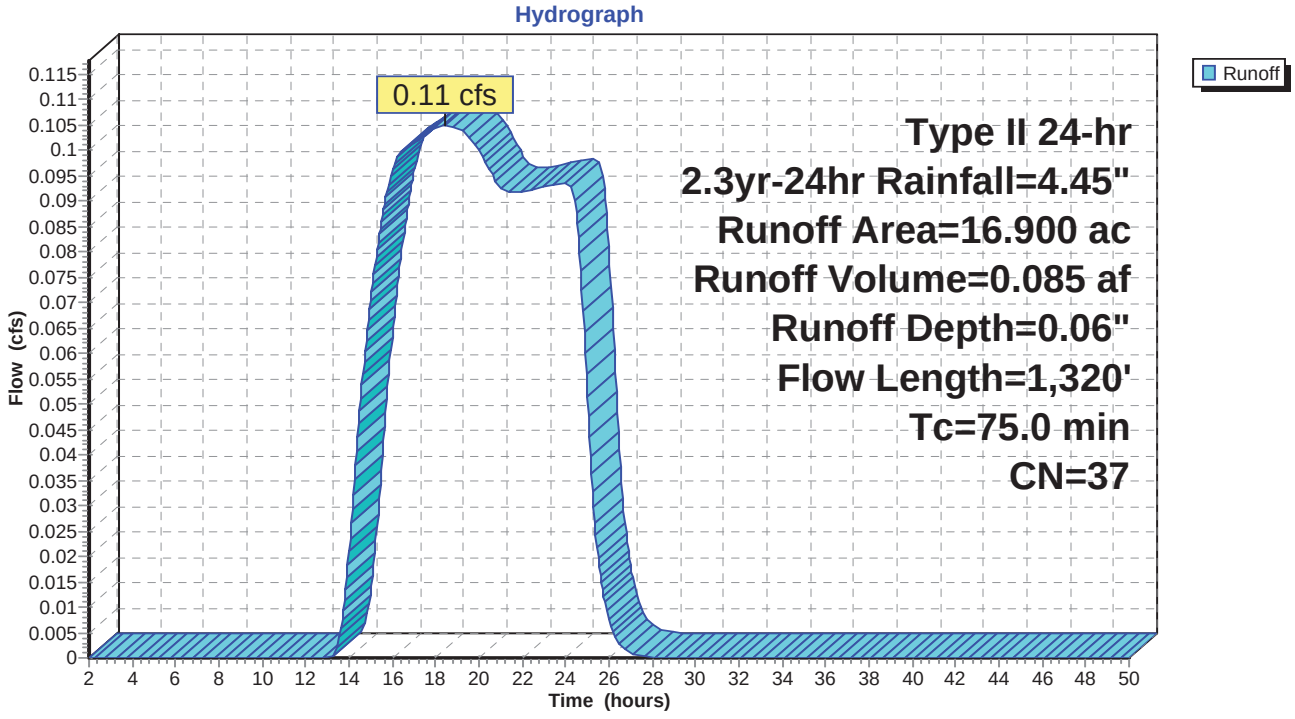
Runoff = 0.11 cfs @ 18.42 hrs, Volume= 0.085 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
*	0.260	98	Impervious Area, HSG A
	16.640	36	Woods, Fair, HSG A
	16.900	37	Weighted Average
	16.640		98.46% Pervious Area
	0.260		1.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.4	300	0.0070	0.08		**Sheet Flow, Woods, Light Underbrush** Woods: Light underbrush n= 0.400 P2= 4.50"
8.6	1,020	0.0150	1.97		**Shallow Concentrated Flow, UNPAVED AREA** Unpaved Kv= 16.1 fps
75.0	1,320	Total			

Subcatchment 3S: SB-3



Hydrograph for Subcatchment 3S: SB-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.10	0.00	0.00	4.65	0.26	0.00	0.00
2.05	0.10	0.00	0.00	4.70	0.26	0.00	0.00
2.10	0.10	0.00	0.00	4.75	0.26	0.00	0.00
2.15	0.11	0.00	0.00	4.80	0.27	0.00	0.00
2.20	0.11	0.00	0.00	4.85	0.27	0.00	0.00
2.25	0.11	0.00	0.00	4.90	0.27	0.00	0.00
2.30	0.11	0.00	0.00	4.95	0.28	0.00	0.00
2.35	0.12	0.00	0.00	5.00	0.28	0.00	0.00
2.40	0.12	0.00	0.00	5.05	0.28	0.00	0.00
2.45	0.12	0.00	0.00	5.10	0.29	0.00	0.00
2.50	0.13	0.00	0.00	5.15	0.29	0.00	0.00
2.55	0.13	0.00	0.00	5.20	0.29	0.00	0.00
2.60	0.13	0.00	0.00	5.25	0.30	0.00	0.00
2.65	0.13	0.00	0.00	5.30	0.30	0.00	0.00
2.70	0.14	0.00	0.00	5.35	0.31	0.00	0.00
2.75	0.14	0.00	0.00	5.40	0.31	0.00	0.00
2.80	0.14	0.00	0.00	5.45	0.31	0.00	0.00
2.85	0.14	0.00	0.00	5.50	0.32	0.00	0.00
2.90	0.15	0.00	0.00	5.55	0.32	0.00	0.00
2.95	0.15	0.00	0.00	5.60	0.32	0.00	0.00
3.00	0.15	0.00	0.00	5.65	0.33	0.00	0.00
3.05	0.16	0.00	0.00	5.70	0.33	0.00	0.00
3.10	0.16	0.00	0.00	5.75	0.34	0.00	0.00
3.15	0.16	0.00	0.00	5.80	0.34	0.00	0.00
3.20	0.17	0.00	0.00	5.85	0.34	0.00	0.00
3.25	0.17	0.00	0.00	5.90	0.35	0.00	0.00
3.30	0.17	0.00	0.00	5.95	0.35	0.00	0.00
3.35	0.17	0.00	0.00	6.00	0.36	0.00	0.00
3.40	0.18	0.00	0.00	6.05	0.36	0.00	0.00
3.45	0.18	0.00	0.00	6.10	0.36	0.00	0.00
3.50	0.18	0.00	0.00	6.15	0.37	0.00	0.00
3.55	0.19	0.00	0.00	6.20	0.37	0.00	0.00
3.60	0.19	0.00	0.00	6.25	0.38	0.00	0.00
3.65	0.19	0.00	0.00	6.30	0.38	0.00	0.00
3.70	0.20	0.00	0.00	6.35	0.38	0.00	0.00
3.75	0.20	0.00	0.00	6.40	0.39	0.00	0.00
3.80	0.20	0.00	0.00	6.45	0.39	0.00	0.00
3.85	0.20	0.00	0.00	6.50	0.40	0.00	0.00
3.90	0.21	0.00	0.00	6.55	0.40	0.00	0.00
3.95	0.21	0.00	0.00	6.60	0.41	0.00	0.00
4.00	0.21	0.00	0.00	6.65	0.41	0.00	0.00
4.05	0.22	0.00	0.00	6.70	0.41	0.00	0.00
4.10	0.22	0.00	0.00	6.75	0.42	0.00	0.00
4.15	0.22	0.00	0.00	6.80	0.42	0.00	0.00
4.20	0.23	0.00	0.00	6.85	0.43	0.00	0.00
4.25	0.23	0.00	0.00	6.90	0.43	0.00	0.00
4.30	0.23	0.00	0.00	6.95	0.44	0.00	0.00
4.35	0.24	0.00	0.00	7.00	0.44	0.00	0.00
4.40	0.24	0.00	0.00	7.05	0.45	0.00	0.00
4.45	0.24	0.00	0.00	7.10	0.45	0.00	0.00
4.50	0.25	0.00	0.00	7.15	0.45	0.00	0.00
4.55	0.25	0.00	0.00	7.20	0.46	0.00	0.00
4.60	0.25	0.00	0.00	7.25	0.46	0.00	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.47	0.00	0.00	9.95	0.80	0.00	0.00
7.35	0.47	0.00	0.00	10.00	0.81	0.00	0.00
7.40	0.48	0.00	0.00	10.05	0.81	0.00	0.00
7.45	0.48	0.00	0.00	10.10	0.82	0.00	0.00
7.50	0.49	0.00	0.00	10.15	0.83	0.00	0.00
7.55	0.49	0.00	0.00	10.20	0.84	0.00	0.00
7.60	0.50	0.00	0.00	10.25	0.85	0.00	0.00
7.65	0.50	0.00	0.00	10.30	0.86	0.00	0.00
7.70	0.51	0.00	0.00	10.35	0.87	0.00	0.00
7.75	0.51	0.00	0.00	10.40	0.89	0.00	0.00
7.80	0.51	0.00	0.00	10.45	0.90	0.00	0.00
7.85	0.52	0.00	0.00	10.50	0.91	0.00	0.00
7.90	0.52	0.00	0.00	10.55	0.92	0.00	0.00
7.95	0.53	0.00	0.00	10.60	0.93	0.00	0.00
8.00	0.53	0.00	0.00	10.65	0.94	0.00	0.00
8.05	0.54	0.00	0.00	10.70	0.96	0.00	0.00
8.10	0.54	0.00	0.00	10.75	0.97	0.00	0.00
8.15	0.55	0.00	0.00	10.80	0.99	0.00	0.00
8.20	0.55	0.00	0.00	10.85	1.00	0.00	0.00
8.25	0.56	0.00	0.00	10.90	1.01	0.00	0.00
8.30	0.57	0.00	0.00	10.95	1.03	0.00	0.00
8.35	0.57	0.00	0.00	11.00	1.05	0.00	0.00
8.40	0.58	0.00	0.00	11.05	1.06	0.00	0.00
8.45	0.58	0.00	0.00	11.10	1.08	0.00	0.00
8.50	0.59	0.00	0.00	11.15	1.10	0.00	0.00
8.55	0.59	0.00	0.00	11.20	1.12	0.00	0.00
8.60	0.60	0.00	0.00	11.25	1.14	0.00	0.00
8.65	0.61	0.00	0.00	11.30	1.16	0.00	0.00
8.70	0.61	0.00	0.00	11.35	1.18	0.00	0.00
8.75	0.62	0.00	0.00	11.40	1.21	0.00	0.00
8.80	0.63	0.00	0.00	11.45	1.23	0.00	0.00
8.85	0.63	0.00	0.00	11.50	1.26	0.00	0.00
8.90	0.64	0.00	0.00	11.55	1.30	0.00	0.00
8.95	0.65	0.00	0.00	11.60	1.37	0.00	0.00
9.00	0.65	0.00	0.00	11.65	1.46	0.00	0.00
9.05	0.66	0.00	0.00	11.70	1.58	0.00	0.00
9.10	0.67	0.00	0.00	11.75	1.72	0.00	0.00
9.15	0.68	0.00	0.00	11.80	1.92	0.00	0.00
9.20	0.68	0.00	0.00	11.85	2.19	0.00	0.00
9.25	0.69	0.00	0.00	11.90	2.53	0.00	0.00
9.30	0.70	0.00	0.00	11.95	2.82	0.00	0.00
9.35	0.70	0.00	0.00	12.00	2.95	0.00	0.00
9.40	0.71	0.00	0.00	12.05	2.99	0.00	0.00
9.45	0.72	0.00	0.00	12.10	3.03	0.00	0.00
9.50	0.73	0.00	0.00	12.15	3.07	0.00	0.00
9.55	0.73	0.00	0.00	12.20	3.11	0.00	0.00
9.60	0.74	0.00	0.00	12.25	3.14	0.00	0.00
9.65	0.75	0.00	0.00	12.30	3.17	0.00	0.00
9.70	0.76	0.00	0.00	12.35	3.20	0.00	0.00
9.75	0.76	0.00	0.00	12.40	3.23	0.00	0.00
9.80	0.77	0.00	0.00	12.45	3.25	0.00	0.00
9.85	0.78	0.00	0.00	12.50	3.27	0.00	0.00
9.90	0.79	0.00	0.00	12.55	3.29	0.00	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	3.31	0.00	0.00	15.25	3.83	0.01	0.08
12.65	3.33	0.00	0.00	15.30	3.84	0.01	0.08
12.70	3.34	0.00	0.00	15.35	3.84	0.01	0.08
12.75	3.36	0.00	0.00	15.40	3.85	0.01	0.08
12.80	3.38	0.00	0.00	15.45	3.85	0.01	0.08
12.85	3.39	0.00	0.00	15.50	3.86	0.01	0.09
12.90	3.41	0.00	0.00	15.55	3.87	0.01	0.09
12.95	3.42	0.00	0.00	15.60	3.87	0.01	0.09
13.00	3.44	0.00	0.00	15.65	3.88	0.01	0.09
13.05	3.45	0.00	0.00	15.70	3.88	0.01	0.09
13.10	3.46	0.00	0.00	15.75	3.89	0.01	0.09
13.15	3.47	0.00	0.00	15.80	3.89	0.01	0.09
13.20	3.49	0.00	0.00	15.85	3.90	0.01	0.09
13.25	3.50	0.00	0.00	15.90	3.91	0.01	0.09
13.30	3.51	0.00	0.00	15.95	3.91	0.01	0.10
13.35	3.52	0.00	0.00	16.00	3.92	0.01	0.10
13.40	3.53	0.00	0.00	16.05	3.92	0.02	0.10
13.45	3.54	0.00	0.00	16.10	3.93	0.02	0.10
13.50	3.56	0.00	0.00	16.15	3.93	0.02	0.10
13.55	3.57	0.00	0.00	16.20	3.94	0.02	0.10
13.60	3.58	0.00	0.00	16.25	3.94	0.02	0.10
13.65	3.59	0.00	0.01	16.30	3.95	0.02	0.10
13.70	3.60	0.00	0.01	16.35	3.95	0.02	0.10
13.75	3.61	0.00	0.01	16.40	3.96	0.02	0.10
13.80	3.61	0.00	0.01	16.45	3.96	0.02	0.10
13.85	3.62	0.00	0.01	16.50	3.97	0.02	0.10
13.90	3.63	0.00	0.02	16.55	3.97	0.02	0.10
13.95	3.64	0.00	0.02	16.60	3.98	0.02	0.10
14.00	3.65	0.00	0.02	16.65	3.98	0.02	0.10
14.05	3.66	0.00	0.02	16.70	3.98	0.02	0.10
14.10	3.67	0.00	0.03	16.75	3.99	0.02	0.10
14.15	3.67	0.00	0.03	16.80	3.99	0.02	0.10
14.20	3.68	0.00	0.03	16.85	4.00	0.02	0.10
14.25	3.69	0.00	0.04	16.90	4.00	0.02	0.10
14.30	3.70	0.00	0.04	16.95	4.01	0.02	0.10
14.35	3.70	0.01	0.04	17.00	4.01	0.02	0.10
14.40	3.71	0.01	0.04	17.05	4.02	0.02	0.10
14.45	3.72	0.01	0.05	17.10	4.02	0.02	0.10
14.50	3.73	0.01	0.05	17.15	4.03	0.02	0.10
14.55	3.73	0.01	0.05	17.20	4.03	0.02	0.10
14.60	3.74	0.01	0.05	17.25	4.04	0.02	0.10
14.65	3.75	0.01	0.06	17.30	4.04	0.02	0.10
14.70	3.76	0.01	0.06	17.35	4.04	0.02	0.10
14.75	3.76	0.01	0.06	17.40	4.05	0.02	0.10
14.80	3.77	0.01	0.06	17.45	4.05	0.02	0.10
14.85	3.78	0.01	0.06	17.50	4.06	0.02	0.10
14.90	3.78	0.01	0.07	17.55	4.06	0.02	0.10
14.95	3.79	0.01	0.07	17.60	4.07	0.02	0.10
15.00	3.80	0.01	0.07	17.65	4.07	0.02	0.10
15.05	3.80	0.01	0.07	17.70	4.07	0.03	0.10
15.10	3.81	0.01	0.07	17.75	4.08	0.03	0.10
15.15	3.82	0.01	0.08	17.80	4.08	0.03	0.10
15.20	3.82	0.01	0.08	17.85	4.09	0.03	0.10

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	4.09	0.03	0.10	20.55	4.27	0.04	0.10
17.95	4.09	0.03	0.10	20.60	4.27	0.04	0.10
18.00	4.10	0.03	0.10	20.65	4.27	0.04	0.09
18.05	4.10	0.03	0.10	20.70	4.28	0.04	0.09
18.10	4.11	0.03	0.10	20.75	4.28	0.04	0.09
18.15	4.11	0.03	0.10	20.80	4.28	0.04	0.09
18.20	4.11	0.03	0.10	20.85	4.28	0.04	0.09
18.25	4.12	0.03	0.10	20.90	4.29	0.04	0.09
18.30	4.12	0.03	0.10	20.95	4.29	0.04	0.09
18.35	4.13	0.03	0.10	21.00	4.29	0.04	0.09
18.40	4.13	0.03	**0.10**	21.05	4.30	0.04	0.09
18.45	4.13	0.03	0.10	21.10	4.30	0.04	0.09
18.50	4.14	0.03	0.10	21.15	4.30	0.04	0.09
18.55	4.14	0.03	0.10	21.20	4.30	0.05	0.09
18.60	4.14	0.03	0.10	21.25	4.31	0.05	0.09
18.65	4.15	0.03	0.10	21.30	4.31	0.05	0.09
18.70	4.15	0.03	0.10	21.35	4.31	0.05	0.09
18.75	4.16	0.03	0.10	21.40	4.32	0.05	0.09
18.80	4.16	0.03	0.10	21.45	4.32	0.05	0.09
18.85	4.16	0.03	0.10	21.50	4.32	0.05	0.09
18.90	4.17	0.03	0.10	21.55	4.32	0.05	0.09
18.95	4.17	0.03	0.10	21.60	4.33	0.05	0.09
19.00	4.17	0.03	0.10	21.65	4.33	0.05	0.09
19.05	4.18	0.03	0.10	21.70	4.33	0.05	0.09
19.10	4.18	0.03	0.10	21.75	4.33	0.05	0.09
19.15	4.18	0.03	0.10	21.80	4.34	0.05	0.09
19.20	4.19	0.03	0.10	21.85	4.34	0.05	0.09
19.25	4.19	0.03	0.10	21.90	4.34	0.05	0.09
19.30	4.19	0.03	0.10	21.95	4.34	0.05	0.09
19.35	4.20	0.04	0.10	22.00	4.35	0.05	0.09
19.40	4.20	0.04	0.10	22.05	4.35	0.05	0.09
19.45	4.20	0.04	0.10	22.10	4.35	0.05	0.09
19.50	4.21	0.04	0.10	22.15	4.36	0.05	0.09
19.55	4.21	0.04	0.10	22.20	4.36	0.05	0.09
19.60	4.21	0.04	0.10	22.25	4.36	0.05	0.09
19.65	4.22	0.04	0.10	22.30	4.36	0.05	0.09
19.70	4.22	0.04	0.10	22.35	4.37	0.05	0.09
19.75	4.22	0.04	0.10	22.40	4.37	0.05	0.09
19.80	4.22	0.04	0.10	22.45	4.37	0.05	0.09
19.85	4.23	0.04	0.10	22.50	4.37	0.05	0.09
19.90	4.23	0.04	0.10	22.55	4.38	0.05	0.09
19.95	4.23	0.04	0.10	22.60	4.38	0.05	0.09
20.00	4.24	0.04	0.10	22.65	4.38	0.05	0.09
20.05	4.24	0.04	0.10	22.70	4.38	0.05	0.09
20.10	4.24	0.04	0.10	22.75	4.39	0.05	0.09
20.15	4.25	0.04	0.10	22.80	4.39	0.05	0.09
20.20	4.25	0.04	0.10	22.85	4.39	0.05	0.09
20.25	4.25	0.04	0.10	22.90	4.39	0.05	0.09
20.30	4.25	0.04	0.10	22.95	4.40	0.05	0.09
20.35	4.26	0.04	0.10	23.00	4.40	0.05	0.09
20.40	4.26	0.04	0.10	23.05	4.40	0.06	0.09
20.45	4.26	0.04	0.10	23.10	4.41	0.06	0.09
20.50	4.27	0.04	0.10	23.15	4.41	0.06	0.09

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	4.41	0.06	0.09	25.85	4.45	0.06	0.01
23.25	4.41	0.06	0.09	25.90	4.45	0.06	0.01
23.30	4.42	0.06	0.09	25.95	4.45	0.06	0.01
23.35	4.42	0.06	0.09	26.00	4.45	0.06	0.01
23.40	4.42	0.06	0.09	26.05	4.45	0.06	0.01
23.45	4.42	0.06	0.09	26.10	4.45	0.06	0.01
23.50	4.43	0.06	0.09	26.15	4.45	0.06	0.01
23.55	4.43	0.06	0.09	26.20	4.45	0.06	0.00
23.60	4.43	0.06	0.09	26.25	4.45	0.06	0.00
23.65	4.43	0.06	0.09	26.30	4.45	0.06	0.00
23.70	4.44	0.06	0.09	26.35	4.45	0.06	0.00
23.75	4.44	0.06	0.09	26.40	4.45	0.06	0.00
23.80	4.44	0.06	0.09	26.45	4.45	0.06	0.00
23.85	4.44	0.06	0.09	26.50	4.45	0.06	0.00
23.90	4.45	0.06	0.09	26.55	4.45	0.06	0.00
23.95	4.45	0.06	0.09	26.60	4.45	0.06	0.00
24.00	**4.45**	**0.06**	0.09	26.65	4.45	0.06	0.00
24.05	4.45	0.06	0.09	26.70	4.45	0.06	0.00
24.10	4.45	0.06	0.09	26.75	4.45	0.06	0.00
24.15	4.45	0.06	0.09	26.80	4.45	0.06	0.00
24.20	4.45	0.06	0.09	26.85	4.45	0.06	0.00
24.25	4.45	0.06	0.09	26.90	4.45	0.06	0.00
24.30	4.45	0.06	0.09	26.95	4.45	0.06	0.00
24.35	4.45	0.06	0.09	27.00	4.45	0.06	0.00
24.40	4.45	0.06	0.09	27.05	4.45	0.06	0.00
24.45	4.45	0.06	0.09	27.10	4.45	0.06	0.00
24.50	4.45	0.06	0.09	27.15	4.45	0.06	0.00
24.55	4.45	0.06	0.09	27.20	4.45	0.06	0.00
24.60	4.45	0.06	0.08	27.25	4.45	0.06	0.00
24.65	4.45	0.06	0.08	27.30	4.45	0.06	0.00
24.70	4.45	0.06	0.08	27.35	4.45	0.06	0.00
24.75	4.45	0.06	0.07	27.40	4.45	0.06	0.00
24.80	4.45	0.06	0.07	27.45	4.45	0.06	0.00
24.85	4.45	0.06	0.06	27.50	4.45	0.06	0.00
24.90	4.45	0.06	0.06	27.55	4.45	0.06	0.00
24.95	4.45	0.06	0.06	27.60	4.45	0.06	0.00
25.00	4.45	0.06	0.05	27.65	4.45	0.06	0.00
25.05	4.45	0.06	0.05	27.70	4.45	0.06	0.00
25.10	4.45	0.06	0.04	27.75	4.45	0.06	0.00
25.15	4.45	0.06	0.04	27.80	4.45	0.06	0.00
25.20	4.45	0.06	0.04	27.85	4.45	0.06	0.00
25.25	4.45	0.06	0.03	27.90	4.45	0.06	0.00
25.30	4.45	0.06	0.03	27.95	4.45	0.06	0.00
25.35	4.45	0.06	0.03	28.00	4.45	0.06	0.00
25.40	4.45	0.06	0.02	28.05	4.45	0.06	0.00
25.45	4.45	0.06	0.02	28.10	4.45	0.06	0.00
25.50	4.45	0.06	0.02	28.15	4.45	0.06	0.00
25.55	4.45	0.06	0.02	28.20	4.45	0.06	0.00
25.60	4.45	0.06	0.02	28.25	4.45	0.06	0.00
25.65	4.45	0.06	0.01	28.30	4.45	0.06	0.00
25.70	4.45	0.06	0.01	28.35	4.45	0.06	0.00
25.75	4.45	0.06	0.01	28.40	4.45	0.06	0.00
25.80	4.45	0.06	0.01	28.45	4.45	0.06	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	4.45	0.06	0.00	31.15	4.45	0.06	0.00
28.55	4.45	0.06	0.00	31.20	4.45	0.06	0.00
28.60	4.45	0.06	0.00	31.25	4.45	0.06	0.00
28.65	4.45	0.06	0.00	31.30	4.45	0.06	0.00
28.70	4.45	0.06	0.00	31.35	4.45	0.06	0.00
28.75	4.45	0.06	0.00	31.40	4.45	0.06	0.00
28.80	4.45	0.06	0.00	31.45	4.45	0.06	0.00
28.85	4.45	0.06	0.00	31.50	4.45	0.06	0.00
28.90	4.45	0.06	0.00	31.55	4.45	0.06	0.00
28.95	4.45	0.06	0.00	31.60	4.45	0.06	0.00
29.00	4.45	0.06	0.00	31.65	4.45	0.06	0.00
29.05	4.45	0.06	0.00	31.70	4.45	0.06	0.00
29.10	4.45	0.06	0.00	31.75	4.45	0.06	0.00
29.15	4.45	0.06	0.00	31.80	4.45	0.06	0.00
29.20	4.45	0.06	0.00	31.85	4.45	0.06	0.00
29.25	4.45	0.06	0.00	31.90	4.45	0.06	0.00
29.30	4.45	0.06	0.00	31.95	4.45	0.06	0.00
29.35	4.45	0.06	0.00	32.00	4.45	0.06	0.00
29.40	4.45	0.06	0.00	32.05	4.45	0.06	0.00
29.45	4.45	0.06	0.00	32.10	4.45	0.06	0.00
29.50	4.45	0.06	0.00	32.15	4.45	0.06	0.00
29.55	4.45	0.06	0.00	32.20	4.45	0.06	0.00
29.60	4.45	0.06	0.00	32.25	4.45	0.06	0.00
29.65	4.45	0.06	0.00	32.30	4.45	0.06	0.00
29.70	4.45	0.06	0.00	32.35	4.45	0.06	0.00
29.75	4.45	0.06	0.00	32.40	4.45	0.06	0.00
29.80	4.45	0.06	0.00	32.45	4.45	0.06	0.00
29.85	4.45	0.06	0.00	32.50	4.45	0.06	0.00
29.90	4.45	0.06	0.00	32.55	4.45	0.06	0.00
29.95	4.45	0.06	0.00	32.60	4.45	0.06	0.00
30.00	4.45	0.06	0.00	32.65	4.45	0.06	0.00
30.05	4.45	0.06	0.00	32.70	4.45	0.06	0.00
30.10	4.45	0.06	0.00	32.75	4.45	0.06	0.00
30.15	4.45	0.06	0.00	32.80	4.45	0.06	0.00
30.20	4.45	0.06	0.00	32.85	4.45	0.06	0.00
30.25	4.45	0.06	0.00	32.90	4.45	0.06	0.00
30.30	4.45	0.06	0.00	32.95	4.45	0.06	0.00
30.35	4.45	0.06	0.00	33.00	4.45	0.06	0.00
30.40	4.45	0.06	0.00	33.05	4.45	0.06	0.00
30.45	4.45	0.06	0.00	33.10	4.45	0.06	0.00
30.50	4.45	0.06	0.00	33.15	4.45	0.06	0.00
30.55	4.45	0.06	0.00	33.20	4.45	0.06	0.00
30.60	4.45	0.06	0.00	33.25	4.45	0.06	0.00
30.65	4.45	0.06	0.00	33.30	4.45	0.06	0.00
30.70	4.45	0.06	0.00	33.35	4.45	0.06	0.00
30.75	4.45	0.06	0.00	33.40	4.45	0.06	0.00
30.80	4.45	0.06	0.00	33.45	4.45	0.06	0.00
30.85	4.45	0.06	0.00	33.50	4.45	0.06	0.00
30.90	4.45	0.06	0.00	33.55	4.45	0.06	0.00
30.95	4.45	0.06	0.00	33.60	4.45	0.06	0.00
31.00	4.45	0.06	0.00	33.65	4.45	0.06	0.00
31.05	4.45	0.06	0.00	33.70	4.45	0.06	0.00
31.10	4.45	0.06	0.00	33.75	4.45	0.06	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	4.45	0.06	0.00	36.45	4.45	0.06	0.00
33.85	4.45	0.06	0.00	36.50	4.45	0.06	0.00
33.90	4.45	0.06	0.00	36.55	4.45	0.06	0.00
33.95	4.45	0.06	0.00	36.60	4.45	0.06	0.00
34.00	4.45	0.06	0.00	36.65	4.45	0.06	0.00
34.05	4.45	0.06	0.00	36.70	4.45	0.06	0.00
34.10	4.45	0.06	0.00	36.75	4.45	0.06	0.00
34.15	4.45	0.06	0.00	36.80	4.45	0.06	0.00
34.20	4.45	0.06	0.00	36.85	4.45	0.06	0.00
34.25	4.45	0.06	0.00	36.90	4.45	0.06	0.00
34.30	4.45	0.06	0.00	36.95	4.45	0.06	0.00
34.35	4.45	0.06	0.00	37.00	4.45	0.06	0.00
34.40	4.45	0.06	0.00	37.05	4.45	0.06	0.00
34.45	4.45	0.06	0.00	37.10	4.45	0.06	0.00
34.50	4.45	0.06	0.00	37.15	4.45	0.06	0.00
34.55	4.45	0.06	0.00	37.20	4.45	0.06	0.00
34.60	4.45	0.06	0.00	37.25	4.45	0.06	0.00
34.65	4.45	0.06	0.00	37.30	4.45	0.06	0.00
34.70	4.45	0.06	0.00	37.35	4.45	0.06	0.00
34.75	4.45	0.06	0.00	37.40	4.45	0.06	0.00
34.80	4.45	0.06	0.00	37.45	4.45	0.06	0.00
34.85	4.45	0.06	0.00	37.50	4.45	0.06	0.00
34.90	4.45	0.06	0.00	37.55	4.45	0.06	0.00
34.95	4.45	0.06	0.00	37.60	4.45	0.06	0.00
35.00	4.45	0.06	0.00	37.65	4.45	0.06	0.00
35.05	4.45	0.06	0.00	37.70	4.45	0.06	0.00
35.10	4.45	0.06	0.00	37.75	4.45	0.06	0.00
35.15	4.45	0.06	0.00	37.80	4.45	0.06	0.00
35.20	4.45	0.06	0.00	37.85	4.45	0.06	0.00
35.25	4.45	0.06	0.00	37.90	4.45	0.06	0.00
35.30	4.45	0.06	0.00	37.95	4.45	0.06	0.00
35.35	4.45	0.06	0.00	38.00	4.45	0.06	0.00
35.40	4.45	0.06	0.00	38.05	4.45	0.06	0.00
35.45	4.45	0.06	0.00	38.10	4.45	0.06	0.00
35.50	4.45	0.06	0.00	38.15	4.45	0.06	0.00
35.55	4.45	0.06	0.00	38.20	4.45	0.06	0.00
35.60	4.45	0.06	0.00	38.25	4.45	0.06	0.00
35.65	4.45	0.06	0.00	38.30	4.45	0.06	0.00
35.70	4.45	0.06	0.00	38.35	4.45	0.06	0.00
35.75	4.45	0.06	0.00	38.40	4.45	0.06	0.00
35.80	4.45	0.06	0.00	38.45	4.45	0.06	0.00
35.85	4.45	0.06	0.00	38.50	4.45	0.06	0.00
35.90	4.45	0.06	0.00	38.55	4.45	0.06	0.00
35.95	4.45	0.06	0.00	38.60	4.45	0.06	0.00
36.00	4.45	0.06	0.00	38.65	4.45	0.06	0.00
36.05	4.45	0.06	0.00	38.70	4.45	0.06	0.00
36.10	4.45	0.06	0.00	38.75	4.45	0.06	0.00
36.15	4.45	0.06	0.00	38.80	4.45	0.06	0.00
36.20	4.45	0.06	0.00	38.85	4.45	0.06	0.00
36.25	4.45	0.06	0.00	38.90	4.45	0.06	0.00
36.30	4.45	0.06	0.00	38.95	4.45	0.06	0.00
36.35	4.45	0.06	0.00	39.00	4.45	0.06	0.00
36.40	4.45	0.06	0.00	39.05	4.45	0.06	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	4.45	0.06	0.00	41.75	4.45	0.06	0.00
39.15	4.45	0.06	0.00	41.80	4.45	0.06	0.00
39.20	4.45	0.06	0.00	41.85	4.45	0.06	0.00
39.25	4.45	0.06	0.00	41.90	4.45	0.06	0.00
39.30	4.45	0.06	0.00	41.95	4.45	0.06	0.00
39.35	4.45	0.06	0.00	42.00	4.45	0.06	0.00
39.40	4.45	0.06	0.00	42.05	4.45	0.06	0.00
39.45	4.45	0.06	0.00	42.10	4.45	0.06	0.00
39.50	4.45	0.06	0.00	42.15	4.45	0.06	0.00
39.55	4.45	0.06	0.00	42.20	4.45	0.06	0.00
39.60	4.45	0.06	0.00	42.25	4.45	0.06	0.00
39.65	4.45	0.06	0.00	42.30	4.45	0.06	0.00
39.70	4.45	0.06	0.00	42.35	4.45	0.06	0.00
39.75	4.45	0.06	0.00	42.40	4.45	0.06	0.00
39.80	4.45	0.06	0.00	42.45	4.45	0.06	0.00
39.85	4.45	0.06	0.00	42.50	4.45	0.06	0.00
39.90	4.45	0.06	0.00	42.55	4.45	0.06	0.00
39.95	4.45	0.06	0.00	42.60	4.45	0.06	0.00
40.00	4.45	0.06	0.00	42.65	4.45	0.06	0.00
40.05	4.45	0.06	0.00	42.70	4.45	0.06	0.00
40.10	4.45	0.06	0.00	42.75	4.45	0.06	0.00
40.15	4.45	0.06	0.00	42.80	4.45	0.06	0.00
40.20	4.45	0.06	0.00	42.85	4.45	0.06	0.00
40.25	4.45	0.06	0.00	42.90	4.45	0.06	0.00
40.30	4.45	0.06	0.00	42.95	4.45	0.06	0.00
40.35	4.45	0.06	0.00	43.00	4.45	0.06	0.00
40.40	4.45	0.06	0.00	43.05	4.45	0.06	0.00
40.45	4.45	0.06	0.00	43.10	4.45	0.06	0.00
40.50	4.45	0.06	0.00	43.15	4.45	0.06	0.00
40.55	4.45	0.06	0.00	43.20	4.45	0.06	0.00
40.60	4.45	0.06	0.00	43.25	4.45	0.06	0.00
40.65	4.45	0.06	0.00	43.30	4.45	0.06	0.00
40.70	4.45	0.06	0.00	43.35	4.45	0.06	0.00
40.75	4.45	0.06	0.00	43.40	4.45	0.06	0.00
40.80	4.45	0.06	0.00	43.45	4.45	0.06	0.00
40.85	4.45	0.06	0.00	43.50	4.45	0.06	0.00
40.90	4.45	0.06	0.00	43.55	4.45	0.06	0.00
40.95	4.45	0.06	0.00	43.60	4.45	0.06	0.00
41.00	4.45	0.06	0.00	43.65	4.45	0.06	0.00
41.05	4.45	0.06	0.00	43.70	4.45	0.06	0.00
41.10	4.45	0.06	0.00	43.75	4.45	0.06	0.00
41.15	4.45	0.06	0.00	43.80	4.45	0.06	0.00
41.20	4.45	0.06	0.00	43.85	4.45	0.06	0.00
41.25	4.45	0.06	0.00	43.90	4.45	0.06	0.00
41.30	4.45	0.06	0.00	43.95	4.45	0.06	0.00
41.35	4.45	0.06	0.00	44.00	4.45	0.06	0.00
41.40	4.45	0.06	0.00	44.05	4.45	0.06	0.00
41.45	4.45	0.06	0.00	44.10	4.45	0.06	0.00
41.50	4.45	0.06	0.00	44.15	4.45	0.06	0.00
41.55	4.45	0.06	0.00	44.20	4.45	0.06	0.00
41.60	4.45	0.06	0.00	44.25	4.45	0.06	0.00
41.65	4.45	0.06	0.00	44.30	4.45	0.06	0.00
41.70	4.45	0.06	0.00	44.35	4.45	0.06	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	4.45	0.06	0.00	47.05	4.45	0.06	0.00
44.45	4.45	0.06	0.00	47.10	4.45	0.06	0.00
44.50	4.45	0.06	0.00	47.15	4.45	0.06	0.00
44.55	4.45	0.06	0.00	47.20	4.45	0.06	0.00
44.60	4.45	0.06	0.00	47.25	4.45	0.06	0.00
44.65	4.45	0.06	0.00	47.30	4.45	0.06	0.00
44.70	4.45	0.06	0.00	47.35	4.45	0.06	0.00
44.75	4.45	0.06	0.00	47.40	4.45	0.06	0.00
44.80	4.45	0.06	0.00	47.45	4.45	0.06	0.00
44.85	4.45	0.06	0.00	47.50	4.45	0.06	0.00
44.90	4.45	0.06	0.00	47.55	4.45	0.06	0.00
44.95	4.45	0.06	0.00	47.60	4.45	0.06	0.00
45.00	4.45	0.06	0.00	47.65	4.45	0.06	0.00
45.05	4.45	0.06	0.00	47.70	4.45	0.06	0.00
45.10	4.45	0.06	0.00	47.75	4.45	0.06	0.00
45.15	4.45	0.06	0.00	47.80	4.45	0.06	0.00
45.20	4.45	0.06	0.00	47.85	4.45	0.06	0.00
45.25	4.45	0.06	0.00	47.90	4.45	0.06	0.00
45.30	4.45	0.06	0.00	47.95	4.45	0.06	0.00
45.35	4.45	0.06	0.00	48.00	4.45	0.06	0.00
45.40	4.45	0.06	0.00	48.05	4.45	0.06	0.00
45.45	4.45	0.06	0.00	48.10	4.45	0.06	0.00
45.50	4.45	0.06	0.00	48.15	4.45	0.06	0.00
45.55	4.45	0.06	0.00	48.20	4.45	0.06	0.00
45.60	4.45	0.06	0.00	48.25	4.45	0.06	0.00
45.65	4.45	0.06	0.00	48.30	4.45	0.06	0.00
45.70	4.45	0.06	0.00	48.35	4.45	0.06	0.00
45.75	4.45	0.06	0.00	48.40	4.45	0.06	0.00
45.80	4.45	0.06	0.00	48.45	4.45	0.06	0.00
45.85	4.45	0.06	0.00	48.50	4.45	0.06	0.00
45.90	4.45	0.06	0.00	48.55	4.45	0.06	0.00
45.95	4.45	0.06	0.00	48.60	4.45	0.06	0.00
46.00	4.45	0.06	0.00	48.65	4.45	0.06	0.00
46.05	4.45	0.06	0.00	48.70	4.45	0.06	0.00
46.10	4.45	0.06	0.00	48.75	4.45	0.06	0.00
46.15	4.45	0.06	0.00	48.80	4.45	0.06	0.00
46.20	4.45	0.06	0.00	48.85	4.45	0.06	0.00
46.25	4.45	0.06	0.00	48.90	4.45	0.06	0.00
46.30	4.45	0.06	0.00	48.95	4.45	0.06	0.00
46.35	4.45	0.06	0.00	49.00	4.45	0.06	0.00
46.40	4.45	0.06	0.00	49.05	4.45	0.06	0.00
46.45	4.45	0.06	0.00	49.10	4.45	0.06	0.00
46.50	4.45	0.06	0.00	49.15	4.45	0.06	0.00
46.55	4.45	0.06	0.00	49.20	4.45	0.06	0.00
46.60	4.45	0.06	0.00	49.25	4.45	0.06	0.00
46.65	4.45	0.06	0.00	49.30	4.45	0.06	0.00
46.70	4.45	0.06	0.00	49.35	4.45	0.06	0.00
46.75	4.45	0.06	0.00	49.40	4.45	0.06	0.00
46.80	4.45	0.06	0.00	49.45	4.45	0.06	0.00
46.85	4.45	0.06	0.00	49.50	4.45	0.06	0.00
46.90	4.45	0.06	0.00	49.55	4.45	0.06	0.00
46.95	4.45	0.06	0.00	49.60	4.45	0.06	0.00
47.00	4.45	0.06	0.00	49.65	4.45	0.06	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	4.45	0.06	0.00
49.75	4.45	0.06	0.00
49.80	4.45	0.06	0.00
49.85	4.45	0.06	0.00
49.90	4.45	0.06	0.00
49.95	4.45	0.06	0.00
50.00	4.45	0.06	0.00

Summary for Subcatchment 4S: SB-4

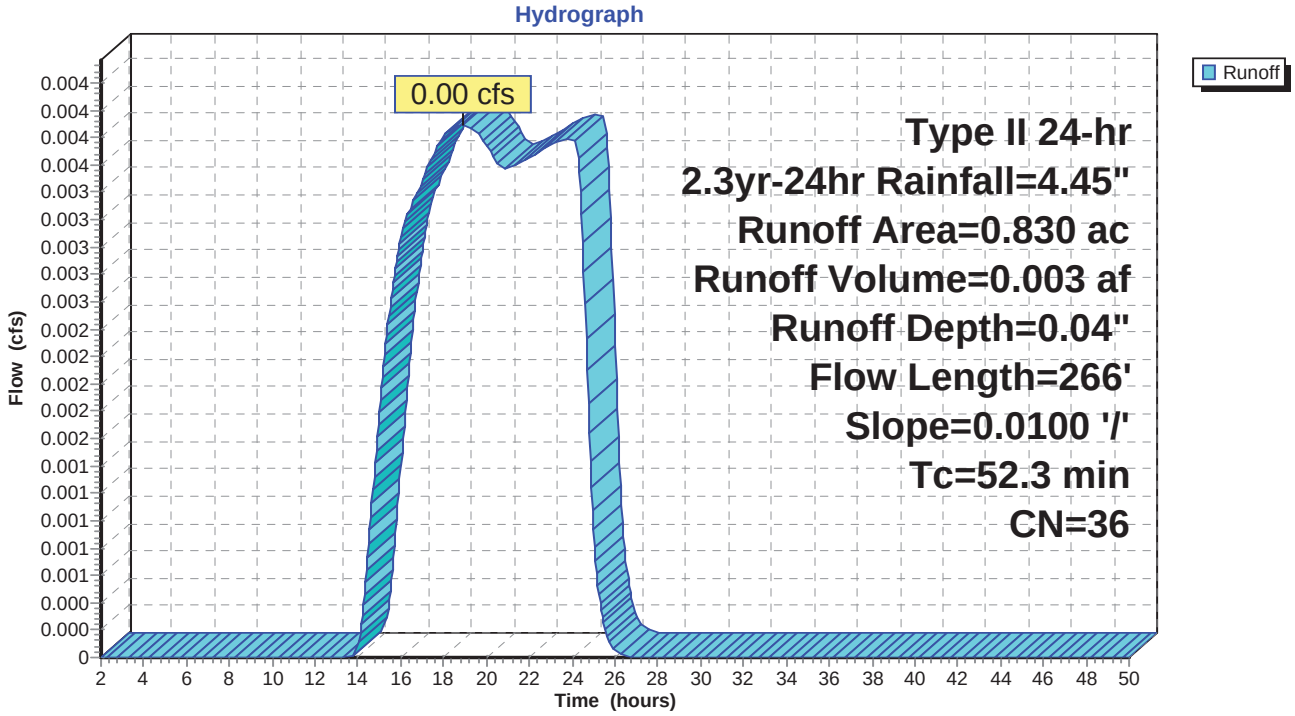
Runoff = 0.00 cfs @ 18.89 hrs, Volume= 0.003 af, Depth= 0.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

Area (ac)	CN	Description
0.830	36	Woods, Fair, HSG A
0.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.3	266	0.0100	0.08		**Sheet Flow, Woods: Light Underbrush** Woods: Light underbrush n= 0.400 P2= 4.50"

Subcatchment 4S: SB-4



Hydrograph for Subcatchment 4S: SB-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.10	0.00	0.00	4.65	0.26	0.00	0.00
2.05	0.10	0.00	0.00	4.70	0.26	0.00	0.00
2.10	0.10	0.00	0.00	4.75	0.26	0.00	0.00
2.15	0.11	0.00	0.00	4.80	0.27	0.00	0.00
2.20	0.11	0.00	0.00	4.85	0.27	0.00	0.00
2.25	0.11	0.00	0.00	4.90	0.27	0.00	0.00
2.30	0.11	0.00	0.00	4.95	0.28	0.00	0.00
2.35	0.12	0.00	0.00	5.00	0.28	0.00	0.00
2.40	0.12	0.00	0.00	5.05	0.28	0.00	0.00
2.45	0.12	0.00	0.00	5.10	0.29	0.00	0.00
2.50	0.13	0.00	0.00	5.15	0.29	0.00	0.00
2.55	0.13	0.00	0.00	5.20	0.29	0.00	0.00
2.60	0.13	0.00	0.00	5.25	0.30	0.00	0.00
2.65	0.13	0.00	0.00	5.30	0.30	0.00	0.00
2.70	0.14	0.00	0.00	5.35	0.31	0.00	0.00
2.75	0.14	0.00	0.00	5.40	0.31	0.00	0.00
2.80	0.14	0.00	0.00	5.45	0.31	0.00	0.00
2.85	0.14	0.00	0.00	5.50	0.32	0.00	0.00
2.90	0.15	0.00	0.00	5.55	0.32	0.00	0.00
2.95	0.15	0.00	0.00	5.60	0.32	0.00	0.00
3.00	0.15	0.00	0.00	5.65	0.33	0.00	0.00
3.05	0.16	0.00	0.00	5.70	0.33	0.00	0.00
3.10	0.16	0.00	0.00	5.75	0.34	0.00	0.00
3.15	0.16	0.00	0.00	5.80	0.34	0.00	0.00
3.20	0.17	0.00	0.00	5.85	0.34	0.00	0.00
3.25	0.17	0.00	0.00	5.90	0.35	0.00	0.00
3.30	0.17	0.00	0.00	5.95	0.35	0.00	0.00
3.35	0.17	0.00	0.00	6.00	0.36	0.00	0.00
3.40	0.18	0.00	0.00	6.05	0.36	0.00	0.00
3.45	0.18	0.00	0.00	6.10	0.36	0.00	0.00
3.50	0.18	0.00	0.00	6.15	0.37	0.00	0.00
3.55	0.19	0.00	0.00	6.20	0.37	0.00	0.00
3.60	0.19	0.00	0.00	6.25	0.38	0.00	0.00
3.65	0.19	0.00	0.00	6.30	0.38	0.00	0.00
3.70	0.20	0.00	0.00	6.35	0.38	0.00	0.00
3.75	0.20	0.00	0.00	6.40	0.39	0.00	0.00
3.80	0.20	0.00	0.00	6.45	0.39	0.00	0.00
3.85	0.20	0.00	0.00	6.50	0.40	0.00	0.00
3.90	0.21	0.00	0.00	6.55	0.40	0.00	0.00
3.95	0.21	0.00	0.00	6.60	0.41	0.00	0.00
4.00	0.21	0.00	0.00	6.65	0.41	0.00	0.00
4.05	0.22	0.00	0.00	6.70	0.41	0.00	0.00
4.10	0.22	0.00	0.00	6.75	0.42	0.00	0.00
4.15	0.22	0.00	0.00	6.80	0.42	0.00	0.00
4.20	0.23	0.00	0.00	6.85	0.43	0.00	0.00
4.25	0.23	0.00	0.00	6.90	0.43	0.00	0.00
4.30	0.23	0.00	0.00	6.95	0.44	0.00	0.00
4.35	0.24	0.00	0.00	7.00	0.44	0.00	0.00
4.40	0.24	0.00	0.00	7.05	0.45	0.00	0.00
4.45	0.24	0.00	0.00	7.10	0.45	0.00	0.00
4.50	0.25	0.00	0.00	7.15	0.45	0.00	0.00
4.55	0.25	0.00	0.00	7.20	0.46	0.00	0.00
4.60	0.25	0.00	0.00	7.25	0.46	0.00	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.47	0.00	0.00	9.95	0.80	0.00	0.00
7.35	0.47	0.00	0.00	10.00	0.81	0.00	0.00
7.40	0.48	0.00	0.00	10.05	0.81	0.00	0.00
7.45	0.48	0.00	0.00	10.10	0.82	0.00	0.00
7.50	0.49	0.00	0.00	10.15	0.83	0.00	0.00
7.55	0.49	0.00	0.00	10.20	0.84	0.00	0.00
7.60	0.50	0.00	0.00	10.25	0.85	0.00	0.00
7.65	0.50	0.00	0.00	10.30	0.86	0.00	0.00
7.70	0.51	0.00	0.00	10.35	0.87	0.00	0.00
7.75	0.51	0.00	0.00	10.40	0.89	0.00	0.00
7.80	0.51	0.00	0.00	10.45	0.90	0.00	0.00
7.85	0.52	0.00	0.00	10.50	0.91	0.00	0.00
7.90	0.52	0.00	0.00	10.55	0.92	0.00	0.00
7.95	0.53	0.00	0.00	10.60	0.93	0.00	0.00
8.00	0.53	0.00	0.00	10.65	0.94	0.00	0.00
8.05	0.54	0.00	0.00	10.70	0.96	0.00	0.00
8.10	0.54	0.00	0.00	10.75	0.97	0.00	0.00
8.15	0.55	0.00	0.00	10.80	0.99	0.00	0.00
8.20	0.55	0.00	0.00	10.85	1.00	0.00	0.00
8.25	0.56	0.00	0.00	10.90	1.01	0.00	0.00
8.30	0.57	0.00	0.00	10.95	1.03	0.00	0.00
8.35	0.57	0.00	0.00	11.00	1.05	0.00	0.00
8.40	0.58	0.00	0.00	11.05	1.06	0.00	0.00
8.45	0.58	0.00	0.00	11.10	1.08	0.00	0.00
8.50	0.59	0.00	0.00	11.15	1.10	0.00	0.00
8.55	0.59	0.00	0.00	11.20	1.12	0.00	0.00
8.60	0.60	0.00	0.00	11.25	1.14	0.00	0.00
8.65	0.61	0.00	0.00	11.30	1.16	0.00	0.00
8.70	0.61	0.00	0.00	11.35	1.18	0.00	0.00
8.75	0.62	0.00	0.00	11.40	1.21	0.00	0.00
8.80	0.63	0.00	0.00	11.45	1.23	0.00	0.00
8.85	0.63	0.00	0.00	11.50	1.26	0.00	0.00
8.90	0.64	0.00	0.00	11.55	1.30	0.00	0.00
8.95	0.65	0.00	0.00	11.60	1.37	0.00	0.00
9.00	0.65	0.00	0.00	11.65	1.46	0.00	0.00
9.05	0.66	0.00	0.00	11.70	1.58	0.00	0.00
9.10	0.67	0.00	0.00	11.75	1.72	0.00	0.00
9.15	0.68	0.00	0.00	11.80	1.92	0.00	0.00
9.20	0.68	0.00	0.00	11.85	2.19	0.00	0.00
9.25	0.69	0.00	0.00	11.90	2.53	0.00	0.00
9.30	0.70	0.00	0.00	11.95	2.82	0.00	0.00
9.35	0.70	0.00	0.00	12.00	2.95	0.00	0.00
9.40	0.71	0.00	0.00	12.05	2.99	0.00	0.00
9.45	0.72	0.00	0.00	12.10	3.03	0.00	0.00
9.50	0.73	0.00	0.00	12.15	3.07	0.00	0.00
9.55	0.73	0.00	0.00	12.20	3.11	0.00	0.00
9.60	0.74	0.00	0.00	12.25	3.14	0.00	0.00
9.65	0.75	0.00	0.00	12.30	3.17	0.00	0.00
9.70	0.76	0.00	0.00	12.35	3.20	0.00	0.00
9.75	0.76	0.00	0.00	12.40	3.23	0.00	0.00
9.80	0.77	0.00	0.00	12.45	3.25	0.00	0.00
9.85	0.78	0.00	0.00	12.50	3.27	0.00	0.00
9.90	0.79	0.00	0.00	12.55	3.29	0.00	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	3.31	0.00	0.00	15.25	3.83	0.00	0.00
12.65	3.33	0.00	0.00	15.30	3.84	0.00	0.00
12.70	3.34	0.00	0.00	15.35	3.84	0.00	0.00
12.75	3.36	0.00	0.00	15.40	3.85	0.00	0.00
12.80	3.38	0.00	0.00	15.45	3.85	0.00	0.00
12.85	3.39	0.00	0.00	15.50	3.86	0.01	0.00
12.90	3.41	0.00	0.00	15.55	3.87	0.01	0.00
12.95	3.42	0.00	0.00	15.60	3.87	0.01	0.00
13.00	3.44	0.00	0.00	15.65	3.88	0.01	0.00
13.05	3.45	0.00	0.00	15.70	3.88	0.01	0.00
13.10	3.46	0.00	0.00	15.75	3.89	0.01	0.00
13.15	3.47	0.00	0.00	15.80	3.89	0.01	0.00
13.20	3.49	0.00	0.00	15.85	3.90	0.01	0.00
13.25	3.50	0.00	0.00	15.90	3.91	0.01	0.00
13.30	3.51	0.00	0.00	15.95	3.91	0.01	0.00
13.35	3.52	0.00	0.00	16.00	3.92	0.01	0.00
13.40	3.53	0.00	0.00	16.05	3.92	0.01	0.00
13.45	3.54	0.00	0.00	16.10	3.93	0.01	0.00
13.50	3.56	0.00	0.00	16.15	3.93	0.01	0.00
13.55	3.57	0.00	0.00	16.20	3.94	0.01	0.00
13.60	3.58	0.00	0.00	16.25	3.94	0.01	0.00
13.65	3.59	0.00	0.00	16.30	3.95	0.01	0.00
13.70	3.60	0.00	0.00	16.35	3.95	0.01	0.00
13.75	3.61	0.00	0.00	16.40	3.96	0.01	0.00
13.80	3.61	0.00	0.00	16.45	3.96	0.01	0.00
13.85	3.62	0.00	0.00	16.50	3.97	0.01	0.00
13.90	3.63	0.00	0.00	16.55	3.97	0.01	0.00
13.95	3.64	0.00	0.00	16.60	3.98	0.01	0.00
14.00	3.65	0.00	0.00	16.65	3.98	0.01	0.00
14.05	3.66	0.00	0.00	16.70	3.98	0.01	0.00
14.10	3.67	0.00	0.00	16.75	3.99	0.01	0.00
14.15	3.67	0.00	0.00	16.80	3.99	0.01	0.00
14.20	3.68	0.00	0.00	16.85	4.00	0.01	0.00
14.25	3.69	0.00	0.00	16.90	4.00	0.01	0.00
14.30	3.70	0.00	0.00	16.95	4.01	0.01	0.00
14.35	3.70	0.00	0.00	17.00	4.01	0.01	0.00
14.40	3.71	0.00	0.00	17.05	4.02	0.01	0.00
14.45	3.72	0.00	0.00	17.10	4.02	0.01	0.00
14.50	3.73	0.00	0.00	17.15	4.03	0.01	0.00
14.55	3.73	0.00	0.00	17.20	4.03	0.01	0.00
14.60	3.74	0.00	0.00	17.25	4.04	0.01	0.00
14.65	3.75	0.00	0.00	17.30	4.04	0.01	0.00
14.70	3.76	0.00	0.00	17.35	4.04	0.01	0.00
14.75	3.76	0.00	0.00	17.40	4.05	0.01	0.00
14.80	3.77	0.00	0.00	17.45	4.05	0.01	0.00
14.85	3.78	0.00	0.00	17.50	4.06	0.01	0.00
14.90	3.78	0.00	0.00	17.55	4.06	0.01	0.00
14.95	3.79	0.00	0.00	17.60	4.07	0.01	0.00
15.00	3.80	0.00	0.00	17.65	4.07	0.01	0.00
15.05	3.80	0.00	0.00	17.70	4.07	0.01	0.00
15.10	3.81	0.00	0.00	17.75	4.08	0.01	0.00
15.15	3.82	0.00	0.00	17.80	4.08	0.02	0.00
15.20	3.82	0.00	0.00	17.85	4.09	0.02	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	4.09	0.02	0.00	20.55	4.27	0.03	0.00
17.95	4.09	0.02	0.00	20.60	4.27	0.03	0.00
18.00	4.10	0.02	0.00	20.65	4.27	0.03	0.00
18.05	4.10	0.02	0.00	20.70	4.28	0.03	0.00
18.10	4.11	0.02	0.00	20.75	4.28	0.03	0.00
18.15	4.11	0.02	0.00	20.80	4.28	0.03	0.00
18.20	4.11	0.02	0.00	20.85	4.28	0.03	0.00
18.25	4.12	0.02	0.00	20.90	4.29	0.03	0.00
18.30	4.12	0.02	0.00	20.95	4.29	0.03	0.00
18.35	4.13	0.02	0.00	21.00	4.29	0.03	0.00
18.40	4.13	0.02	0.00	21.05	4.30	0.03	0.00
18.45	4.13	0.02	0.00	21.10	4.30	0.03	0.00
18.50	4.14	0.02	0.00	21.15	4.30	0.03	0.00
18.55	4.14	0.02	0.00	21.20	4.30	0.03	0.00
18.60	4.14	0.02	0.00	21.25	4.31	0.03	0.00
18.65	4.15	0.02	0.00	21.30	4.31	0.03	0.00
18.70	4.15	0.02	0.00	21.35	4.31	0.03	0.00
18.75	4.16	0.02	0.00	21.40	4.32	0.03	0.00
18.80	4.16	0.02	0.00	21.45	4.32	0.03	0.00
18.85	4.16	0.02	0.00	21.50	4.32	0.03	0.00
18.90	4.17	0.02	**0.00**	21.55	4.32	0.03	0.00
18.95	4.17	0.02	0.00	21.60	4.33	0.03	0.00
19.00	4.17	0.02	0.00	21.65	4.33	0.03	0.00
19.05	4.18	0.02	0.00	21.70	4.33	0.03	0.00
19.10	4.18	0.02	0.00	21.75	4.33	0.03	0.00
19.15	4.18	0.02	0.00	21.80	4.34	0.03	0.00
19.20	4.19	0.02	0.00	21.85	4.34	0.03	0.00
19.25	4.19	0.02	0.00	21.90	4.34	0.03	0.00
19.30	4.19	0.02	0.00	21.95	4.34	0.03	0.00
19.35	4.20	0.02	0.00	22.00	4.35	0.03	0.00
19.40	4.20	0.02	0.00	22.05	4.35	0.03	0.00
19.45	4.20	0.02	0.00	22.10	4.35	0.03	0.00
19.50	4.21	0.02	0.00	22.15	4.36	0.03	0.00
19.55	4.21	0.02	0.00	22.20	4.36	0.03	0.00
19.60	4.21	0.02	0.00	22.25	4.36	0.03	0.00
19.65	4.22	0.02	0.00	22.30	4.36	0.04	0.00
19.70	4.22	0.02	0.00	22.35	4.37	0.04	0.00
19.75	4.22	0.02	0.00	22.40	4.37	0.04	0.00
19.80	4.22	0.02	0.00	22.45	4.37	0.04	0.00
19.85	4.23	0.02	0.00	22.50	4.37	0.04	0.00
19.90	4.23	0.02	0.00	22.55	4.38	0.04	0.00
19.95	4.23	0.02	0.00	22.60	4.38	0.04	0.00
20.00	4.24	0.03	0.00	22.65	4.38	0.04	0.00
20.05	4.24	0.03	0.00	22.70	4.38	0.04	0.00
20.10	4.24	0.03	0.00	22.75	4.39	0.04	0.00
20.15	4.25	0.03	0.00	22.80	4.39	0.04	0.00
20.20	4.25	0.03	0.00	22.85	4.39	0.04	0.00
20.25	4.25	0.03	0.00	22.90	4.39	0.04	0.00
20.30	4.25	0.03	0.00	22.95	4.40	0.04	0.00
20.35	4.26	0.03	0.00	23.00	4.40	0.04	0.00
20.40	4.26	0.03	0.00	23.05	4.40	0.04	0.00
20.45	4.26	0.03	0.00	23.10	4.41	0.04	0.00
20.50	4.27	0.03	0.00	23.15	4.41	0.04	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	4.41	0.04	0.00	25.85	4.45	0.04	0.00
23.25	4.41	0.04	0.00	25.90	4.45	0.04	0.00
23.30	4.42	0.04	0.00	25.95	4.45	0.04	0.00
23.35	4.42	0.04	0.00	26.00	4.45	0.04	0.00
23.40	4.42	0.04	0.00	26.05	4.45	0.04	0.00
23.45	4.42	0.04	0.00	26.10	4.45	0.04	0.00
23.50	4.43	0.04	0.00	26.15	4.45	0.04	0.00
23.55	4.43	0.04	0.00	26.20	4.45	0.04	0.00
23.60	4.43	0.04	0.00	26.25	4.45	0.04	0.00
23.65	4.43	0.04	0.00	26.30	4.45	0.04	0.00
23.70	4.44	0.04	0.00	26.35	4.45	0.04	0.00
23.75	4.44	0.04	0.00	26.40	4.45	0.04	0.00
23.80	4.44	0.04	0.00	26.45	4.45	0.04	0.00
23.85	4.44	0.04	0.00	26.50	4.45	0.04	0.00
23.90	4.45	0.04	0.00	26.55	4.45	0.04	0.00
23.95	4.45	0.04	0.00	26.60	4.45	0.04	0.00
24.00	**4.45**	**0.04**	0.00	26.65	4.45	0.04	0.00
24.05	4.45	0.04	0.00	26.70	4.45	0.04	0.00
24.10	4.45	0.04	0.00	26.75	4.45	0.04	0.00
24.15	4.45	0.04	0.00	26.80	4.45	0.04	0.00
24.20	4.45	0.04	0.00	26.85	4.45	0.04	0.00
24.25	4.45	0.04	0.00	26.90	4.45	0.04	0.00
24.30	4.45	0.04	0.00	26.95	4.45	0.04	0.00
24.35	4.45	0.04	0.00	27.00	4.45	0.04	0.00
24.40	4.45	0.04	0.00	27.05	4.45	0.04	0.00
24.45	4.45	0.04	0.00	27.10	4.45	0.04	0.00
24.50	4.45	0.04	0.00	27.15	4.45	0.04	0.00
24.55	4.45	0.04	0.00	27.20	4.45	0.04	0.00
24.60	4.45	0.04	0.00	27.25	4.45	0.04	0.00
24.65	4.45	0.04	0.00	27.30	4.45	0.04	0.00
24.70	4.45	0.04	0.00	27.35	4.45	0.04	0.00
24.75	4.45	0.04	0.00	27.40	4.45	0.04	0.00
24.80	4.45	0.04	0.00	27.45	4.45	0.04	0.00
24.85	4.45	0.04	0.00	27.50	4.45	0.04	0.00
24.90	4.45	0.04	0.00	27.55	4.45	0.04	0.00
24.95	4.45	0.04	0.00	27.60	4.45	0.04	0.00
25.00	4.45	0.04	0.00	27.65	4.45	0.04	0.00
25.05	4.45	0.04	0.00	27.70	4.45	0.04	0.00
25.10	4.45	0.04	0.00	27.75	4.45	0.04	0.00
25.15	4.45	0.04	0.00	27.80	4.45	0.04	0.00
25.20	4.45	0.04	0.00	27.85	4.45	0.04	0.00
25.25	4.45	0.04	0.00	27.90	4.45	0.04	0.00
25.30	4.45	0.04	0.00	27.95	4.45	0.04	0.00
25.35	4.45	0.04	0.00	28.00	4.45	0.04	0.00
25.40	4.45	0.04	0.00	28.05	4.45	0.04	0.00
25.45	4.45	0.04	0.00	28.10	4.45	0.04	0.00
25.50	4.45	0.04	0.00	28.15	4.45	0.04	0.00
25.55	4.45	0.04	0.00	28.20	4.45	0.04	0.00
25.60	4.45	0.04	0.00	28.25	4.45	0.04	0.00
25.65	4.45	0.04	0.00	28.30	4.45	0.04	0.00
25.70	4.45	0.04	0.00	28.35	4.45	0.04	0.00
25.75	4.45	0.04	0.00	28.40	4.45	0.04	0.00
25.80	4.45	0.04	0.00	28.45	4.45	0.04	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	4.45	0.04	0.00	31.15	4.45	0.04	0.00
28.55	4.45	0.04	0.00	31.20	4.45	0.04	0.00
28.60	4.45	0.04	0.00	31.25	4.45	0.04	0.00
28.65	4.45	0.04	0.00	31.30	4.45	0.04	0.00
28.70	4.45	0.04	0.00	31.35	4.45	0.04	0.00
28.75	4.45	0.04	0.00	31.40	4.45	0.04	0.00
28.80	4.45	0.04	0.00	31.45	4.45	0.04	0.00
28.85	4.45	0.04	0.00	31.50	4.45	0.04	0.00
28.90	4.45	0.04	0.00	31.55	4.45	0.04	0.00
28.95	4.45	0.04	0.00	31.60	4.45	0.04	0.00
29.00	4.45	0.04	0.00	31.65	4.45	0.04	0.00
29.05	4.45	0.04	0.00	31.70	4.45	0.04	0.00
29.10	4.45	0.04	0.00	31.75	4.45	0.04	0.00
29.15	4.45	0.04	0.00	31.80	4.45	0.04	0.00
29.20	4.45	0.04	0.00	31.85	4.45	0.04	0.00
29.25	4.45	0.04	0.00	31.90	4.45	0.04	0.00
29.30	4.45	0.04	0.00	31.95	4.45	0.04	0.00
29.35	4.45	0.04	0.00	32.00	4.45	0.04	0.00
29.40	4.45	0.04	0.00	32.05	4.45	0.04	0.00
29.45	4.45	0.04	0.00	32.10	4.45	0.04	0.00
29.50	4.45	0.04	0.00	32.15	4.45	0.04	0.00
29.55	4.45	0.04	0.00	32.20	4.45	0.04	0.00
29.60	4.45	0.04	0.00	32.25	4.45	0.04	0.00
29.65	4.45	0.04	0.00	32.30	4.45	0.04	0.00
29.70	4.45	0.04	0.00	32.35	4.45	0.04	0.00
29.75	4.45	0.04	0.00	32.40	4.45	0.04	0.00
29.80	4.45	0.04	0.00	32.45	4.45	0.04	0.00
29.85	4.45	0.04	0.00	32.50	4.45	0.04	0.00
29.90	4.45	0.04	0.00	32.55	4.45	0.04	0.00
29.95	4.45	0.04	0.00	32.60	4.45	0.04	0.00
30.00	4.45	0.04	0.00	32.65	4.45	0.04	0.00
30.05	4.45	0.04	0.00	32.70	4.45	0.04	0.00
30.10	4.45	0.04	0.00	32.75	4.45	0.04	0.00
30.15	4.45	0.04	0.00	32.80	4.45	0.04	0.00
30.20	4.45	0.04	0.00	32.85	4.45	0.04	0.00
30.25	4.45	0.04	0.00	32.90	4.45	0.04	0.00
30.30	4.45	0.04	0.00	32.95	4.45	0.04	0.00
30.35	4.45	0.04	0.00	33.00	4.45	0.04	0.00
30.40	4.45	0.04	0.00	33.05	4.45	0.04	0.00
30.45	4.45	0.04	0.00	33.10	4.45	0.04	0.00
30.50	4.45	0.04	0.00	33.15	4.45	0.04	0.00
30.55	4.45	0.04	0.00	33.20	4.45	0.04	0.00
30.60	4.45	0.04	0.00	33.25	4.45	0.04	0.00
30.65	4.45	0.04	0.00	33.30	4.45	0.04	0.00
30.70	4.45	0.04	0.00	33.35	4.45	0.04	0.00
30.75	4.45	0.04	0.00	33.40	4.45	0.04	0.00
30.80	4.45	0.04	0.00	33.45	4.45	0.04	0.00
30.85	4.45	0.04	0.00	33.50	4.45	0.04	0.00
30.90	4.45	0.04	0.00	33.55	4.45	0.04	0.00
30.95	4.45	0.04	0.00	33.60	4.45	0.04	0.00
31.00	4.45	0.04	0.00	33.65	4.45	0.04	0.00
31.05	4.45	0.04	0.00	33.70	4.45	0.04	0.00
31.10	4.45	0.04	0.00	33.75	4.45	0.04	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	4.45	0.04	0.00	36.45	4.45	0.04	0.00
33.85	4.45	0.04	0.00	36.50	4.45	0.04	0.00
33.90	4.45	0.04	0.00	36.55	4.45	0.04	0.00
33.95	4.45	0.04	0.00	36.60	4.45	0.04	0.00
34.00	4.45	0.04	0.00	36.65	4.45	0.04	0.00
34.05	4.45	0.04	0.00	36.70	4.45	0.04	0.00
34.10	4.45	0.04	0.00	36.75	4.45	0.04	0.00
34.15	4.45	0.04	0.00	36.80	4.45	0.04	0.00
34.20	4.45	0.04	0.00	36.85	4.45	0.04	0.00
34.25	4.45	0.04	0.00	36.90	4.45	0.04	0.00
34.30	4.45	0.04	0.00	36.95	4.45	0.04	0.00
34.35	4.45	0.04	0.00	37.00	4.45	0.04	0.00
34.40	4.45	0.04	0.00	37.05	4.45	0.04	0.00
34.45	4.45	0.04	0.00	37.10	4.45	0.04	0.00
34.50	4.45	0.04	0.00	37.15	4.45	0.04	0.00
34.55	4.45	0.04	0.00	37.20	4.45	0.04	0.00
34.60	4.45	0.04	0.00	37.25	4.45	0.04	0.00
34.65	4.45	0.04	0.00	37.30	4.45	0.04	0.00
34.70	4.45	0.04	0.00	37.35	4.45	0.04	0.00
34.75	4.45	0.04	0.00	37.40	4.45	0.04	0.00
34.80	4.45	0.04	0.00	37.45	4.45	0.04	0.00
34.85	4.45	0.04	0.00	37.50	4.45	0.04	0.00
34.90	4.45	0.04	0.00	37.55	4.45	0.04	0.00
34.95	4.45	0.04	0.00	37.60	4.45	0.04	0.00
35.00	4.45	0.04	0.00	37.65	4.45	0.04	0.00
35.05	4.45	0.04	0.00	37.70	4.45	0.04	0.00
35.10	4.45	0.04	0.00	37.75	4.45	0.04	0.00
35.15	4.45	0.04	0.00	37.80	4.45	0.04	0.00
35.20	4.45	0.04	0.00	37.85	4.45	0.04	0.00
35.25	4.45	0.04	0.00	37.90	4.45	0.04	0.00
35.30	4.45	0.04	0.00	37.95	4.45	0.04	0.00
35.35	4.45	0.04	0.00	38.00	4.45	0.04	0.00
35.40	4.45	0.04	0.00	38.05	4.45	0.04	0.00
35.45	4.45	0.04	0.00	38.10	4.45	0.04	0.00
35.50	4.45	0.04	0.00	38.15	4.45	0.04	0.00
35.55	4.45	0.04	0.00	38.20	4.45	0.04	0.00
35.60	4.45	0.04	0.00	38.25	4.45	0.04	0.00
35.65	4.45	0.04	0.00	38.30	4.45	0.04	0.00
35.70	4.45	0.04	0.00	38.35	4.45	0.04	0.00
35.75	4.45	0.04	0.00	38.40	4.45	0.04	0.00
35.80	4.45	0.04	0.00	38.45	4.45	0.04	0.00
35.85	4.45	0.04	0.00	38.50	4.45	0.04	0.00
35.90	4.45	0.04	0.00	38.55	4.45	0.04	0.00
35.95	4.45	0.04	0.00	38.60	4.45	0.04	0.00
36.00	4.45	0.04	0.00	38.65	4.45	0.04	0.00
36.05	4.45	0.04	0.00	38.70	4.45	0.04	0.00
36.10	4.45	0.04	0.00	38.75	4.45	0.04	0.00
36.15	4.45	0.04	0.00	38.80	4.45	0.04	0.00
36.20	4.45	0.04	0.00	38.85	4.45	0.04	0.00
36.25	4.45	0.04	0.00	38.90	4.45	0.04	0.00
36.30	4.45	0.04	0.00	38.95	4.45	0.04	0.00
36.35	4.45	0.04	0.00	39.00	4.45	0.04	0.00
36.40	4.45	0.04	0.00	39.05	4.45	0.04	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	4.45	0.04	0.00	41.75	4.45	0.04	0.00
39.15	4.45	0.04	0.00	41.80	4.45	0.04	0.00
39.20	4.45	0.04	0.00	41.85	4.45	0.04	0.00
39.25	4.45	0.04	0.00	41.90	4.45	0.04	0.00
39.30	4.45	0.04	0.00	41.95	4.45	0.04	0.00
39.35	4.45	0.04	0.00	42.00	4.45	0.04	0.00
39.40	4.45	0.04	0.00	42.05	4.45	0.04	0.00
39.45	4.45	0.04	0.00	42.10	4.45	0.04	0.00
39.50	4.45	0.04	0.00	42.15	4.45	0.04	0.00
39.55	4.45	0.04	0.00	42.20	4.45	0.04	0.00
39.60	4.45	0.04	0.00	42.25	4.45	0.04	0.00
39.65	4.45	0.04	0.00	42.30	4.45	0.04	0.00
39.70	4.45	0.04	0.00	42.35	4.45	0.04	0.00
39.75	4.45	0.04	0.00	42.40	4.45	0.04	0.00
39.80	4.45	0.04	0.00	42.45	4.45	0.04	0.00
39.85	4.45	0.04	0.00	42.50	4.45	0.04	0.00
39.90	4.45	0.04	0.00	42.55	4.45	0.04	0.00
39.95	4.45	0.04	0.00	42.60	4.45	0.04	0.00
40.00	4.45	0.04	0.00	42.65	4.45	0.04	0.00
40.05	4.45	0.04	0.00	42.70	4.45	0.04	0.00
40.10	4.45	0.04	0.00	42.75	4.45	0.04	0.00
40.15	4.45	0.04	0.00	42.80	4.45	0.04	0.00
40.20	4.45	0.04	0.00	42.85	4.45	0.04	0.00
40.25	4.45	0.04	0.00	42.90	4.45	0.04	0.00
40.30	4.45	0.04	0.00	42.95	4.45	0.04	0.00
40.35	4.45	0.04	0.00	43.00	4.45	0.04	0.00
40.40	4.45	0.04	0.00	43.05	4.45	0.04	0.00
40.45	4.45	0.04	0.00	43.10	4.45	0.04	0.00
40.50	4.45	0.04	0.00	43.15	4.45	0.04	0.00
40.55	4.45	0.04	0.00	43.20	4.45	0.04	0.00
40.60	4.45	0.04	0.00	43.25	4.45	0.04	0.00
40.65	4.45	0.04	0.00	43.30	4.45	0.04	0.00
40.70	4.45	0.04	0.00	43.35	4.45	0.04	0.00
40.75	4.45	0.04	0.00	43.40	4.45	0.04	0.00
40.80	4.45	0.04	0.00	43.45	4.45	0.04	0.00
40.85	4.45	0.04	0.00	43.50	4.45	0.04	0.00
40.90	4.45	0.04	0.00	43.55	4.45	0.04	0.00
40.95	4.45	0.04	0.00	43.60	4.45	0.04	0.00
41.00	4.45	0.04	0.00	43.65	4.45	0.04	0.00
41.05	4.45	0.04	0.00	43.70	4.45	0.04	0.00
41.10	4.45	0.04	0.00	43.75	4.45	0.04	0.00
41.15	4.45	0.04	0.00	43.80	4.45	0.04	0.00
41.20	4.45	0.04	0.00	43.85	4.45	0.04	0.00
41.25	4.45	0.04	0.00	43.90	4.45	0.04	0.00
41.30	4.45	0.04	0.00	43.95	4.45	0.04	0.00
41.35	4.45	0.04	0.00	44.00	4.45	0.04	0.00
41.40	4.45	0.04	0.00	44.05	4.45	0.04	0.00
41.45	4.45	0.04	0.00	44.10	4.45	0.04	0.00
41.50	4.45	0.04	0.00	44.15	4.45	0.04	0.00
41.55	4.45	0.04	0.00	44.20	4.45	0.04	0.00
41.60	4.45	0.04	0.00	44.25	4.45	0.04	0.00
41.65	4.45	0.04	0.00	44.30	4.45	0.04	0.00
41.70	4.45	0.04	0.00	44.35	4.45	0.04	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	4.45	0.04	0.00	47.05	4.45	0.04	0.00
44.45	4.45	0.04	0.00	47.10	4.45	0.04	0.00
44.50	4.45	0.04	0.00	47.15	4.45	0.04	0.00
44.55	4.45	0.04	0.00	47.20	4.45	0.04	0.00
44.60	4.45	0.04	0.00	47.25	4.45	0.04	0.00
44.65	4.45	0.04	0.00	47.30	4.45	0.04	0.00
44.70	4.45	0.04	0.00	47.35	4.45	0.04	0.00
44.75	4.45	0.04	0.00	47.40	4.45	0.04	0.00
44.80	4.45	0.04	0.00	47.45	4.45	0.04	0.00
44.85	4.45	0.04	0.00	47.50	4.45	0.04	0.00
44.90	4.45	0.04	0.00	47.55	4.45	0.04	0.00
44.95	4.45	0.04	0.00	47.60	4.45	0.04	0.00
45.00	4.45	0.04	0.00	47.65	4.45	0.04	0.00
45.05	4.45	0.04	0.00	47.70	4.45	0.04	0.00
45.10	4.45	0.04	0.00	47.75	4.45	0.04	0.00
45.15	4.45	0.04	0.00	47.80	4.45	0.04	0.00
45.20	4.45	0.04	0.00	47.85	4.45	0.04	0.00
45.25	4.45	0.04	0.00	47.90	4.45	0.04	0.00
45.30	4.45	0.04	0.00	47.95	4.45	0.04	0.00
45.35	4.45	0.04	0.00	48.00	4.45	0.04	0.00
45.40	4.45	0.04	0.00	48.05	4.45	0.04	0.00
45.45	4.45	0.04	0.00	48.10	4.45	0.04	0.00
45.50	4.45	0.04	0.00	48.15	4.45	0.04	0.00
45.55	4.45	0.04	0.00	48.20	4.45	0.04	0.00
45.60	4.45	0.04	0.00	48.25	4.45	0.04	0.00
45.65	4.45	0.04	0.00	48.30	4.45	0.04	0.00
45.70	4.45	0.04	0.00	48.35	4.45	0.04	0.00
45.75	4.45	0.04	0.00	48.40	4.45	0.04	0.00
45.80	4.45	0.04	0.00	48.45	4.45	0.04	0.00
45.85	4.45	0.04	0.00	48.50	4.45	0.04	0.00
45.90	4.45	0.04	0.00	48.55	4.45	0.04	0.00
45.95	4.45	0.04	0.00	48.60	4.45	0.04	0.00
46.00	4.45	0.04	0.00	48.65	4.45	0.04	0.00
46.05	4.45	0.04	0.00	48.70	4.45	0.04	0.00
46.10	4.45	0.04	0.00	48.75	4.45	0.04	0.00
46.15	4.45	0.04	0.00	48.80	4.45	0.04	0.00
46.20	4.45	0.04	0.00	48.85	4.45	0.04	0.00
46.25	4.45	0.04	0.00	48.90	4.45	0.04	0.00
46.30	4.45	0.04	0.00	48.95	4.45	0.04	0.00
46.35	4.45	0.04	0.00	49.00	4.45	0.04	0.00
46.40	4.45	0.04	0.00	49.05	4.45	0.04	0.00
46.45	4.45	0.04	0.00	49.10	4.45	0.04	0.00
46.50	4.45	0.04	0.00	49.15	4.45	0.04	0.00
46.55	4.45	0.04	0.00	49.20	4.45	0.04	0.00
46.60	4.45	0.04	0.00	49.25	4.45	0.04	0.00
46.65	4.45	0.04	0.00	49.30	4.45	0.04	0.00
46.70	4.45	0.04	0.00	49.35	4.45	0.04	0.00
46.75	4.45	0.04	0.00	49.40	4.45	0.04	0.00
46.80	4.45	0.04	0.00	49.45	4.45	0.04	0.00
46.85	4.45	0.04	0.00	49.50	4.45	0.04	0.00
46.90	4.45	0.04	0.00	49.55	4.45	0.04	0.00
46.95	4.45	0.04	0.00	49.60	4.45	0.04	0.00
47.00	4.45	0.04	0.00	49.65	4.45	0.04	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	4.45	0.04	0.00
49.75	4.45	0.04	0.00
49.80	4.45	0.04	0.00
49.85	4.45	0.04	0.00
49.90	4.45	0.04	0.00
49.95	4.45	0.04	0.00
50.00	4.45	0.04	0.00

Summary for Subcatchment 5S: OSB-1

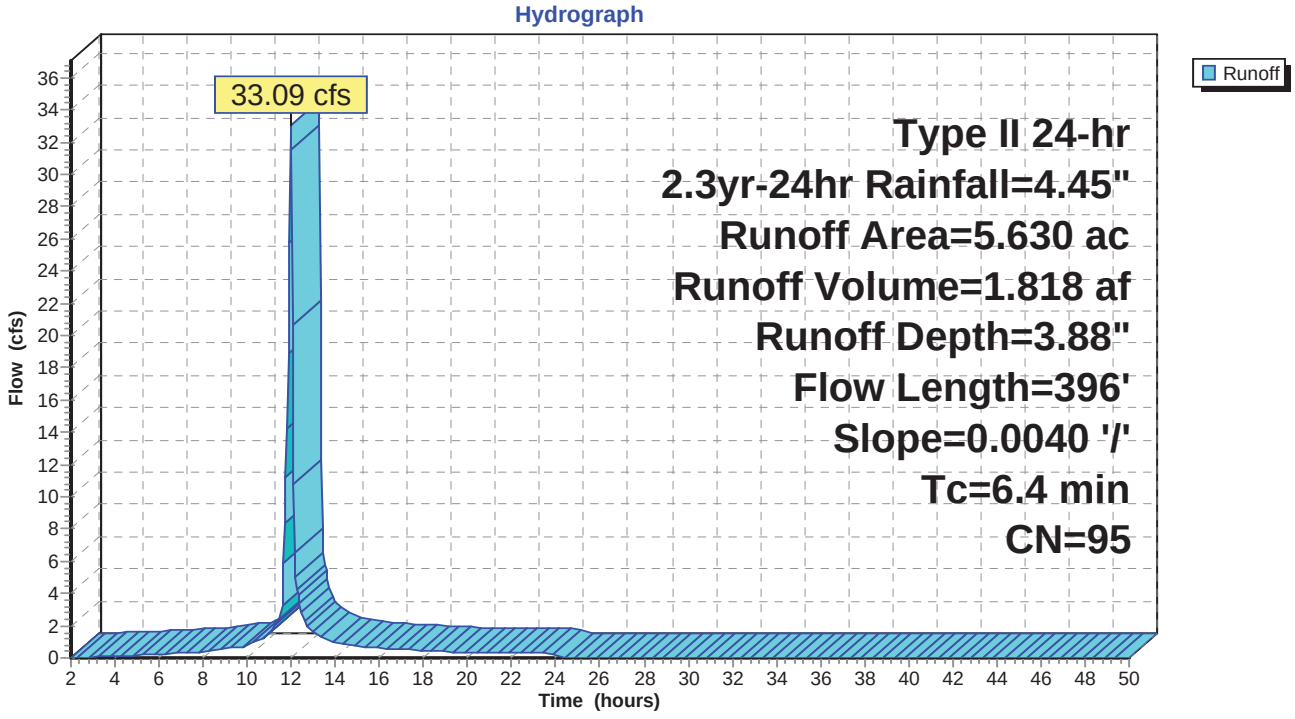
Runoff = 33.09 cfs @ 11.97 hrs, Volume= 1.818 af, Depth= 3.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
*	5.350	98	Gravel surface, HSG A
	0.280	36	Woods, Fair, HSG A
	5.630	95	Weighted Average
	0.280		4.97% Pervious Area
	5.350		95.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	264	0.0040	1.04		**Sheet Flow, Gravel Surface** Smooth surfaces n= 0.011 P2= 4.50"
2.2	132	0.0040	1.02		**Shallow Concentrated Flow, Gravel Surface** Unpaved Kv= 16.1 fps
6.4	396	Total			

Subcatchment 5S: OSB-1



Hydrograph for Subcatchment 5S: OSB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.10	0.00	0.00	4.65	0.26	0.03	0.15
2.05	0.10	0.00	0.00	4.70	0.26	0.03	0.15
2.10	0.10	0.00	0.00	4.75	0.26	0.04	0.15
2.15	0.11	0.00	0.00	4.80	0.27	0.04	0.16
2.20	0.11	0.00	0.00	4.85	0.27	0.04	0.16
2.25	0.11	0.00	0.00	4.90	0.27	0.04	0.16
2.30	0.11	0.00	0.00	4.95	0.28	0.04	0.17
2.35	0.12	0.00	0.01	5.00	0.28	0.04	0.17
2.40	0.12	0.00	0.01	5.05	0.28	0.05	0.17
2.45	0.12	0.00	0.01	5.10	0.29	0.05	0.18
2.50	0.13	0.00	0.02	5.15	0.29	0.05	0.18
2.55	0.13	0.00	0.02	5.20	0.29	0.05	0.18
2.60	0.13	0.00	0.02	5.25	0.30	0.05	0.19
2.65	0.13	0.00	0.03	5.30	0.30	0.05	0.19
2.70	0.14	0.00	0.03	5.35	0.31	0.06	0.19
2.75	0.14	0.00	0.03	5.40	0.31	0.06	0.20
2.80	0.14	0.00	0.03	5.45	0.31	0.06	0.20
2.85	0.14	0.00	0.04	5.50	0.32	0.06	0.20
2.90	0.15	0.00	0.04	5.55	0.32	0.06	0.21
2.95	0.15	0.00	0.04	5.60	0.32	0.06	0.21
3.00	0.15	0.00	0.05	5.65	0.33	0.07	0.21
3.05	0.16	0.00	0.05	5.70	0.33	0.07	0.22
3.10	0.16	0.01	0.05	5.75	0.34	0.07	0.22
3.15	0.16	0.01	0.06	5.80	0.34	0.07	0.23
3.20	0.17	0.01	0.06	5.85	0.34	0.07	0.23
3.25	0.17	0.01	0.06	5.90	0.35	0.08	0.23
3.30	0.17	0.01	0.06	5.95	0.35	0.08	0.24
3.35	0.17	0.01	0.07	6.00	0.36	0.08	0.24
3.40	0.18	0.01	0.07	6.05	0.36	0.08	0.24
3.45	0.18	0.01	0.07	6.10	0.36	0.09	0.25
3.50	0.18	0.01	0.08	6.15	0.37	0.09	0.25
3.55	0.19	0.01	0.08	6.20	0.37	0.09	0.25
3.60	0.19	0.01	0.08	6.25	0.38	0.09	0.26
3.65	0.19	0.01	0.09	6.30	0.38	0.09	0.26
3.70	0.20	0.01	0.09	6.35	0.38	0.10	0.26
3.75	0.20	0.01	0.09	6.40	0.39	0.10	0.27
3.80	0.20	0.01	0.09	6.45	0.39	0.10	0.27
3.85	0.20	0.02	0.10	6.50	0.40	0.10	0.27
3.90	0.21	0.02	0.10	6.55	0.40	0.11	0.28
3.95	0.21	0.02	0.10	6.60	0.41	0.11	0.28
4.00	0.21	0.02	0.10	6.65	0.41	0.11	0.28
4.05	0.22	0.02	0.11	6.70	0.41	0.11	0.29
4.10	0.22	0.02	0.11	6.75	0.42	0.12	0.29
4.15	0.22	0.02	0.11	6.80	0.42	0.12	0.30
4.20	0.23	0.02	0.12	6.85	0.43	0.12	0.30
4.25	0.23	0.02	0.12	6.90	0.43	0.12	0.30
4.30	0.23	0.02	0.12	6.95	0.44	0.13	0.31
4.35	0.24	0.03	0.13	7.00	0.44	0.13	0.31
4.40	0.24	0.03	0.13	7.05	0.45	0.13	0.31
4.45	0.24	0.03	0.13	7.10	0.45	0.14	0.32
4.50	0.25	0.03	0.14	7.15	0.45	0.14	0.32
4.55	0.25	0.03	0.14	7.20	0.46	0.14	0.32
4.60	0.25	0.03	0.14	7.25	0.46	0.14	0.33

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.47	0.15	0.33	9.95	0.80	0.39	0.77
7.35	0.47	0.15	0.33	10.00	0.81	0.40	0.79
7.40	0.48	0.15	0.34	10.05	0.81	0.41	0.81
7.45	0.48	0.16	0.34	10.10	0.82	0.41	0.83
7.50	0.49	0.16	0.34	10.15	0.83	0.42	0.85
7.55	0.49	0.16	0.35	10.20	0.84	0.43	0.88
7.60	0.50	0.17	0.35	10.25	0.85	0.44	0.91
7.65	0.50	0.17	0.36	10.30	0.86	0.45	0.94
7.70	0.51	0.17	0.36	10.35	0.87	0.46	0.96
7.75	0.51	0.18	0.36	10.40	0.89	0.47	0.99
7.80	0.51	0.18	0.37	10.45	0.90	0.48	1.02
7.85	0.52	0.18	0.37	10.50	0.91	0.48	1.05
7.90	0.52	0.19	0.37	10.55	0.92	0.49	1.08
7.95	0.53	0.19	0.38	10.60	0.93	0.51	1.11
8.00	0.53	0.19	0.38	10.65	0.94	0.52	1.16
8.05	0.54	0.20	0.38	10.70	0.96	0.53	1.20
8.10	0.54	0.20	0.39	10.75	0.97	0.54	1.25
8.15	0.55	0.20	0.40	10.80	0.99	0.55	1.30
8.20	0.55	0.21	0.41	10.85	1.00	0.56	1.34
8.25	0.56	0.21	0.42	10.90	1.01	0.58	1.39
8.30	0.57	0.21	0.43	10.95	1.03	0.59	1.44
8.35	0.57	0.22	0.44	11.00	1.05	0.60	1.49
8.40	0.58	0.22	0.45	11.05	1.06	0.62	1.54
8.45	0.58	0.23	0.46	11.10	1.08	0.63	1.61
8.50	0.59	0.23	0.47	11.15	1.10	0.65	1.71
8.55	0.59	0.24	0.49	11.20	1.12	0.67	1.81
8.60	0.60	0.24	0.50	11.25	1.14	0.69	1.92
8.65	0.61	0.24	0.51	11.30	1.16	0.70	2.04
8.70	0.61	0.25	0.52	11.35	1.18	0.73	2.15
8.75	0.62	0.25	0.53	11.40	1.21	0.75	2.27
8.80	0.63	0.26	0.54	11.45	1.23	0.77	2.38
8.85	0.63	0.26	0.56	11.50	1.26	0.79	2.50
8.90	0.64	0.27	0.57	11.55	1.30	0.83	2.72
8.95	0.65	0.27	0.58	11.60	1.37	0.89	3.75
9.00	0.65	0.28	0.59	11.65	1.46	0.97	5.83
9.05	0.66	0.29	0.60	11.70	1.58	1.08	8.40
9.10	0.67	0.29	0.61	11.75	1.72	1.22	11.18
9.15	0.68	0.30	0.62	11.80	1.92	1.40	14.25
9.20	0.68	0.30	0.62	11.85	2.19	1.66	18.95
9.25	0.69	0.31	0.62	11.90	2.53	1.99	25.78
9.30	0.70	0.31	0.62	11.95	2.82	2.28	**32.56**
9.35	0.70	0.32	0.63	12.00	2.95	2.40	31.52
9.40	0.71	0.32	0.63	12.05	2.99	2.44	20.66
9.45	0.72	0.33	0.63	12.10	3.03	2.48	10.71
9.50	0.73	0.34	0.63	12.15	3.07	2.52	6.49
9.55	0.73	0.34	0.64	12.20	3.11	2.56	4.95
9.60	0.74	0.35	0.64	12.25	3.14	2.59	4.26
9.65	0.75	0.35	0.66	12.30	3.17	2.62	3.86
9.70	0.76	0.36	0.68	12.35	3.20	2.65	3.55
9.75	0.76	0.37	0.69	12.40	3.23	2.67	3.27
9.80	0.77	0.37	0.71	12.45	3.25	2.69	2.99
9.85	0.78	0.38	0.73	12.50	3.27	2.71	2.71
9.90	0.79	0.39	0.75	12.55	3.29	2.73	2.44

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	3.31	2.75	2.23	15.25	3.83	3.26	0.72
12.65	3.33	2.77	2.11	15.30	3.84	3.27	0.71
12.70	3.34	2.79	2.03	15.35	3.84	3.28	0.70
12.75	3.36	2.80	1.96	15.40	3.85	3.28	0.69
12.80	3.38	2.82	1.90	15.45	3.85	3.29	0.69
12.85	3.39	2.83	1.83	15.50	3.86	3.29	0.68
12.90	3.41	2.85	1.77	15.55	3.87	3.30	0.67
12.95	3.42	2.86	1.70	15.60	3.87	3.31	0.66
13.00	3.44	2.88	1.64	15.65	3.88	3.31	0.65
13.05	3.45	2.89	1.58	15.70	3.88	3.32	0.64
13.10	3.46	2.90	1.52	15.75	3.89	3.32	0.63
13.15	3.47	2.91	1.48	15.80	3.89	3.33	0.62
13.20	3.49	2.93	1.44	15.85	3.90	3.33	0.62
13.25	3.50	2.94	1.41	15.90	3.91	3.34	0.61
13.30	3.51	2.95	1.37	15.95	3.91	3.34	0.60
13.35	3.52	2.96	1.34	16.00	3.92	3.35	0.59
13.40	3.53	2.97	1.30	16.05	3.92	3.35	0.58
13.45	3.54	2.98	1.27	16.10	3.93	3.36	0.57
13.50	3.56	2.99	1.24	16.15	3.93	3.36	0.57
13.55	3.57	3.00	1.20	16.20	3.94	3.37	0.57
13.60	3.58	3.01	1.17	16.25	3.94	3.37	0.56
13.65	3.59	3.02	1.14	16.30	3.95	3.38	0.56
13.70	3.60	3.03	1.12	16.35	3.95	3.38	0.56
13.75	3.61	3.04	1.09	16.40	3.96	3.39	0.55
13.80	3.61	3.05	1.07	16.45	3.96	3.39	0.55
13.85	3.62	3.06	1.04	16.50	3.97	3.40	0.55
13.90	3.63	3.07	1.02	16.55	3.97	3.40	0.54
13.95	3.64	3.08	0.99	16.60	3.98	3.41	0.54
14.00	3.65	3.09	0.97	16.65	3.98	3.41	0.54
14.05	3.66	3.09	0.94	16.70	3.98	3.42	0.54
14.10	3.67	3.10	0.92	16.75	3.99	3.42	0.53
14.15	3.67	3.11	0.91	16.80	3.99	3.43	0.53
14.20	3.68	3.12	0.90	16.85	4.00	3.43	0.53
14.25	3.69	3.13	0.89	16.90	4.00	3.43	0.52
14.30	3.70	3.13	0.88	16.95	4.01	3.44	0.52
14.35	3.70	3.14	0.88	17.00	4.01	3.44	0.52
14.40	3.71	3.15	0.87	17.05	4.02	3.45	0.51
14.45	3.72	3.16	0.86	17.10	4.02	3.45	0.51
14.50	3.73	3.16	0.85	17.15	4.03	3.46	0.51
14.55	3.73	3.17	0.84	17.20	4.03	3.46	0.50
14.60	3.74	3.18	0.83	17.25	4.04	3.47	0.50
14.65	3.75	3.18	0.82	17.30	4.04	3.47	0.50
14.70	3.76	3.19	0.82	17.35	4.04	3.47	0.50
14.75	3.76	3.20	0.81	17.40	4.05	3.48	0.49
14.80	3.77	3.21	0.80	17.45	4.05	3.48	0.49
14.85	3.78	3.21	0.79	17.50	4.06	3.49	0.49
14.90	3.78	3.22	0.78	17.55	4.06	3.49	0.48
14.95	3.79	3.23	0.77	17.60	4.07	3.50	0.48
15.00	3.80	3.23	0.76	17.65	4.07	3.50	0.48
15.05	3.80	3.24	0.75	17.70	4.07	3.50	0.47
15.10	3.81	3.25	0.75	17.75	4.08	3.51	0.47
15.15	3.82	3.25	0.74	17.80	4.08	3.51	0.47
15.20	3.82	3.26	0.73	17.85	4.09	3.52	0.46

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	4.09	3.52	0.46	20.55	4.27	3.70	0.32
17.95	4.09	3.52	0.46	20.60	4.27	3.70	0.32
18.00	4.10	3.53	0.45	20.65	4.27	3.70	0.32
18.05	4.10	3.53	0.45	20.70	4.28	3.70	0.32
18.10	4.11	3.54	0.45	20.75	4.28	3.71	0.32
18.15	4.11	3.54	0.45	20.80	4.28	3.71	0.32
18.20	4.11	3.54	0.44	20.85	4.28	3.71	0.31
18.25	4.12	3.55	0.44	20.90	4.29	3.71	0.31
18.30	4.12	3.55	0.44	20.95	4.29	3.72	0.31
18.35	4.13	3.56	0.43	21.00	4.29	3.72	0.31
18.40	4.13	3.56	0.43	21.05	4.30	3.72	0.31
18.45	4.13	3.56	0.43	21.10	4.30	3.73	0.31
18.50	4.14	3.57	0.42	21.15	4.30	3.73	0.31
18.55	4.14	3.57	0.42	21.20	4.30	3.73	0.31
18.60	4.14	3.57	0.42	21.25	4.31	3.73	0.31
18.65	4.15	3.58	0.41	21.30	4.31	3.74	0.31
18.70	4.15	3.58	0.41	21.35	4.31	3.74	0.31
18.75	4.16	3.58	0.41	21.40	4.32	3.74	0.31
18.80	4.16	3.59	0.41	21.45	4.32	3.74	0.31
18.85	4.16	3.59	0.40	21.50	4.32	3.75	0.31
18.90	4.17	3.59	0.40	21.55	4.32	3.75	0.31
18.95	4.17	3.60	0.40	21.60	4.33	3.75	0.31
19.00	4.17	3.60	0.39	21.65	4.33	3.76	0.31
19.05	4.18	3.61	0.39	21.70	4.33	3.76	0.30
19.10	4.18	3.61	0.39	21.75	4.33	3.76	0.30
19.15	4.18	3.61	0.38	21.80	4.34	3.76	0.30
19.20	4.19	3.62	0.38	21.85	4.34	3.77	0.30
19.25	4.19	3.62	0.38	21.90	4.34	3.77	0.30
19.30	4.19	3.62	0.37	21.95	4.34	3.77	0.30
19.35	4.20	3.62	0.37	22.00	4.35	3.77	0.30
19.40	4.20	3.63	0.37	22.05	4.35	3.78	0.30
19.45	4.20	3.63	0.36	22.10	4.35	3.78	0.30
19.50	4.21	3.63	0.36	22.15	4.36	3.78	0.30
19.55	4.21	3.64	0.36	22.20	4.36	3.78	0.30
19.60	4.21	3.64	0.36	22.25	4.36	3.79	0.30
19.65	4.22	3.64	0.35	22.30	4.36	3.79	0.30
19.70	4.22	3.65	0.35	22.35	4.37	3.79	0.30
19.75	4.22	3.65	0.35	22.40	4.37	3.80	0.30
19.80	4.22	3.65	0.34	22.45	4.37	3.80	0.30
19.85	4.23	3.66	0.34	22.50	4.37	3.80	0.29
19.90	4.23	3.66	0.34	22.55	4.38	3.80	0.29
19.95	4.23	3.66	0.33	22.60	4.38	3.81	0.29
20.00	4.24	3.66	0.33	22.65	4.38	3.81	0.29
20.05	4.24	3.67	0.33	22.70	4.38	3.81	0.29
20.10	4.24	3.67	0.33	22.75	4.39	3.81	0.29
20.15	4.25	3.67	0.32	22.80	4.39	3.82	0.29
20.20	4.25	3.68	0.32	22.85	4.39	3.82	0.29
20.25	4.25	3.68	0.32	22.90	4.39	3.82	0.29
20.30	4.25	3.68	0.32	22.95	4.40	3.82	0.29
20.35	4.26	3.68	0.32	23.00	4.40	3.83	0.29
20.40	4.26	3.69	0.32	23.05	4.40	3.83	0.29
20.45	4.26	3.69	0.32	23.10	4.41	3.83	0.29
20.50	4.27	3.69	0.32	23.15	4.41	3.83	0.29

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	4.41	3.84	0.29	25.85	4.45	3.88	0.00
23.25	4.41	3.84	0.29	25.90	4.45	3.88	0.00
23.30	4.42	3.84	0.28	25.95	4.45	3.88	0.00
23.35	4.42	3.84	0.28	26.00	4.45	3.88	0.00
23.40	4.42	3.85	0.28	26.05	4.45	3.88	0.00
23.45	4.42	3.85	0.28	26.10	4.45	3.88	0.00
23.50	4.43	3.85	0.28	26.15	4.45	3.88	0.00
23.55	4.43	3.85	0.28	26.20	4.45	3.88	0.00
23.60	4.43	3.86	0.28	26.25	4.45	3.88	0.00
23.65	4.43	3.86	0.28	26.30	4.45	3.88	0.00
23.70	4.44	3.86	0.28	26.35	4.45	3.88	0.00
23.75	4.44	3.86	0.28	26.40	4.45	3.88	0.00
23.80	4.44	3.87	0.28	26.45	4.45	3.88	0.00
23.85	4.44	3.87	0.28	26.50	4.45	3.88	0.00
23.90	4.45	3.87	0.28	26.55	4.45	3.88	0.00
23.95	4.45	3.87	0.28	26.60	4.45	3.88	0.00
24.00	**4.45**	**3.88**	0.28	26.65	4.45	3.88	0.00
24.05	4.45	3.88	0.24	26.70	4.45	3.88	0.00
24.10	4.45	3.88	0.12	26.75	4.45	3.88	0.00
24.15	4.45	3.88	0.04	26.80	4.45	3.88	0.00
24.20	4.45	3.88	0.01	26.85	4.45	3.88	0.00
24.25	4.45	3.88	0.00	26.90	4.45	3.88	0.00
24.30	4.45	3.88	0.00	26.95	4.45	3.88	0.00
24.35	4.45	3.88	0.00	27.00	4.45	3.88	0.00
24.40	4.45	3.88	0.00	27.05	4.45	3.88	0.00
24.45	4.45	3.88	0.00	27.10	4.45	3.88	0.00
24.50	4.45	3.88	0.00	27.15	4.45	3.88	0.00
24.55	4.45	3.88	0.00	27.20	4.45	3.88	0.00
24.60	4.45	3.88	0.00	27.25	4.45	3.88	0.00
24.65	4.45	3.88	0.00	27.30	4.45	3.88	0.00
24.70	4.45	3.88	0.00	27.35	4.45	3.88	0.00
24.75	4.45	3.88	0.00	27.40	4.45	3.88	0.00
24.80	4.45	3.88	0.00	27.45	4.45	3.88	0.00
24.85	4.45	3.88	0.00	27.50	4.45	3.88	0.00
24.90	4.45	3.88	0.00	27.55	4.45	3.88	0.00
24.95	4.45	3.88	0.00	27.60	4.45	3.88	0.00
25.00	4.45	3.88	0.00	27.65	4.45	3.88	0.00
25.05	4.45	3.88	0.00	27.70	4.45	3.88	0.00
25.10	4.45	3.88	0.00	27.75	4.45	3.88	0.00
25.15	4.45	3.88	0.00	27.80	4.45	3.88	0.00
25.20	4.45	3.88	0.00	27.85	4.45	3.88	0.00
25.25	4.45	3.88	0.00	27.90	4.45	3.88	0.00
25.30	4.45	3.88	0.00	27.95	4.45	3.88	0.00
25.35	4.45	3.88	0.00	28.00	4.45	3.88	0.00
25.40	4.45	3.88	0.00	28.05	4.45	3.88	0.00
25.45	4.45	3.88	0.00	28.10	4.45	3.88	0.00
25.50	4.45	3.88	0.00	28.15	4.45	3.88	0.00
25.55	4.45	3.88	0.00	28.20	4.45	3.88	0.00
25.60	4.45	3.88	0.00	28.25	4.45	3.88	0.00
25.65	4.45	3.88	0.00	28.30	4.45	3.88	0.00
25.70	4.45	3.88	0.00	28.35	4.45	3.88	0.00
25.75	4.45	3.88	0.00	28.40	4.45	3.88	0.00
25.80	4.45	3.88	0.00	28.45	4.45	3.88	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	4.45	3.88	0.00	31.15	4.45	3.88	0.00
28.55	4.45	3.88	0.00	31.20	4.45	3.88	0.00
28.60	4.45	3.88	0.00	31.25	4.45	3.88	0.00
28.65	4.45	3.88	0.00	31.30	4.45	3.88	0.00
28.70	4.45	3.88	0.00	31.35	4.45	3.88	0.00
28.75	4.45	3.88	0.00	31.40	4.45	3.88	0.00
28.80	4.45	3.88	0.00	31.45	4.45	3.88	0.00
28.85	4.45	3.88	0.00	31.50	4.45	3.88	0.00
28.90	4.45	3.88	0.00	31.55	4.45	3.88	0.00
28.95	4.45	3.88	0.00	31.60	4.45	3.88	0.00
29.00	4.45	3.88	0.00	31.65	4.45	3.88	0.00
29.05	4.45	3.88	0.00	31.70	4.45	3.88	0.00
29.10	4.45	3.88	0.00	31.75	4.45	3.88	0.00
29.15	4.45	3.88	0.00	31.80	4.45	3.88	0.00
29.20	4.45	3.88	0.00	31.85	4.45	3.88	0.00
29.25	4.45	3.88	0.00	31.90	4.45	3.88	0.00
29.30	4.45	3.88	0.00	31.95	4.45	3.88	0.00
29.35	4.45	3.88	0.00	32.00	4.45	3.88	0.00
29.40	4.45	3.88	0.00	32.05	4.45	3.88	0.00
29.45	4.45	3.88	0.00	32.10	4.45	3.88	0.00
29.50	4.45	3.88	0.00	32.15	4.45	3.88	0.00
29.55	4.45	3.88	0.00	32.20	4.45	3.88	0.00
29.60	4.45	3.88	0.00	32.25	4.45	3.88	0.00
29.65	4.45	3.88	0.00	32.30	4.45	3.88	0.00
29.70	4.45	3.88	0.00	32.35	4.45	3.88	0.00
29.75	4.45	3.88	0.00	32.40	4.45	3.88	0.00
29.80	4.45	3.88	0.00	32.45	4.45	3.88	0.00
29.85	4.45	3.88	0.00	32.50	4.45	3.88	0.00
29.90	4.45	3.88	0.00	32.55	4.45	3.88	0.00
29.95	4.45	3.88	0.00	32.60	4.45	3.88	0.00
30.00	4.45	3.88	0.00	32.65	4.45	3.88	0.00
30.05	4.45	3.88	0.00	32.70	4.45	3.88	0.00
30.10	4.45	3.88	0.00	32.75	4.45	3.88	0.00
30.15	4.45	3.88	0.00	32.80	4.45	3.88	0.00
30.20	4.45	3.88	0.00	32.85	4.45	3.88	0.00
30.25	4.45	3.88	0.00	32.90	4.45	3.88	0.00
30.30	4.45	3.88	0.00	32.95	4.45	3.88	0.00
30.35	4.45	3.88	0.00	33.00	4.45	3.88	0.00
30.40	4.45	3.88	0.00	33.05	4.45	3.88	0.00
30.45	4.45	3.88	0.00	33.10	4.45	3.88	0.00
30.50	4.45	3.88	0.00	33.15	4.45	3.88	0.00
30.55	4.45	3.88	0.00	33.20	4.45	3.88	0.00
30.60	4.45	3.88	0.00	33.25	4.45	3.88	0.00
30.65	4.45	3.88	0.00	33.30	4.45	3.88	0.00
30.70	4.45	3.88	0.00	33.35	4.45	3.88	0.00
30.75	4.45	3.88	0.00	33.40	4.45	3.88	0.00
30.80	4.45	3.88	0.00	33.45	4.45	3.88	0.00
30.85	4.45	3.88	0.00	33.50	4.45	3.88	0.00
30.90	4.45	3.88	0.00	33.55	4.45	3.88	0.00
30.95	4.45	3.88	0.00	33.60	4.45	3.88	0.00
31.00	4.45	3.88	0.00	33.65	4.45	3.88	0.00
31.05	4.45	3.88	0.00	33.70	4.45	3.88	0.00
31.10	4.45	3.88	0.00	33.75	4.45	3.88	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	4.45	3.88	0.00	36.45	4.45	3.88	0.00
33.85	4.45	3.88	0.00	36.50	4.45	3.88	0.00
33.90	4.45	3.88	0.00	36.55	4.45	3.88	0.00
33.95	4.45	3.88	0.00	36.60	4.45	3.88	0.00
34.00	4.45	3.88	0.00	36.65	4.45	3.88	0.00
34.05	4.45	3.88	0.00	36.70	4.45	3.88	0.00
34.10	4.45	3.88	0.00	36.75	4.45	3.88	0.00
34.15	4.45	3.88	0.00	36.80	4.45	3.88	0.00
34.20	4.45	3.88	0.00	36.85	4.45	3.88	0.00
34.25	4.45	3.88	0.00	36.90	4.45	3.88	0.00
34.30	4.45	3.88	0.00	36.95	4.45	3.88	0.00
34.35	4.45	3.88	0.00	37.00	4.45	3.88	0.00
34.40	4.45	3.88	0.00	37.05	4.45	3.88	0.00
34.45	4.45	3.88	0.00	37.10	4.45	3.88	0.00
34.50	4.45	3.88	0.00	37.15	4.45	3.88	0.00
34.55	4.45	3.88	0.00	37.20	4.45	3.88	0.00
34.60	4.45	3.88	0.00	37.25	4.45	3.88	0.00
34.65	4.45	3.88	0.00	37.30	4.45	3.88	0.00
34.70	4.45	3.88	0.00	37.35	4.45	3.88	0.00
34.75	4.45	3.88	0.00	37.40	4.45	3.88	0.00
34.80	4.45	3.88	0.00	37.45	4.45	3.88	0.00
34.85	4.45	3.88	0.00	37.50	4.45	3.88	0.00
34.90	4.45	3.88	0.00	37.55	4.45	3.88	0.00
34.95	4.45	3.88	0.00	37.60	4.45	3.88	0.00
35.00	4.45	3.88	0.00	37.65	4.45	3.88	0.00
35.05	4.45	3.88	0.00	37.70	4.45	3.88	0.00
35.10	4.45	3.88	0.00	37.75	4.45	3.88	0.00
35.15	4.45	3.88	0.00	37.80	4.45	3.88	0.00
35.20	4.45	3.88	0.00	37.85	4.45	3.88	0.00
35.25	4.45	3.88	0.00	37.90	4.45	3.88	0.00
35.30	4.45	3.88	0.00	37.95	4.45	3.88	0.00
35.35	4.45	3.88	0.00	38.00	4.45	3.88	0.00
35.40	4.45	3.88	0.00	38.05	4.45	3.88	0.00
35.45	4.45	3.88	0.00	38.10	4.45	3.88	0.00
35.50	4.45	3.88	0.00	38.15	4.45	3.88	0.00
35.55	4.45	3.88	0.00	38.20	4.45	3.88	0.00
35.60	4.45	3.88	0.00	38.25	4.45	3.88	0.00
35.65	4.45	3.88	0.00	38.30	4.45	3.88	0.00
35.70	4.45	3.88	0.00	38.35	4.45	3.88	0.00
35.75	4.45	3.88	0.00	38.40	4.45	3.88	0.00
35.80	4.45	3.88	0.00	38.45	4.45	3.88	0.00
35.85	4.45	3.88	0.00	38.50	4.45	3.88	0.00
35.90	4.45	3.88	0.00	38.55	4.45	3.88	0.00
35.95	4.45	3.88	0.00	38.60	4.45	3.88	0.00
36.00	4.45	3.88	0.00	38.65	4.45	3.88	0.00
36.05	4.45	3.88	0.00	38.70	4.45	3.88	0.00
36.10	4.45	3.88	0.00	38.75	4.45	3.88	0.00
36.15	4.45	3.88	0.00	38.80	4.45	3.88	0.00
36.20	4.45	3.88	0.00	38.85	4.45	3.88	0.00
36.25	4.45	3.88	0.00	38.90	4.45	3.88	0.00
36.30	4.45	3.88	0.00	38.95	4.45	3.88	0.00
36.35	4.45	3.88	0.00	39.00	4.45	3.88	0.00
36.40	4.45	3.88	0.00	39.05	4.45	3.88	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	4.45	3.88	0.00	41.75	4.45	3.88	0.00
39.15	4.45	3.88	0.00	41.80	4.45	3.88	0.00
39.20	4.45	3.88	0.00	41.85	4.45	3.88	0.00
39.25	4.45	3.88	0.00	41.90	4.45	3.88	0.00
39.30	4.45	3.88	0.00	41.95	4.45	3.88	0.00
39.35	4.45	3.88	0.00	42.00	4.45	3.88	0.00
39.40	4.45	3.88	0.00	42.05	4.45	3.88	0.00
39.45	4.45	3.88	0.00	42.10	4.45	3.88	0.00
39.50	4.45	3.88	0.00	42.15	4.45	3.88	0.00
39.55	4.45	3.88	0.00	42.20	4.45	3.88	0.00
39.60	4.45	3.88	0.00	42.25	4.45	3.88	0.00
39.65	4.45	3.88	0.00	42.30	4.45	3.88	0.00
39.70	4.45	3.88	0.00	42.35	4.45	3.88	0.00
39.75	4.45	3.88	0.00	42.40	4.45	3.88	0.00
39.80	4.45	3.88	0.00	42.45	4.45	3.88	0.00
39.85	4.45	3.88	0.00	42.50	4.45	3.88	0.00
39.90	4.45	3.88	0.00	42.55	4.45	3.88	0.00
39.95	4.45	3.88	0.00	42.60	4.45	3.88	0.00
40.00	4.45	3.88	0.00	42.65	4.45	3.88	0.00
40.05	4.45	3.88	0.00	42.70	4.45	3.88	0.00
40.10	4.45	3.88	0.00	42.75	4.45	3.88	0.00
40.15	4.45	3.88	0.00	42.80	4.45	3.88	0.00
40.20	4.45	3.88	0.00	42.85	4.45	3.88	0.00
40.25	4.45	3.88	0.00	42.90	4.45	3.88	0.00
40.30	4.45	3.88	0.00	42.95	4.45	3.88	0.00
40.35	4.45	3.88	0.00	43.00	4.45	3.88	0.00
40.40	4.45	3.88	0.00	43.05	4.45	3.88	0.00
40.45	4.45	3.88	0.00	43.10	4.45	3.88	0.00
40.50	4.45	3.88	0.00	43.15	4.45	3.88	0.00
40.55	4.45	3.88	0.00	43.20	4.45	3.88	0.00
40.60	4.45	3.88	0.00	43.25	4.45	3.88	0.00
40.65	4.45	3.88	0.00	43.30	4.45	3.88	0.00
40.70	4.45	3.88	0.00	43.35	4.45	3.88	0.00
40.75	4.45	3.88	0.00	43.40	4.45	3.88	0.00
40.80	4.45	3.88	0.00	43.45	4.45	3.88	0.00
40.85	4.45	3.88	0.00	43.50	4.45	3.88	0.00
40.90	4.45	3.88	0.00	43.55	4.45	3.88	0.00
40.95	4.45	3.88	0.00	43.60	4.45	3.88	0.00
41.00	4.45	3.88	0.00	43.65	4.45	3.88	0.00
41.05	4.45	3.88	0.00	43.70	4.45	3.88	0.00
41.10	4.45	3.88	0.00	43.75	4.45	3.88	0.00
41.15	4.45	3.88	0.00	43.80	4.45	3.88	0.00
41.20	4.45	3.88	0.00	43.85	4.45	3.88	0.00
41.25	4.45	3.88	0.00	43.90	4.45	3.88	0.00
41.30	4.45	3.88	0.00	43.95	4.45	3.88	0.00
41.35	4.45	3.88	0.00	44.00	4.45	3.88	0.00
41.40	4.45	3.88	0.00	44.05	4.45	3.88	0.00
41.45	4.45	3.88	0.00	44.10	4.45	3.88	0.00
41.50	4.45	3.88	0.00	44.15	4.45	3.88	0.00
41.55	4.45	3.88	0.00	44.20	4.45	3.88	0.00
41.60	4.45	3.88	0.00	44.25	4.45	3.88	0.00
41.65	4.45	3.88	0.00	44.30	4.45	3.88	0.00
41.70	4.45	3.88	0.00	44.35	4.45	3.88	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	4.45	3.88	0.00	47.05	4.45	3.88	0.00
44.45	4.45	3.88	0.00	47.10	4.45	3.88	0.00
44.50	4.45	3.88	0.00	47.15	4.45	3.88	0.00
44.55	4.45	3.88	0.00	47.20	4.45	3.88	0.00
44.60	4.45	3.88	0.00	47.25	4.45	3.88	0.00
44.65	4.45	3.88	0.00	47.30	4.45	3.88	0.00
44.70	4.45	3.88	0.00	47.35	4.45	3.88	0.00
44.75	4.45	3.88	0.00	47.40	4.45	3.88	0.00
44.80	4.45	3.88	0.00	47.45	4.45	3.88	0.00
44.85	4.45	3.88	0.00	47.50	4.45	3.88	0.00
44.90	4.45	3.88	0.00	47.55	4.45	3.88	0.00
44.95	4.45	3.88	0.00	47.60	4.45	3.88	0.00
45.00	4.45	3.88	0.00	47.65	4.45	3.88	0.00
45.05	4.45	3.88	0.00	47.70	4.45	3.88	0.00
45.10	4.45	3.88	0.00	47.75	4.45	3.88	0.00
45.15	4.45	3.88	0.00	47.80	4.45	3.88	0.00
45.20	4.45	3.88	0.00	47.85	4.45	3.88	0.00
45.25	4.45	3.88	0.00	47.90	4.45	3.88	0.00
45.30	4.45	3.88	0.00	47.95	4.45	3.88	0.00
45.35	4.45	3.88	0.00	48.00	4.45	3.88	0.00
45.40	4.45	3.88	0.00	48.05	4.45	3.88	0.00
45.45	4.45	3.88	0.00	48.10	4.45	3.88	0.00
45.50	4.45	3.88	0.00	48.15	4.45	3.88	0.00
45.55	4.45	3.88	0.00	48.20	4.45	3.88	0.00
45.60	4.45	3.88	0.00	48.25	4.45	3.88	0.00
45.65	4.45	3.88	0.00	48.30	4.45	3.88	0.00
45.70	4.45	3.88	0.00	48.35	4.45	3.88	0.00
45.75	4.45	3.88	0.00	48.40	4.45	3.88	0.00
45.80	4.45	3.88	0.00	48.45	4.45	3.88	0.00
45.85	4.45	3.88	0.00	48.50	4.45	3.88	0.00
45.90	4.45	3.88	0.00	48.55	4.45	3.88	0.00
45.95	4.45	3.88	0.00	48.60	4.45	3.88	0.00
46.00	4.45	3.88	0.00	48.65	4.45	3.88	0.00
46.05	4.45	3.88	0.00	48.70	4.45	3.88	0.00
46.10	4.45	3.88	0.00	48.75	4.45	3.88	0.00
46.15	4.45	3.88	0.00	48.80	4.45	3.88	0.00
46.20	4.45	3.88	0.00	48.85	4.45	3.88	0.00
46.25	4.45	3.88	0.00	48.90	4.45	3.88	0.00
46.30	4.45	3.88	0.00	48.95	4.45	3.88	0.00
46.35	4.45	3.88	0.00	49.00	4.45	3.88	0.00
46.40	4.45	3.88	0.00	49.05	4.45	3.88	0.00
46.45	4.45	3.88	0.00	49.10	4.45	3.88	0.00
46.50	4.45	3.88	0.00	49.15	4.45	3.88	0.00
46.55	4.45	3.88	0.00	49.20	4.45	3.88	0.00
46.60	4.45	3.88	0.00	49.25	4.45	3.88	0.00
46.65	4.45	3.88	0.00	49.30	4.45	3.88	0.00
46.70	4.45	3.88	0.00	49.35	4.45	3.88	0.00
46.75	4.45	3.88	0.00	49.40	4.45	3.88	0.00
46.80	4.45	3.88	0.00	49.45	4.45	3.88	0.00
46.85	4.45	3.88	0.00	49.50	4.45	3.88	0.00
46.90	4.45	3.88	0.00	49.55	4.45	3.88	0.00
46.95	4.45	3.88	0.00	49.60	4.45	3.88	0.00
47.00	4.45	3.88	0.00	49.65	4.45	3.88	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	4.45	3.88	0.00
49.75	4.45	3.88	0.00
49.80	4.45	3.88	0.00
49.85	4.45	3.88	0.00
49.90	4.45	3.88	0.00
49.95	4.45	3.88	0.00
50.00	4.45	3.88	0.00

Time span=2.00-50.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SB-1 Runoff Area=5.690 ac 0.00% Impervious Runoff Depth=1.20"
Flow Length=1,190' Tc=107.7 min CN=41 Runoff=1.65 cfs 0.570 af

Subcatchment2S: SB-2 Runoff Area=26.640 ac 0.00% Impervious Runoff Depth=0.86"
Flow Length=1,810' Tc=108.7 min CN=37 Runoff=4.82 cfs 1.904 af

Subcatchment3S: SB-3 Runoff Area=16.900 ac 1.54% Impervious Runoff Depth=0.86"
Flow Length=1,320' Tc=75.0 min CN=37 Runoff=3.80 cfs 1.208 af

Subcatchment4S: SB-4 Runoff Area=0.830 ac 0.00% Impervious Runoff Depth=0.78"
Flow Length=266' Slope=0.0100 '/' Tc=52.3 min CN=36 Runoff=0.20 cfs 0.054 af

Subcatchment5S: OSB-1 Runoff Area=5.630 ac 95.03% Impervious Runoff Depth>7.08"
Flow Length=396' Slope=0.0040 '/' Tc=6.4 min CN=95 Runoff=58.46 cfs 3.321 af

Total Runoff Area = 55.690 ac Runoff Volume = 7.056 af Average Runoff Depth = 1.52"
89.93% Pervious = 50.080 ac 10.07% Impervious = 5.610 ac

Summary for Subcatchment 1S: SB-1

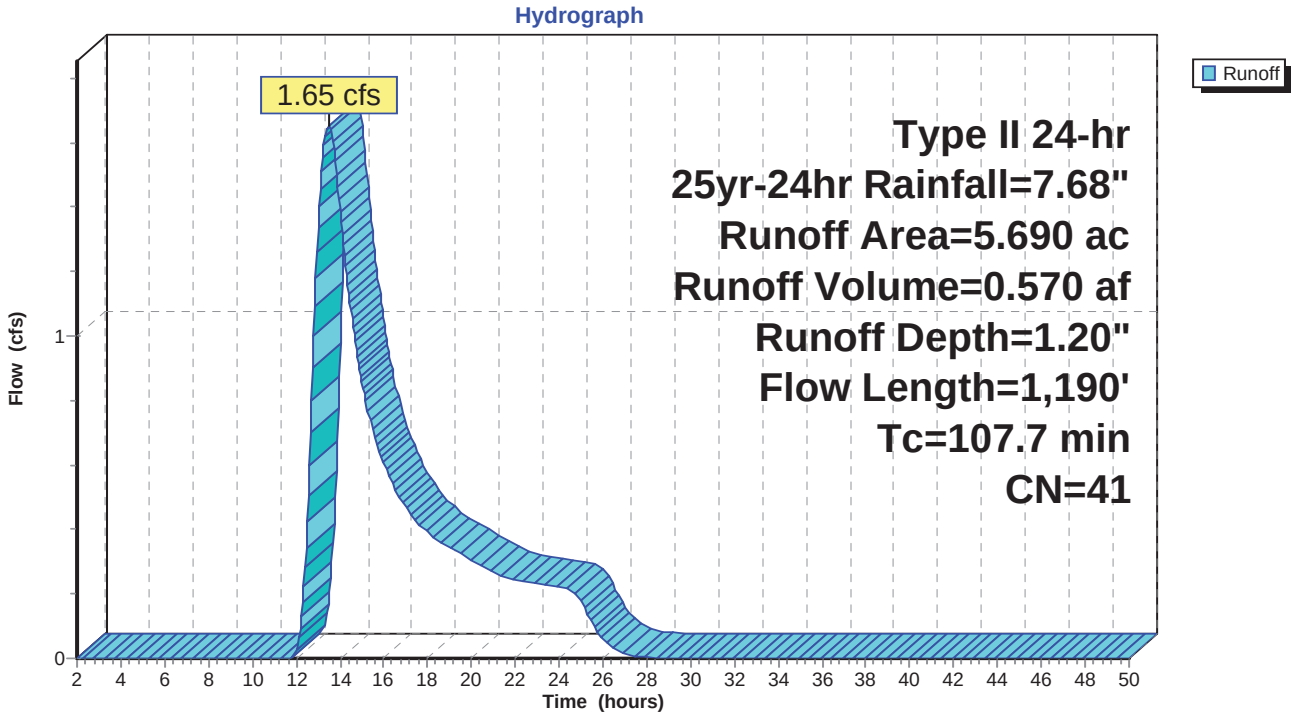
Runoff = 1.65 cfs @ 13.50 hrs, Volume= 0.570 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
*	2.100	49	Open Space, Fair, HSG A
	3.590	36	Woods, Fair, HSG A
	5.690	41	Weighted Average
	5.690		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
93.1	300	0.0030	0.05		**Sheet Flow, WOODS - LIGHT UNDERBRUSH** Woods: Light underbrush n= 0.400 P2= 4.50"
14.6	890	0.0040	1.02		**Shallow Concentrated Flow, UNPAVED AREA** Unpaved Kv= 16.1 fps
107.7	1,190	Total			

Subcatchment 1S: SB-1



Hydrograph for Subcatchment 1S: SB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.17	0.00	0.00	4.65	0.44	0.00	0.00
2.05	0.17	0.00	0.00	4.70	0.45	0.00	0.00
2.10	0.18	0.00	0.00	4.75	0.45	0.00	0.00
2.15	0.18	0.00	0.00	4.80	0.46	0.00	0.00
2.20	0.19	0.00	0.00	4.85	0.47	0.00	0.00
2.25	0.19	0.00	0.00	4.90	0.47	0.00	0.00
2.30	0.20	0.00	0.00	4.95	0.48	0.00	0.00
2.35	0.20	0.00	0.00	5.00	0.48	0.00	0.00
2.40	0.21	0.00	0.00	5.05	0.49	0.00	0.00
2.45	0.21	0.00	0.00	5.10	0.50	0.00	0.00
2.50	0.22	0.00	0.00	5.15	0.50	0.00	0.00
2.55	0.22	0.00	0.00	5.20	0.51	0.00	0.00
2.60	0.23	0.00	0.00	5.25	0.52	0.00	0.00
2.65	0.23	0.00	0.00	5.30	0.52	0.00	0.00
2.70	0.24	0.00	0.00	5.35	0.53	0.00	0.00
2.75	0.24	0.00	0.00	5.40	0.53	0.00	0.00
2.80	0.25	0.00	0.00	5.45	0.54	0.00	0.00
2.85	0.25	0.00	0.00	5.50	0.55	0.00	0.00
2.90	0.26	0.00	0.00	5.55	0.55	0.00	0.00
2.95	0.26	0.00	0.00	5.60	0.56	0.00	0.00
3.00	0.26	0.00	0.00	5.65	0.57	0.00	0.00
3.05	0.27	0.00	0.00	5.70	0.57	0.00	0.00
3.10	0.27	0.00	0.00	5.75	0.58	0.00	0.00
3.15	0.28	0.00	0.00	5.80	0.59	0.00	0.00
3.20	0.29	0.00	0.00	5.85	0.59	0.00	0.00
3.25	0.29	0.00	0.00	5.90	0.60	0.00	0.00
3.30	0.30	0.00	0.00	5.95	0.61	0.00	0.00
3.35	0.30	0.00	0.00	6.00	0.61	0.00	0.00
3.40	0.31	0.00	0.00	6.05	0.62	0.00	0.00
3.45	0.31	0.00	0.00	6.10	0.63	0.00	0.00
3.50	0.32	0.00	0.00	6.15	0.64	0.00	0.00
3.55	0.32	0.00	0.00	6.20	0.64	0.00	0.00
3.60	0.33	0.00	0.00	6.25	0.65	0.00	0.00
3.65	0.33	0.00	0.00	6.30	0.66	0.00	0.00
3.70	0.34	0.00	0.00	6.35	0.66	0.00	0.00
3.75	0.34	0.00	0.00	6.40	0.67	0.00	0.00
3.80	0.35	0.00	0.00	6.45	0.68	0.00	0.00
3.85	0.35	0.00	0.00	6.50	0.69	0.00	0.00
3.90	0.36	0.00	0.00	6.55	0.69	0.00	0.00
3.95	0.36	0.00	0.00	6.60	0.70	0.00	0.00
4.00	0.37	0.00	0.00	6.65	0.71	0.00	0.00
4.05	0.37	0.00	0.00	6.70	0.71	0.00	0.00
4.10	0.38	0.00	0.00	6.75	0.72	0.00	0.00
4.15	0.38	0.00	0.00	6.80	0.73	0.00	0.00
4.20	0.39	0.00	0.00	6.85	0.74	0.00	0.00
4.25	0.40	0.00	0.00	6.90	0.75	0.00	0.00
4.30	0.40	0.00	0.00	6.95	0.75	0.00	0.00
4.35	0.41	0.00	0.00	7.00	0.76	0.00	0.00
4.40	0.41	0.00	0.00	7.05	0.77	0.00	0.00
4.45	0.42	0.00	0.00	7.10	0.78	0.00	0.00
4.50	0.42	0.00	0.00	7.15	0.78	0.00	0.00
4.55	0.43	0.00	0.00	7.20	0.79	0.00	0.00
4.60	0.44	0.00	0.00	7.25	0.80	0.00	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.81	0.00	0.00	9.95	1.37	0.00	0.00
7.35	0.82	0.00	0.00	10.00	1.39	0.00	0.00
7.40	0.82	0.00	0.00	10.05	1.41	0.00	0.00
7.45	0.83	0.00	0.00	10.10	1.42	0.00	0.00
7.50	0.84	0.00	0.00	10.15	1.44	0.00	0.00
7.55	0.85	0.00	0.00	10.20	1.46	0.00	0.00
7.60	0.86	0.00	0.00	10.25	1.47	0.00	0.00
7.65	0.86	0.00	0.00	10.30	1.49	0.00	0.00
7.70	0.87	0.00	0.00	10.35	1.51	0.00	0.00
7.75	0.88	0.00	0.00	10.40	1.53	0.00	0.00
7.80	0.89	0.00	0.00	10.45	1.55	0.00	0.00
7.85	0.90	0.00	0.00	10.50	1.57	0.00	0.00
7.90	0.90	0.00	0.00	10.55	1.59	0.00	0.00
7.95	0.91	0.00	0.00	10.60	1.61	0.00	0.00
8.00	0.92	0.00	0.00	10.65	1.63	0.00	0.00
8.05	0.93	0.00	0.00	10.70	1.65	0.00	0.00
8.10	0.94	0.00	0.00	10.75	1.68	0.00	0.00
8.15	0.95	0.00	0.00	10.80	1.70	0.00	0.00
8.20	0.96	0.00	0.00	10.85	1.73	0.00	0.00
8.25	0.97	0.00	0.00	10.90	1.75	0.00	0.00
8.30	0.98	0.00	0.00	10.95	1.78	0.00	0.00
8.35	0.99	0.00	0.00	11.00	1.80	0.00	0.00
8.40	1.00	0.00	0.00	11.05	1.83	0.00	0.00
8.45	1.01	0.00	0.00	11.10	1.86	0.00	0.00
8.50	1.02	0.00	0.00	11.15	1.90	0.00	0.00
8.55	1.03	0.00	0.00	11.20	1.93	0.00	0.00
8.60	1.04	0.00	0.00	11.25	1.97	0.00	0.00
8.65	1.05	0.00	0.00	11.30	2.00	0.00	0.00
8.70	1.06	0.00	0.00	11.35	2.04	0.00	0.00
8.75	1.07	0.00	0.00	11.40	2.08	0.00	0.00
8.80	1.08	0.00	0.00	11.45	2.13	0.00	0.00
8.85	1.09	0.00	0.00	11.50	2.17	0.00	0.00
8.90	1.10	0.00	0.00	11.55	2.24	0.00	0.00
8.95	1.12	0.00	0.00	11.60	2.36	0.00	0.00
9.00	1.13	0.00	0.00	11.65	2.52	0.00	0.00
9.05	1.14	0.00	0.00	11.70	2.72	0.00	0.00
9.10	1.15	0.00	0.00	11.75	2.97	0.00	0.00
9.15	1.17	0.00	0.00	11.80	3.31	0.01	0.00
9.20	1.18	0.00	0.00	11.85	3.77	0.05	0.00
9.25	1.19	0.00	0.00	11.90	4.36	0.14	0.00
9.30	1.20	0.00	0.00	11.95	4.87	0.24	0.00
9.35	1.21	0.00	0.00	12.00	5.09	0.30	0.01
9.40	1.23	0.00	0.00	12.05	5.17	0.31	0.02
9.45	1.24	0.00	0.00	12.10	5.24	0.33	0.04
9.50	1.25	0.00	0.00	12.15	5.30	0.35	0.06
9.55	1.26	0.00	0.00	12.20	5.37	0.37	0.09
9.60	1.28	0.00	0.00	12.25	5.42	0.38	0.13
9.65	1.29	0.00	0.00	12.30	5.48	0.40	0.17
9.70	1.30	0.00	0.00	12.35	5.52	0.41	0.22
9.75	1.32	0.00	0.00	12.40	5.57	0.42	0.28
9.80	1.33	0.00	0.00	12.45	5.61	0.44	0.34
9.85	1.35	0.00	0.00	12.50	5.64	0.45	0.42
9.90	1.36	0.00	0.00	12.55	5.68	0.46	0.50

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	5.71	0.47	0.60	15.25	6.61	0.77	0.77
12.65	5.74	0.47	0.70	15.30	6.62	0.77	0.76
12.70	5.77	0.48	0.80	15.35	6.63	0.78	0.74
12.75	5.80	0.49	0.90	15.40	6.64	0.78	0.73
12.80	5.83	0.50	1.00	15.45	6.65	0.78	0.72
12.85	5.85	0.51	1.09	15.50	6.66	0.79	0.70
12.90	5.88	0.52	1.18	15.55	6.67	0.79	0.69
12.95	5.91	0.53	1.26	15.60	6.68	0.80	0.68
13.00	5.93	0.53	1.33	15.65	6.69	0.80	0.67
13.05	5.95	0.54	1.40	15.70	6.70	0.80	0.66
13.10	5.97	0.55	1.46	15.75	6.71	0.81	0.65
13.15	6.00	0.56	1.51	15.80	6.72	0.81	0.64
13.20	6.02	0.56	1.55	15.85	6.73	0.81	0.63
13.25	6.04	0.57	1.59	15.90	6.74	0.82	0.62
13.30	6.06	0.58	1.62	15.95	6.75	0.82	0.61
13.35	6.08	0.58	1.63	16.00	6.76	0.82	0.60
13.40	6.10	0.59	1.64	16.05	6.77	0.83	0.59
13.45	6.12	0.60	1.65	16.10	6.78	0.83	0.59
13.50	6.14	0.60	**1.65**	16.15	6.78	0.83	0.58
13.55	6.15	0.61	1.65	16.20	6.79	0.84	0.57
13.60	6.17	0.61	1.64	16.25	6.80	0.84	0.56
13.65	6.19	0.62	1.62	16.30	6.81	0.84	0.55
13.70	6.21	0.62	1.60	16.35	6.82	0.85	0.55
13.75	6.22	0.63	1.58	16.40	6.83	0.85	0.54
13.80	6.24	0.64	1.54	16.45	6.84	0.85	0.53
13.85	6.25	0.64	1.50	16.50	6.84	0.86	0.53
13.90	6.27	0.65	1.46	16.55	6.85	0.86	0.52
13.95	6.28	0.65	1.42	16.60	6.86	0.86	0.51
14.00	6.30	0.66	1.39	16.65	6.87	0.87	0.51
14.05	6.31	0.66	1.35	16.70	6.88	0.87	0.50
14.10	6.33	0.67	1.32	16.75	6.89	0.87	0.50
14.15	6.34	0.67	1.28	16.80	6.89	0.88	0.49
14.20	6.35	0.68	1.25	16.85	6.90	0.88	0.48
14.25	6.37	0.68	1.22	16.90	6.91	0.88	0.48
14.30	6.38	0.69	1.19	16.95	6.92	0.89	0.47
14.35	6.39	0.69	1.16	17.00	6.93	0.89	0.47
14.40	6.41	0.69	1.13	17.05	6.93	0.89	0.46
14.45	6.42	0.70	1.10	17.10	6.94	0.89	0.46
14.50	6.43	0.70	1.08	17.15	6.95	0.90	0.45
14.55	6.45	0.71	1.05	17.20	6.96	0.90	0.45
14.60	6.46	0.71	1.03	17.25	6.96	0.90	0.44
14.65	6.47	0.72	1.00	17.30	6.97	0.91	0.44
14.70	6.48	0.72	0.98	17.35	6.98	0.91	0.44
14.75	6.50	0.73	0.96	17.40	6.99	0.91	0.43
14.80	6.51	0.73	0.93	17.45	6.99	0.92	0.43
14.85	6.52	0.74	0.91	17.50	7.00	0.92	0.42
14.90	6.53	0.74	0.89	17.55	7.01	0.92	0.42
14.95	6.54	0.74	0.87	17.60	7.02	0.92	0.42
15.00	6.55	0.75	0.86	17.65	7.02	0.93	0.41
15.05	6.57	0.75	0.84	17.70	7.03	0.93	0.41
15.10	6.58	0.76	0.82	17.75	7.04	0.93	0.40
15.15	6.59	0.76	0.80	17.80	7.05	0.94	0.40
15.20	6.60	0.76	0.79	17.85	7.05	0.94	0.40

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	7.06	0.94	0.39	20.55	7.37	1.07	0.28
17.95	7.07	0.94	0.39	20.60	7.37	1.07	0.28
18.00	7.07	0.95	0.39	20.65	7.38	1.07	0.28
18.05	7.08	0.95	0.39	20.70	7.38	1.07	0.28
18.10	7.09	0.95	0.38	20.75	7.39	1.07	0.28
18.15	7.09	0.96	0.38	20.80	7.39	1.08	0.27
18.20	7.10	0.96	0.38	20.85	7.39	1.08	0.27
18.25	7.11	0.96	0.38	20.90	7.40	1.08	0.27
18.30	7.11	0.96	0.37	20.95	7.40	1.08	0.27
18.35	7.12	0.97	0.37	21.00	7.41	1.09	0.27
18.40	7.13	0.97	0.37	21.05	7.41	1.09	0.26
18.45	7.13	0.97	0.37	21.10	7.42	1.09	0.26
18.50	7.14	0.97	0.36	21.15	7.42	1.09	0.26
18.55	7.15	0.98	0.36	21.20	7.43	1.09	0.26
18.60	7.15	0.98	0.36	21.25	7.43	1.10	0.26
18.65	7.16	0.98	0.36	21.30	7.44	1.10	0.26
18.70	7.17	0.98	0.36	21.35	7.44	1.10	0.26
18.75	7.17	0.99	0.35	21.40	7.45	1.10	0.25
18.80	7.18	0.99	0.35	21.45	7.45	1.10	0.25
18.85	7.18	0.99	0.35	21.50	7.46	1.11	0.25
18.90	7.19	0.99	0.35	21.55	7.46	1.11	0.25
18.95	7.20	1.00	0.35	21.60	7.47	1.11	0.25
19.00	7.20	1.00	0.34	21.65	7.47	1.11	0.25
19.05	7.21	1.00	0.34	21.70	7.48	1.11	0.25
19.10	7.21	1.00	0.34	21.75	7.48	1.12	0.25
19.15	7.22	1.01	0.34	21.80	7.48	1.12	0.25
19.20	7.23	1.01	0.34	21.85	7.49	1.12	0.25
19.25	7.23	1.01	0.33	21.90	7.49	1.12	0.24
19.30	7.24	1.01	0.33	21.95	7.50	1.12	0.24
19.35	7.24	1.02	0.33	22.00	7.50	1.13	0.24
19.40	7.25	1.02	0.33	22.05	7.51	1.13	0.24
19.45	7.25	1.02	0.33	22.10	7.51	1.13	0.24
19.50	7.26	1.02	0.32	22.15	7.52	1.13	0.24
19.55	7.26	1.02	0.32	22.20	7.52	1.13	0.24
19.60	7.27	1.03	0.32	22.25	7.53	1.13	0.24
19.65	7.28	1.03	0.32	22.30	7.53	1.14	0.24
19.70	7.28	1.03	0.32	22.35	7.54	1.14	0.24
19.75	7.29	1.03	0.31	22.40	7.54	1.14	0.24
19.80	7.29	1.04	0.31	22.45	7.54	1.14	0.24
19.85	7.30	1.04	0.31	22.50	7.55	1.14	0.24
19.90	7.30	1.04	0.31	22.55	7.55	1.15	0.24
19.95	7.31	1.04	0.31	22.60	7.56	1.15	0.24
20.00	7.31	1.04	0.30	22.65	7.56	1.15	0.23
20.05	7.32	1.05	0.30	22.70	7.57	1.15	0.23
20.10	7.32	1.05	0.30	22.75	7.57	1.15	0.23
20.15	7.33	1.05	0.30	22.80	7.58	1.16	0.23
20.20	7.33	1.05	0.30	22.85	7.58	1.16	0.23
20.25	7.34	1.05	0.30	22.90	7.58	1.16	0.23
20.30	7.34	1.06	0.29	22.95	7.59	1.16	0.23
20.35	7.35	1.06	0.29	23.00	7.59	1.16	0.23
20.40	7.35	1.06	0.29	23.05	7.60	1.17	0.23
20.45	7.36	1.06	0.29	23.10	7.60	1.17	0.23
20.50	7.36	1.06	0.29	23.15	7.61	1.17	0.23

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	7.61	1.17	0.23	25.85	7.68	1.20	0.07
23.25	7.62	1.17	0.23	25.90	7.68	1.20	0.07
23.30	7.62	1.18	0.23	25.95	7.68	1.20	0.06
23.35	7.62	1.18	0.23	26.00	7.68	1.20	0.06
23.40	7.63	1.18	0.23	26.05	7.68	1.20	0.05
23.45	7.63	1.18	0.23	26.10	7.68	1.20	0.05
23.50	7.64	1.18	0.23	26.15	7.68	1.20	0.05
23.55	7.64	1.18	0.23	26.20	7.68	1.20	0.04
23.60	7.65	1.19	0.23	26.25	7.68	1.20	0.04
23.65	7.65	1.19	0.23	26.30	7.68	1.20	0.04
23.70	7.65	1.19	0.23	26.35	7.68	1.20	0.04
23.75	7.66	1.19	0.23	26.40	7.68	1.20	0.03
23.80	7.66	1.19	0.23	26.45	7.68	1.20	0.03
23.85	7.67	1.20	0.23	26.50	7.68	1.20	0.03
23.90	7.67	1.20	0.22	26.55	7.68	1.20	0.03
23.95	7.68	1.20	0.22	26.60	7.68	1.20	0.03
24.00	**7.68**	**1.20**	0.22	26.65	7.68	1.20	0.02
24.05	7.68	1.20	0.22	26.70	7.68	1.20	0.02
24.10	7.68	1.20	0.22	26.75	7.68	1.20	0.02
24.15	7.68	1.20	0.22	26.80	7.68	1.20	0.02
24.20	7.68	1.20	0.22	26.85	7.68	1.20	0.02
24.25	7.68	1.20	0.22	26.90	7.68	1.20	0.02
24.30	7.68	1.20	0.22	26.95	7.68	1.20	0.02
24.35	7.68	1.20	0.22	27.00	7.68	1.20	0.01
24.40	7.68	1.20	0.22	27.05	7.68	1.20	0.01
24.45	7.68	1.20	0.22	27.10	7.68	1.20	0.01
24.50	7.68	1.20	0.22	27.15	7.68	1.20	0.01
24.55	7.68	1.20	0.21	27.20	7.68	1.20	0.01
24.60	7.68	1.20	0.21	27.25	7.68	1.20	0.01
24.65	7.68	1.20	0.21	27.30	7.68	1.20	0.01
24.70	7.68	1.20	0.21	27.35	7.68	1.20	0.01
24.75	7.68	1.20	0.20	27.40	7.68	1.20	0.01
24.80	7.68	1.20	0.20	27.45	7.68	1.20	0.01
24.85	7.68	1.20	0.19	27.50	7.68	1.20	0.01
24.90	7.68	1.20	0.19	27.55	7.68	1.20	0.01
24.95	7.68	1.20	0.18	27.60	7.68	1.20	0.01
25.00	7.68	1.20	0.18	27.65	7.68	1.20	0.01
25.05	7.68	1.20	0.17	27.70	7.68	1.20	0.01
25.10	7.68	1.20	0.16	27.75	7.68	1.20	0.01
25.15	7.68	1.20	0.16	27.80	7.68	1.20	0.00
25.20	7.68	1.20	0.15	27.85	7.68	1.20	0.00
25.25	7.68	1.20	0.15	27.90	7.68	1.20	0.00
25.30	7.68	1.20	0.14	27.95	7.68	1.20	0.00
25.35	7.68	1.20	0.13	28.00	7.68	1.20	0.00
25.40	7.68	1.20	0.12	28.05	7.68	1.20	0.00
25.45	7.68	1.20	0.12	28.10	7.68	1.20	0.00
25.50	7.68	1.20	0.11	28.15	7.68	1.20	0.00
25.55	7.68	1.20	0.11	28.20	7.68	1.20	0.00
25.60	7.68	1.20	0.10	28.25	7.68	1.20	0.00
25.65	7.68	1.20	0.09	28.30	7.68	1.20	0.00
25.70	7.68	1.20	0.09	28.35	7.68	1.20	0.00
25.75	7.68	1.20	0.08	28.40	7.68	1.20	0.00
25.80	7.68	1.20	0.08	28.45	7.68	1.20	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	7.68	1.20	0.00	31.15	7.68	1.20	0.00
28.55	7.68	1.20	0.00	31.20	7.68	1.20	0.00
28.60	7.68	1.20	0.00	31.25	7.68	1.20	0.00
28.65	7.68	1.20	0.00	31.30	7.68	1.20	0.00
28.70	7.68	1.20	0.00	31.35	7.68	1.20	0.00
28.75	7.68	1.20	0.00	31.40	7.68	1.20	0.00
28.80	7.68	1.20	0.00	31.45	7.68	1.20	0.00
28.85	7.68	1.20	0.00	31.50	7.68	1.20	0.00
28.90	7.68	1.20	0.00	31.55	7.68	1.20	0.00
28.95	7.68	1.20	0.00	31.60	7.68	1.20	0.00
29.00	7.68	1.20	0.00	31.65	7.68	1.20	0.00
29.05	7.68	1.20	0.00	31.70	7.68	1.20	0.00
29.10	7.68	1.20	0.00	31.75	7.68	1.20	0.00
29.15	7.68	1.20	0.00	31.80	7.68	1.20	0.00
29.20	7.68	1.20	0.00	31.85	7.68	1.20	0.00
29.25	7.68	1.20	0.00	31.90	7.68	1.20	0.00
29.30	7.68	1.20	0.00	31.95	7.68	1.20	0.00
29.35	7.68	1.20	0.00	32.00	7.68	1.20	0.00
29.40	7.68	1.20	0.00	32.05	7.68	1.20	0.00
29.45	7.68	1.20	0.00	32.10	7.68	1.20	0.00
29.50	7.68	1.20	0.00	32.15	7.68	1.20	0.00
29.55	7.68	1.20	0.00	32.20	7.68	1.20	0.00
29.60	7.68	1.20	0.00	32.25	7.68	1.20	0.00
29.65	7.68	1.20	0.00	32.30	7.68	1.20	0.00
29.70	7.68	1.20	0.00	32.35	7.68	1.20	0.00
29.75	7.68	1.20	0.00	32.40	7.68	1.20	0.00
29.80	7.68	1.20	0.00	32.45	7.68	1.20	0.00
29.85	7.68	1.20	0.00	32.50	7.68	1.20	0.00
29.90	7.68	1.20	0.00	32.55	7.68	1.20	0.00
29.95	7.68	1.20	0.00	32.60	7.68	1.20	0.00
30.00	7.68	1.20	0.00	32.65	7.68	1.20	0.00
30.05	7.68	1.20	0.00	32.70	7.68	1.20	0.00
30.10	7.68	1.20	0.00	32.75	7.68	1.20	0.00
30.15	7.68	1.20	0.00	32.80	7.68	1.20	0.00
30.20	7.68	1.20	0.00	32.85	7.68	1.20	0.00
30.25	7.68	1.20	0.00	32.90	7.68	1.20	0.00
30.30	7.68	1.20	0.00	32.95	7.68	1.20	0.00
30.35	7.68	1.20	0.00	33.00	7.68	1.20	0.00
30.40	7.68	1.20	0.00	33.05	7.68	1.20	0.00
30.45	7.68	1.20	0.00	33.10	7.68	1.20	0.00
30.50	7.68	1.20	0.00	33.15	7.68	1.20	0.00
30.55	7.68	1.20	0.00	33.20	7.68	1.20	0.00
30.60	7.68	1.20	0.00	33.25	7.68	1.20	0.00
30.65	7.68	1.20	0.00	33.30	7.68	1.20	0.00
30.70	7.68	1.20	0.00	33.35	7.68	1.20	0.00
30.75	7.68	1.20	0.00	33.40	7.68	1.20	0.00
30.80	7.68	1.20	0.00	33.45	7.68	1.20	0.00
30.85	7.68	1.20	0.00	33.50	7.68	1.20	0.00
30.90	7.68	1.20	0.00	33.55	7.68	1.20	0.00
30.95	7.68	1.20	0.00	33.60	7.68	1.20	0.00
31.00	7.68	1.20	0.00	33.65	7.68	1.20	0.00
31.05	7.68	1.20	0.00	33.70	7.68	1.20	0.00
31.10	7.68	1.20	0.00	33.75	7.68	1.20	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	7.68	1.20	0.00	36.45	7.68	1.20	0.00
33.85	7.68	1.20	0.00	36.50	7.68	1.20	0.00
33.90	7.68	1.20	0.00	36.55	7.68	1.20	0.00
33.95	7.68	1.20	0.00	36.60	7.68	1.20	0.00
34.00	7.68	1.20	0.00	36.65	7.68	1.20	0.00
34.05	7.68	1.20	0.00	36.70	7.68	1.20	0.00
34.10	7.68	1.20	0.00	36.75	7.68	1.20	0.00
34.15	7.68	1.20	0.00	36.80	7.68	1.20	0.00
34.20	7.68	1.20	0.00	36.85	7.68	1.20	0.00
34.25	7.68	1.20	0.00	36.90	7.68	1.20	0.00
34.30	7.68	1.20	0.00	36.95	7.68	1.20	0.00
34.35	7.68	1.20	0.00	37.00	7.68	1.20	0.00
34.40	7.68	1.20	0.00	37.05	7.68	1.20	0.00
34.45	7.68	1.20	0.00	37.10	7.68	1.20	0.00
34.50	7.68	1.20	0.00	37.15	7.68	1.20	0.00
34.55	7.68	1.20	0.00	37.20	7.68	1.20	0.00
34.60	7.68	1.20	0.00	37.25	7.68	1.20	0.00
34.65	7.68	1.20	0.00	37.30	7.68	1.20	0.00
34.70	7.68	1.20	0.00	37.35	7.68	1.20	0.00
34.75	7.68	1.20	0.00	37.40	7.68	1.20	0.00
34.80	7.68	1.20	0.00	37.45	7.68	1.20	0.00
34.85	7.68	1.20	0.00	37.50	7.68	1.20	0.00
34.90	7.68	1.20	0.00	37.55	7.68	1.20	0.00
34.95	7.68	1.20	0.00	37.60	7.68	1.20	0.00
35.00	7.68	1.20	0.00	37.65	7.68	1.20	0.00
35.05	7.68	1.20	0.00	37.70	7.68	1.20	0.00
35.10	7.68	1.20	0.00	37.75	7.68	1.20	0.00
35.15	7.68	1.20	0.00	37.80	7.68	1.20	0.00
35.20	7.68	1.20	0.00	37.85	7.68	1.20	0.00
35.25	7.68	1.20	0.00	37.90	7.68	1.20	0.00
35.30	7.68	1.20	0.00	37.95	7.68	1.20	0.00
35.35	7.68	1.20	0.00	38.00	7.68	1.20	0.00
35.40	7.68	1.20	0.00	38.05	7.68	1.20	0.00
35.45	7.68	1.20	0.00	38.10	7.68	1.20	0.00
35.50	7.68	1.20	0.00	38.15	7.68	1.20	0.00
35.55	7.68	1.20	0.00	38.20	7.68	1.20	0.00
35.60	7.68	1.20	0.00	38.25	7.68	1.20	0.00
35.65	7.68	1.20	0.00	38.30	7.68	1.20	0.00
35.70	7.68	1.20	0.00	38.35	7.68	1.20	0.00
35.75	7.68	1.20	0.00	38.40	7.68	1.20	0.00
35.80	7.68	1.20	0.00	38.45	7.68	1.20	0.00
35.85	7.68	1.20	0.00	38.50	7.68	1.20	0.00
35.90	7.68	1.20	0.00	38.55	7.68	1.20	0.00
35.95	7.68	1.20	0.00	38.60	7.68	1.20	0.00
36.00	7.68	1.20	0.00	38.65	7.68	1.20	0.00
36.05	7.68	1.20	0.00	38.70	7.68	1.20	0.00
36.10	7.68	1.20	0.00	38.75	7.68	1.20	0.00
36.15	7.68	1.20	0.00	38.80	7.68	1.20	0.00
36.20	7.68	1.20	0.00	38.85	7.68	1.20	0.00
36.25	7.68	1.20	0.00	38.90	7.68	1.20	0.00
36.30	7.68	1.20	0.00	38.95	7.68	1.20	0.00
36.35	7.68	1.20	0.00	39.00	7.68	1.20	0.00
36.40	7.68	1.20	0.00	39.05	7.68	1.20	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	7.68	1.20	0.00	41.75	7.68	1.20	0.00
39.15	7.68	1.20	0.00	41.80	7.68	1.20	0.00
39.20	7.68	1.20	0.00	41.85	7.68	1.20	0.00
39.25	7.68	1.20	0.00	41.90	7.68	1.20	0.00
39.30	7.68	1.20	0.00	41.95	7.68	1.20	0.00
39.35	7.68	1.20	0.00	42.00	7.68	1.20	0.00
39.40	7.68	1.20	0.00	42.05	7.68	1.20	0.00
39.45	7.68	1.20	0.00	42.10	7.68	1.20	0.00
39.50	7.68	1.20	0.00	42.15	7.68	1.20	0.00
39.55	7.68	1.20	0.00	42.20	7.68	1.20	0.00
39.60	7.68	1.20	0.00	42.25	7.68	1.20	0.00
39.65	7.68	1.20	0.00	42.30	7.68	1.20	0.00
39.70	7.68	1.20	0.00	42.35	7.68	1.20	0.00
39.75	7.68	1.20	0.00	42.40	7.68	1.20	0.00
39.80	7.68	1.20	0.00	42.45	7.68	1.20	0.00
39.85	7.68	1.20	0.00	42.50	7.68	1.20	0.00
39.90	7.68	1.20	0.00	42.55	7.68	1.20	0.00
39.95	7.68	1.20	0.00	42.60	7.68	1.20	0.00
40.00	7.68	1.20	0.00	42.65	7.68	1.20	0.00
40.05	7.68	1.20	0.00	42.70	7.68	1.20	0.00
40.10	7.68	1.20	0.00	42.75	7.68	1.20	0.00
40.15	7.68	1.20	0.00	42.80	7.68	1.20	0.00
40.20	7.68	1.20	0.00	42.85	7.68	1.20	0.00
40.25	7.68	1.20	0.00	42.90	7.68	1.20	0.00
40.30	7.68	1.20	0.00	42.95	7.68	1.20	0.00
40.35	7.68	1.20	0.00	43.00	7.68	1.20	0.00
40.40	7.68	1.20	0.00	43.05	7.68	1.20	0.00
40.45	7.68	1.20	0.00	43.10	7.68	1.20	0.00
40.50	7.68	1.20	0.00	43.15	7.68	1.20	0.00
40.55	7.68	1.20	0.00	43.20	7.68	1.20	0.00
40.60	7.68	1.20	0.00	43.25	7.68	1.20	0.00
40.65	7.68	1.20	0.00	43.30	7.68	1.20	0.00
40.70	7.68	1.20	0.00	43.35	7.68	1.20	0.00
40.75	7.68	1.20	0.00	43.40	7.68	1.20	0.00
40.80	7.68	1.20	0.00	43.45	7.68	1.20	0.00
40.85	7.68	1.20	0.00	43.50	7.68	1.20	0.00
40.90	7.68	1.20	0.00	43.55	7.68	1.20	0.00
40.95	7.68	1.20	0.00	43.60	7.68	1.20	0.00
41.00	7.68	1.20	0.00	43.65	7.68	1.20	0.00
41.05	7.68	1.20	0.00	43.70	7.68	1.20	0.00
41.10	7.68	1.20	0.00	43.75	7.68	1.20	0.00
41.15	7.68	1.20	0.00	43.80	7.68	1.20	0.00
41.20	7.68	1.20	0.00	43.85	7.68	1.20	0.00
41.25	7.68	1.20	0.00	43.90	7.68	1.20	0.00
41.30	7.68	1.20	0.00	43.95	7.68	1.20	0.00
41.35	7.68	1.20	0.00	44.00	7.68	1.20	0.00
41.40	7.68	1.20	0.00	44.05	7.68	1.20	0.00
41.45	7.68	1.20	0.00	44.10	7.68	1.20	0.00
41.50	7.68	1.20	0.00	44.15	7.68	1.20	0.00
41.55	7.68	1.20	0.00	44.20	7.68	1.20	0.00
41.60	7.68	1.20	0.00	44.25	7.68	1.20	0.00
41.65	7.68	1.20	0.00	44.30	7.68	1.20	0.00
41.70	7.68	1.20	0.00	44.35	7.68	1.20	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	7.68	1.20	0.00	47.05	7.68	1.20	0.00
44.45	7.68	1.20	0.00	47.10	7.68	1.20	0.00
44.50	7.68	1.20	0.00	47.15	7.68	1.20	0.00
44.55	7.68	1.20	0.00	47.20	7.68	1.20	0.00
44.60	7.68	1.20	0.00	47.25	7.68	1.20	0.00
44.65	7.68	1.20	0.00	47.30	7.68	1.20	0.00
44.70	7.68	1.20	0.00	47.35	7.68	1.20	0.00
44.75	7.68	1.20	0.00	47.40	7.68	1.20	0.00
44.80	7.68	1.20	0.00	47.45	7.68	1.20	0.00
44.85	7.68	1.20	0.00	47.50	7.68	1.20	0.00
44.90	7.68	1.20	0.00	47.55	7.68	1.20	0.00
44.95	7.68	1.20	0.00	47.60	7.68	1.20	0.00
45.00	7.68	1.20	0.00	47.65	7.68	1.20	0.00
45.05	7.68	1.20	0.00	47.70	7.68	1.20	0.00
45.10	7.68	1.20	0.00	47.75	7.68	1.20	0.00
45.15	7.68	1.20	0.00	47.80	7.68	1.20	0.00
45.20	7.68	1.20	0.00	47.85	7.68	1.20	0.00
45.25	7.68	1.20	0.00	47.90	7.68	1.20	0.00
45.30	7.68	1.20	0.00	47.95	7.68	1.20	0.00
45.35	7.68	1.20	0.00	48.00	7.68	1.20	0.00
45.40	7.68	1.20	0.00	48.05	7.68	1.20	0.00
45.45	7.68	1.20	0.00	48.10	7.68	1.20	0.00
45.50	7.68	1.20	0.00	48.15	7.68	1.20	0.00
45.55	7.68	1.20	0.00	48.20	7.68	1.20	0.00
45.60	7.68	1.20	0.00	48.25	7.68	1.20	0.00
45.65	7.68	1.20	0.00	48.30	7.68	1.20	0.00
45.70	7.68	1.20	0.00	48.35	7.68	1.20	0.00
45.75	7.68	1.20	0.00	48.40	7.68	1.20	0.00
45.80	7.68	1.20	0.00	48.45	7.68	1.20	0.00
45.85	7.68	1.20	0.00	48.50	7.68	1.20	0.00
45.90	7.68	1.20	0.00	48.55	7.68	1.20	0.00
45.95	7.68	1.20	0.00	48.60	7.68	1.20	0.00
46.00	7.68	1.20	0.00	48.65	7.68	1.20	0.00
46.05	7.68	1.20	0.00	48.70	7.68	1.20	0.00
46.10	7.68	1.20	0.00	48.75	7.68	1.20	0.00
46.15	7.68	1.20	0.00	48.80	7.68	1.20	0.00
46.20	7.68	1.20	0.00	48.85	7.68	1.20	0.00
46.25	7.68	1.20	0.00	48.90	7.68	1.20	0.00
46.30	7.68	1.20	0.00	48.95	7.68	1.20	0.00
46.35	7.68	1.20	0.00	49.00	7.68	1.20	0.00
46.40	7.68	1.20	0.00	49.05	7.68	1.20	0.00
46.45	7.68	1.20	0.00	49.10	7.68	1.20	0.00
46.50	7.68	1.20	0.00	49.15	7.68	1.20	0.00
46.55	7.68	1.20	0.00	49.20	7.68	1.20	0.00
46.60	7.68	1.20	0.00	49.25	7.68	1.20	0.00
46.65	7.68	1.20	0.00	49.30	7.68	1.20	0.00
46.70	7.68	1.20	0.00	49.35	7.68	1.20	0.00
46.75	7.68	1.20	0.00	49.40	7.68	1.20	0.00
46.80	7.68	1.20	0.00	49.45	7.68	1.20	0.00
46.85	7.68	1.20	0.00	49.50	7.68	1.20	0.00
46.90	7.68	1.20	0.00	49.55	7.68	1.20	0.00
46.95	7.68	1.20	0.00	49.60	7.68	1.20	0.00
47.00	7.68	1.20	0.00	49.65	7.68	1.20	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	7.68	1.20	0.00
49.75	7.68	1.20	0.00
49.80	7.68	1.20	0.00
49.85	7.68	1.20	0.00
49.90	7.68	1.20	0.00
49.95	7.68	1.20	0.00
50.00	7.68	1.20	0.00

Summary for Subcatchment 2S: SB-2

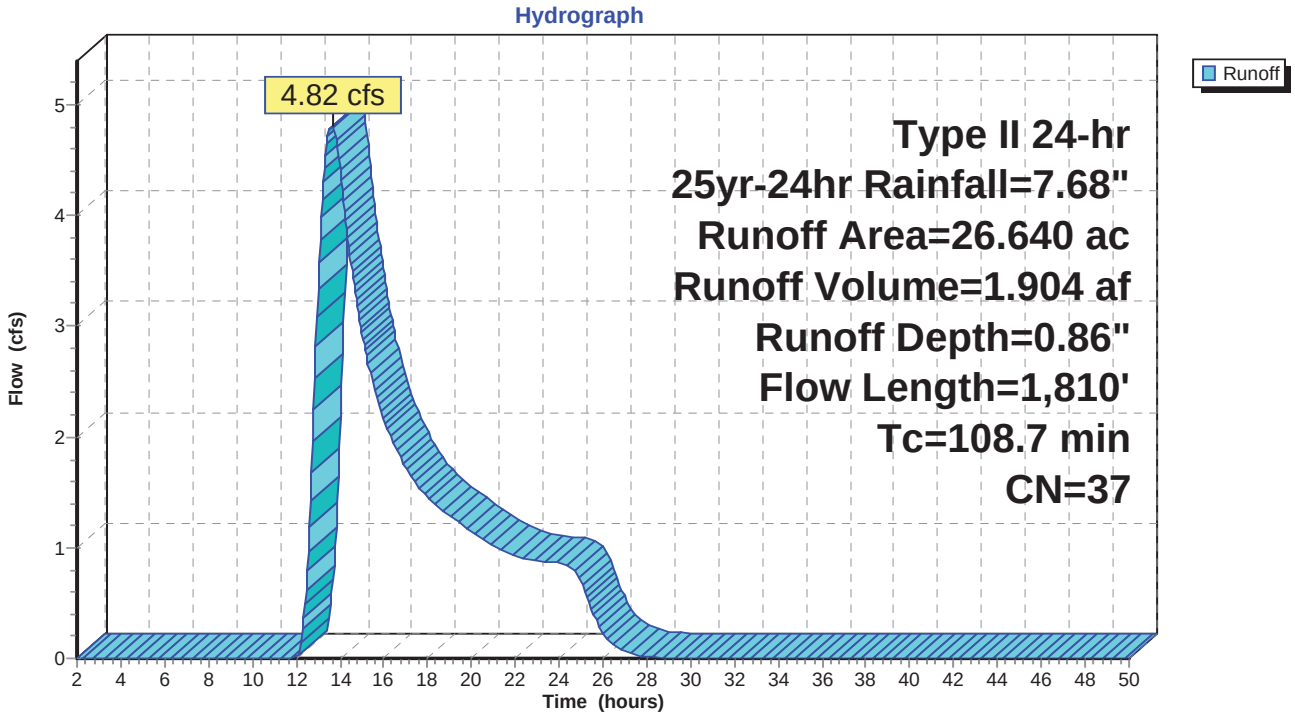
Runoff = 4.82 cfs @ 13.65 hrs, Volume= 1.904 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

Area (ac)	CN	Description
1.320	49	50-75% Grass cover, Fair, HSG A
25.320	36	Woods, Fair, HSG A
26.640	37	Weighted Average
26.640		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
93.1	300	0.0030	0.05		**Sheet Flow, WOODS, LIGHT UNDERBRUSH** Woods: Light underbrush n= 0.400 P2= 4.50"
15.6	1,510	0.0100	1.61		**Shallow Concentrated Flow, UNPAVED AREA** Unpaved Kv= 16.1 fps
108.7	1,810	Total			

Subcatchment 2S: SB-2



Hydrograph for Subcatchment 2S: SB-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.17	0.00	0.00	4.65	0.44	0.00	0.00
2.05	0.17	0.00	0.00	4.70	0.45	0.00	0.00
2.10	0.18	0.00	0.00	4.75	0.45	0.00	0.00
2.15	0.18	0.00	0.00	4.80	0.46	0.00	0.00
2.20	0.19	0.00	0.00	4.85	0.47	0.00	0.00
2.25	0.19	0.00	0.00	4.90	0.47	0.00	0.00
2.30	0.20	0.00	0.00	4.95	0.48	0.00	0.00
2.35	0.20	0.00	0.00	5.00	0.48	0.00	0.00
2.40	0.21	0.00	0.00	5.05	0.49	0.00	0.00
2.45	0.21	0.00	0.00	5.10	0.50	0.00	0.00
2.50	0.22	0.00	0.00	5.15	0.50	0.00	0.00
2.55	0.22	0.00	0.00	5.20	0.51	0.00	0.00
2.60	0.23	0.00	0.00	5.25	0.52	0.00	0.00
2.65	0.23	0.00	0.00	5.30	0.52	0.00	0.00
2.70	0.24	0.00	0.00	5.35	0.53	0.00	0.00
2.75	0.24	0.00	0.00	5.40	0.53	0.00	0.00
2.80	0.25	0.00	0.00	5.45	0.54	0.00	0.00
2.85	0.25	0.00	0.00	5.50	0.55	0.00	0.00
2.90	0.26	0.00	0.00	5.55	0.55	0.00	0.00
2.95	0.26	0.00	0.00	5.60	0.56	0.00	0.00
3.00	0.26	0.00	0.00	5.65	0.57	0.00	0.00
3.05	0.27	0.00	0.00	5.70	0.57	0.00	0.00
3.10	0.27	0.00	0.00	5.75	0.58	0.00	0.00
3.15	0.28	0.00	0.00	5.80	0.59	0.00	0.00
3.20	0.29	0.00	0.00	5.85	0.59	0.00	0.00
3.25	0.29	0.00	0.00	5.90	0.60	0.00	0.00
3.30	0.30	0.00	0.00	5.95	0.61	0.00	0.00
3.35	0.30	0.00	0.00	6.00	0.61	0.00	0.00
3.40	0.31	0.00	0.00	6.05	0.62	0.00	0.00
3.45	0.31	0.00	0.00	6.10	0.63	0.00	0.00
3.50	0.32	0.00	0.00	6.15	0.64	0.00	0.00
3.55	0.32	0.00	0.00	6.20	0.64	0.00	0.00
3.60	0.33	0.00	0.00	6.25	0.65	0.00	0.00
3.65	0.33	0.00	0.00	6.30	0.66	0.00	0.00
3.70	0.34	0.00	0.00	6.35	0.66	0.00	0.00
3.75	0.34	0.00	0.00	6.40	0.67	0.00	0.00
3.80	0.35	0.00	0.00	6.45	0.68	0.00	0.00
3.85	0.35	0.00	0.00	6.50	0.69	0.00	0.00
3.90	0.36	0.00	0.00	6.55	0.69	0.00	0.00
3.95	0.36	0.00	0.00	6.60	0.70	0.00	0.00
4.00	0.37	0.00	0.00	6.65	0.71	0.00	0.00
4.05	0.37	0.00	0.00	6.70	0.71	0.00	0.00
4.10	0.38	0.00	0.00	6.75	0.72	0.00	0.00
4.15	0.38	0.00	0.00	6.80	0.73	0.00	0.00
4.20	0.39	0.00	0.00	6.85	0.74	0.00	0.00
4.25	0.40	0.00	0.00	6.90	0.75	0.00	0.00
4.30	0.40	0.00	0.00	6.95	0.75	0.00	0.00
4.35	0.41	0.00	0.00	7.00	0.76	0.00	0.00
4.40	0.41	0.00	0.00	7.05	0.77	0.00	0.00
4.45	0.42	0.00	0.00	7.10	0.78	0.00	0.00
4.50	0.42	0.00	0.00	7.15	0.78	0.00	0.00
4.55	0.43	0.00	0.00	7.20	0.79	0.00	0.00
4.60	0.44	0.00	0.00	7.25	0.80	0.00	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.81	0.00	0.00	9.95	1.37	0.00	0.00
7.35	0.82	0.00	0.00	10.00	1.39	0.00	0.00
7.40	0.82	0.00	0.00	10.05	1.41	0.00	0.00
7.45	0.83	0.00	0.00	10.10	1.42	0.00	0.00
7.50	0.84	0.00	0.00	10.15	1.44	0.00	0.00
7.55	0.85	0.00	0.00	10.20	1.46	0.00	0.00
7.60	0.86	0.00	0.00	10.25	1.47	0.00	0.00
7.65	0.86	0.00	0.00	10.30	1.49	0.00	0.00
7.70	0.87	0.00	0.00	10.35	1.51	0.00	0.00
7.75	0.88	0.00	0.00	10.40	1.53	0.00	0.00
7.80	0.89	0.00	0.00	10.45	1.55	0.00	0.00
7.85	0.90	0.00	0.00	10.50	1.57	0.00	0.00
7.90	0.90	0.00	0.00	10.55	1.59	0.00	0.00
7.95	0.91	0.00	0.00	10.60	1.61	0.00	0.00
8.00	0.92	0.00	0.00	10.65	1.63	0.00	0.00
8.05	0.93	0.00	0.00	10.70	1.65	0.00	0.00
8.10	0.94	0.00	0.00	10.75	1.68	0.00	0.00
8.15	0.95	0.00	0.00	10.80	1.70	0.00	0.00
8.20	0.96	0.00	0.00	10.85	1.73	0.00	0.00
8.25	0.97	0.00	0.00	10.90	1.75	0.00	0.00
8.30	0.98	0.00	0.00	10.95	1.78	0.00	0.00
8.35	0.99	0.00	0.00	11.00	1.80	0.00	0.00
8.40	1.00	0.00	0.00	11.05	1.83	0.00	0.00
8.45	1.01	0.00	0.00	11.10	1.86	0.00	0.00
8.50	1.02	0.00	0.00	11.15	1.90	0.00	0.00
8.55	1.03	0.00	0.00	11.20	1.93	0.00	0.00
8.60	1.04	0.00	0.00	11.25	1.97	0.00	0.00
8.65	1.05	0.00	0.00	11.30	2.00	0.00	0.00
8.70	1.06	0.00	0.00	11.35	2.04	0.00	0.00
8.75	1.07	0.00	0.00	11.40	2.08	0.00	0.00
8.80	1.08	0.00	0.00	11.45	2.13	0.00	0.00
8.85	1.09	0.00	0.00	11.50	2.17	0.00	0.00
8.90	1.10	0.00	0.00	11.55	2.24	0.00	0.00
8.95	1.12	0.00	0.00	11.60	2.36	0.00	0.00
9.00	1.13	0.00	0.00	11.65	2.52	0.00	0.00
9.05	1.14	0.00	0.00	11.70	2.72	0.00	0.00
9.10	1.15	0.00	0.00	11.75	2.97	0.00	0.00
9.15	1.17	0.00	0.00	11.80	3.31	0.00	0.00
9.20	1.18	0.00	0.00	11.85	3.77	0.01	0.00
9.25	1.19	0.00	0.00	11.90	4.36	0.05	0.00
9.30	1.20	0.00	0.00	11.95	4.87	0.12	0.00
9.35	1.21	0.00	0.00	12.00	5.09	0.15	0.00
9.40	1.23	0.00	0.00	12.05	5.17	0.17	0.00
9.45	1.24	0.00	0.00	12.10	5.24	0.18	0.02
9.50	1.25	0.00	0.00	12.15	5.30	0.19	0.06
9.55	1.26	0.00	0.00	12.20	5.37	0.20	0.10
9.60	1.28	0.00	0.00	12.25	5.42	0.21	0.18
9.65	1.29	0.00	0.00	12.30	5.48	0.22	0.27
9.70	1.30	0.00	0.00	12.35	5.52	0.23	0.37
9.75	1.32	0.00	0.00	12.40	5.57	0.24	0.49
9.80	1.33	0.00	0.00	12.45	5.61	0.25	0.62
9.85	1.35	0.00	0.00	12.50	5.64	0.26	0.79
9.90	1.36	0.00	0.00	12.55	5.68	0.27	0.97

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	5.71	0.27	1.18	15.25	6.61	0.51	2.69
12.65	5.74	0.28	1.42	15.30	6.62	0.51	2.64
12.70	5.77	0.29	1.67	15.35	6.63	0.51	2.60
12.75	5.80	0.30	1.96	15.40	6.64	0.52	2.56
12.80	5.83	0.30	2.25	15.45	6.65	0.52	2.52
12.85	5.85	0.31	2.53	15.50	6.66	0.52	2.48
12.90	5.88	0.31	2.82	15.55	6.67	0.53	2.44
12.95	5.91	0.32	3.08	15.60	6.68	0.53	2.41
13.00	5.93	0.33	3.33	15.65	6.69	0.53	2.37
13.05	5.95	0.33	3.58	15.70	6.70	0.54	2.33
13.10	5.97	0.34	3.78	15.75	6.71	0.54	2.30
13.15	6.00	0.34	3.98	15.80	6.72	0.54	2.27
13.20	6.02	0.35	4.15	15.85	6.73	0.54	2.24
13.25	6.04	0.35	4.30	15.90	6.74	0.55	2.21
13.30	6.06	0.36	4.43	15.95	6.75	0.55	2.18
13.35	6.08	0.36	4.55	16.00	6.76	0.55	2.16
13.40	6.10	0.37	4.66	16.05	6.77	0.55	2.13
13.45	6.12	0.37	4.72	16.10	6.78	0.56	2.11
13.50	6.14	0.38	4.76	16.15	6.78	0.56	2.08
13.55	6.15	0.38	4.79	16.20	6.79	0.56	2.06
13.60	6.17	0.39	4.81	16.25	6.80	0.56	2.03
13.65	6.19	0.39	**4.82**	16.30	6.81	0.57	2.01
13.70	6.21	0.40	4.80	16.35	6.82	0.57	1.99
13.75	6.22	0.40	4.78	16.40	6.83	0.57	1.96
13.80	6.24	0.40	4.74	16.45	6.84	0.58	1.94
13.85	6.25	0.41	4.68	16.50	6.84	0.58	1.92
13.90	6.27	0.41	4.61	16.55	6.85	0.58	1.90
13.95	6.28	0.42	4.51	16.60	6.86	0.58	1.88
14.00	6.30	0.42	4.41	16.65	6.87	0.59	1.86
14.05	6.31	0.42	4.32	16.70	6.88	0.59	1.84
14.10	6.33	0.43	4.22	16.75	6.89	0.59	1.82
14.15	6.34	0.43	4.13	16.80	6.89	0.59	1.80
14.20	6.35	0.44	4.04	16.85	6.90	0.60	1.78
14.25	6.37	0.44	3.96	16.90	6.91	0.60	1.76
14.30	6.38	0.44	3.88	16.95	6.92	0.60	1.74
14.35	6.39	0.45	3.80	17.00	6.93	0.60	1.72
14.40	6.41	0.45	3.72	17.05	6.93	0.61	1.71
14.45	6.42	0.45	3.64	17.10	6.94	0.61	1.69
14.50	6.43	0.46	3.57	17.15	6.95	0.61	1.67
14.55	6.45	0.46	3.50	17.20	6.96	0.61	1.66
14.60	6.46	0.46	3.43	17.25	6.96	0.62	1.64
14.65	6.47	0.47	3.37	17.30	6.97	0.62	1.63
14.70	6.48	0.47	3.30	17.35	6.98	0.62	1.61
14.75	6.50	0.47	3.24	17.40	6.99	0.62	1.60
14.80	6.51	0.48	3.17	17.45	6.99	0.62	1.58
14.85	6.52	0.48	3.11	17.50	7.00	0.63	1.57
14.90	6.53	0.48	3.05	17.55	7.01	0.63	1.56
14.95	6.54	0.49	2.99	17.60	7.02	0.63	1.54
15.00	6.55	0.49	2.94	17.65	7.02	0.63	1.53
15.05	6.57	0.49	2.89	17.70	7.03	0.64	1.52
15.10	6.58	0.50	2.83	17.75	7.04	0.64	1.51
15.15	6.59	0.50	2.78	17.80	7.05	0.64	1.50
15.20	6.60	0.50	2.73	17.85	7.05	0.64	1.49

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	7.06	0.65	1.48	20.55	7.37	0.75	1.08
17.95	7.07	0.65	1.47	20.60	7.37	0.75	1.07
18.00	7.07	0.65	1.46	20.65	7.38	0.75	1.06
18.05	7.08	0.65	1.44	20.70	7.38	0.75	1.05
18.10	7.09	0.65	1.43	20.75	7.39	0.75	1.05
18.15	7.09	0.66	1.42	20.80	7.39	0.76	1.04
18.20	7.10	0.66	1.42	20.85	7.39	0.76	1.03
18.25	7.11	0.66	1.41	20.90	7.40	0.76	1.03
18.30	7.11	0.66	1.40	20.95	7.40	0.76	1.02
18.35	7.12	0.67	1.39	21.00	7.41	0.76	1.01
18.40	7.13	0.67	1.38	21.05	7.41	0.76	1.01
18.45	7.13	0.67	1.38	21.10	7.42	0.77	1.00
18.50	7.14	0.67	1.37	21.15	7.42	0.77	1.00
18.55	7.15	0.67	1.36	21.20	7.43	0.77	0.99
18.60	7.15	0.68	1.35	21.25	7.43	0.77	0.99
18.65	7.16	0.68	1.34	21.30	7.44	0.77	0.98
18.70	7.17	0.68	1.34	21.35	7.44	0.77	0.98
18.75	7.17	0.68	1.33	21.40	7.45	0.78	0.97
18.80	7.18	0.68	1.32	21.45	7.45	0.78	0.97
18.85	7.18	0.69	1.31	21.50	7.46	0.78	0.96
18.90	7.19	0.69	1.31	21.55	7.46	0.78	0.96
18.95	7.20	0.69	1.30	21.60	7.47	0.78	0.95
19.00	7.20	0.69	1.29	21.65	7.47	0.78	0.95
19.05	7.21	0.69	1.29	21.70	7.48	0.79	0.95
19.10	7.21	0.70	1.28	21.75	7.48	0.79	0.94
19.15	7.22	0.70	1.27	21.80	7.48	0.79	0.94
19.20	7.23	0.70	1.27	21.85	7.49	0.79	0.94
19.25	7.23	0.70	1.26	21.90	7.49	0.79	0.93
19.30	7.24	0.70	1.25	21.95	7.50	0.79	0.93
19.35	7.24	0.71	1.24	22.00	7.50	0.79	0.93
19.40	7.25	0.71	1.24	22.05	7.51	0.80	0.92
19.45	7.25	0.71	1.23	22.10	7.51	0.80	0.92
19.50	7.26	0.71	1.22	22.15	7.52	0.80	0.92
19.55	7.26	0.71	1.22	22.20	7.52	0.80	0.92
19.60	7.27	0.71	1.21	22.25	7.53	0.80	0.91
19.65	7.28	0.72	1.20	22.30	7.53	0.80	0.91
19.70	7.28	0.72	1.20	22.35	7.54	0.81	0.91
19.75	7.29	0.72	1.19	22.40	7.54	0.81	0.91
19.80	7.29	0.72	1.18	22.45	7.54	0.81	0.91
19.85	7.30	0.72	1.17	22.50	7.55	0.81	0.90
19.90	7.30	0.73	1.17	22.55	7.55	0.81	0.90
19.95	7.31	0.73	1.16	22.60	7.56	0.81	0.90
20.00	7.31	0.73	1.15	22.65	7.56	0.82	0.90
20.05	7.32	0.73	1.15	22.70	7.57	0.82	0.90
20.10	7.32	0.73	1.14	22.75	7.57	0.82	0.90
20.15	7.33	0.73	1.13	22.80	7.58	0.82	0.89
20.20	7.33	0.74	1.13	22.85	7.58	0.82	0.89
20.25	7.34	0.74	1.12	22.90	7.58	0.82	0.89
20.30	7.34	0.74	1.11	22.95	7.59	0.83	0.89
20.35	7.35	0.74	1.10	23.00	7.59	0.83	0.89
20.40	7.35	0.74	1.10	23.05	7.60	0.83	0.89
20.45	7.36	0.74	1.09	23.10	7.60	0.83	0.88
20.50	7.36	0.75	1.08	23.15	7.61	0.83	0.88

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	7.61	0.83	0.88	25.85	7.68	0.86	0.28
23.25	7.62	0.83	0.88	25.90	7.68	0.86	0.26
23.30	7.62	0.84	0.88	25.95	7.68	0.86	0.24
23.35	7.62	0.84	0.88	26.00	7.68	0.86	0.23
23.40	7.63	0.84	0.88	26.05	7.68	0.86	0.21
23.45	7.63	0.84	0.87	26.10	7.68	0.86	0.20
23.50	7.64	0.84	0.87	26.15	7.68	0.86	0.18
23.55	7.64	0.84	0.87	26.20	7.68	0.86	0.17
23.60	7.65	0.85	0.87	26.25	7.68	0.86	0.16
23.65	7.65	0.85	0.87	26.30	7.68	0.86	0.15
23.70	7.65	0.85	0.87	26.35	7.68	0.86	0.14
23.75	7.66	0.85	0.87	26.40	7.68	0.86	0.13
23.80	7.66	0.85	0.87	26.45	7.68	0.86	0.12
23.85	7.67	0.85	0.86	26.50	7.68	0.86	0.11
23.90	7.67	0.85	0.86	26.55	7.68	0.86	0.11
23.95	7.68	0.86	0.86	26.60	7.68	0.86	0.10
24.00	**7.68**	**0.86**	0.86	26.65	7.68	0.86	0.09
24.05	7.68	0.86	0.86	26.70	7.68	0.86	0.09
24.10	7.68	0.86	0.86	26.75	7.68	0.86	0.08
24.15	7.68	0.86	0.86	26.80	7.68	0.86	0.08
24.20	7.68	0.86	0.85	26.85	7.68	0.86	0.07
24.25	7.68	0.86	0.85	26.90	7.68	0.86	0.07
24.30	7.68	0.86	0.85	26.95	7.68	0.86	0.06
24.35	7.68	0.86	0.85	27.00	7.68	0.86	0.06
24.40	7.68	0.86	0.84	27.05	7.68	0.86	0.05
24.45	7.68	0.86	0.84	27.10	7.68	0.86	0.05
24.50	7.68	0.86	0.83	27.15	7.68	0.86	0.05
24.55	7.68	0.86	0.82	27.20	7.68	0.86	0.04
24.60	7.68	0.86	0.81	27.25	7.68	0.86	0.04
24.65	7.68	0.86	0.80	27.30	7.68	0.86	0.04
24.70	7.68	0.86	0.79	27.35	7.68	0.86	0.04
24.75	7.68	0.86	0.78	27.40	7.68	0.86	0.03
24.80	7.68	0.86	0.76	27.45	7.68	0.86	0.03
24.85	7.68	0.86	0.75	27.50	7.68	0.86	0.03
24.90	7.68	0.86	0.73	27.55	7.68	0.86	0.03
24.95	7.68	0.86	0.71	27.60	7.68	0.86	0.03
25.00	7.68	0.86	0.69	27.65	7.68	0.86	0.02
25.05	7.68	0.86	0.66	27.70	7.68	0.86	0.02
25.10	7.68	0.86	0.64	27.75	7.68	0.86	0.02
25.15	7.68	0.86	0.62	27.80	7.68	0.86	0.02
25.20	7.68	0.86	0.59	27.85	7.68	0.86	0.02
25.25	7.68	0.86	0.57	27.90	7.68	0.86	0.02
25.30	7.68	0.86	0.54	27.95	7.68	0.86	0.02
25.35	7.68	0.86	0.51	28.00	7.68	0.86	0.01
25.40	7.68	0.86	0.49	28.05	7.68	0.86	0.01
25.45	7.68	0.86	0.46	28.10	7.68	0.86	0.01
25.50	7.68	0.86	0.44	28.15	7.68	0.86	0.01
25.55	7.68	0.86	0.41	28.20	7.68	0.86	0.01
25.60	7.68	0.86	0.39	28.25	7.68	0.86	0.01
25.65	7.68	0.86	0.36	28.30	7.68	0.86	0.01
25.70	7.68	0.86	0.34	28.35	7.68	0.86	0.01
25.75	7.68	0.86	0.32	28.40	7.68	0.86	0.01
25.80	7.68	0.86	0.30	28.45	7.68	0.86	0.01

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	7.68	0.86	0.01	31.15	7.68	0.86	0.00
28.55	7.68	0.86	0.01	31.20	7.68	0.86	0.00
28.60	7.68	0.86	0.01	31.25	7.68	0.86	0.00
28.65	7.68	0.86	0.01	31.30	7.68	0.86	0.00
28.70	7.68	0.86	0.00	31.35	7.68	0.86	0.00
28.75	7.68	0.86	0.00	31.40	7.68	0.86	0.00
28.80	7.68	0.86	0.00	31.45	7.68	0.86	0.00
28.85	7.68	0.86	0.00	31.50	7.68	0.86	0.00
28.90	7.68	0.86	0.00	31.55	7.68	0.86	0.00
28.95	7.68	0.86	0.00	31.60	7.68	0.86	0.00
29.00	7.68	0.86	0.00	31.65	7.68	0.86	0.00
29.05	7.68	0.86	0.00	31.70	7.68	0.86	0.00
29.10	7.68	0.86	0.00	31.75	7.68	0.86	0.00
29.15	7.68	0.86	0.00	31.80	7.68	0.86	0.00
29.20	7.68	0.86	0.00	31.85	7.68	0.86	0.00
29.25	7.68	0.86	0.00	31.90	7.68	0.86	0.00
29.30	7.68	0.86	0.00	31.95	7.68	0.86	0.00
29.35	7.68	0.86	0.00	32.00	7.68	0.86	0.00
29.40	7.68	0.86	0.00	32.05	7.68	0.86	0.00
29.45	7.68	0.86	0.00	32.10	7.68	0.86	0.00
29.50	7.68	0.86	0.00	32.15	7.68	0.86	0.00
29.55	7.68	0.86	0.00	32.20	7.68	0.86	0.00
29.60	7.68	0.86	0.00	32.25	7.68	0.86	0.00
29.65	7.68	0.86	0.00	32.30	7.68	0.86	0.00
29.70	7.68	0.86	0.00	32.35	7.68	0.86	0.00
29.75	7.68	0.86	0.00	32.40	7.68	0.86	0.00
29.80	7.68	0.86	0.00	32.45	7.68	0.86	0.00
29.85	7.68	0.86	0.00	32.50	7.68	0.86	0.00
29.90	7.68	0.86	0.00	32.55	7.68	0.86	0.00
29.95	7.68	0.86	0.00	32.60	7.68	0.86	0.00
30.00	7.68	0.86	0.00	32.65	7.68	0.86	0.00
30.05	7.68	0.86	0.00	32.70	7.68	0.86	0.00
30.10	7.68	0.86	0.00	32.75	7.68	0.86	0.00
30.15	7.68	0.86	0.00	32.80	7.68	0.86	0.00
30.20	7.68	0.86	0.00	32.85	7.68	0.86	0.00
30.25	7.68	0.86	0.00	32.90	7.68	0.86	0.00
30.30	7.68	0.86	0.00	32.95	7.68	0.86	0.00
30.35	7.68	0.86	0.00	33.00	7.68	0.86	0.00
30.40	7.68	0.86	0.00	33.05	7.68	0.86	0.00
30.45	7.68	0.86	0.00	33.10	7.68	0.86	0.00
30.50	7.68	0.86	0.00	33.15	7.68	0.86	0.00
30.55	7.68	0.86	0.00	33.20	7.68	0.86	0.00
30.60	7.68	0.86	0.00	33.25	7.68	0.86	0.00
30.65	7.68	0.86	0.00	33.30	7.68	0.86	0.00
30.70	7.68	0.86	0.00	33.35	7.68	0.86	0.00
30.75	7.68	0.86	0.00	33.40	7.68	0.86	0.00
30.80	7.68	0.86	0.00	33.45	7.68	0.86	0.00
30.85	7.68	0.86	0.00	33.50	7.68	0.86	0.00
30.90	7.68	0.86	0.00	33.55	7.68	0.86	0.00
30.95	7.68	0.86	0.00	33.60	7.68	0.86	0.00
31.00	7.68	0.86	0.00	33.65	7.68	0.86	0.00
31.05	7.68	0.86	0.00	33.70	7.68	0.86	0.00
31.10	7.68	0.86	0.00	33.75	7.68	0.86	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	7.68	0.86	0.00	36.45	7.68	0.86	0.00
33.85	7.68	0.86	0.00	36.50	7.68	0.86	0.00
33.90	7.68	0.86	0.00	36.55	7.68	0.86	0.00
33.95	7.68	0.86	0.00	36.60	7.68	0.86	0.00
34.00	7.68	0.86	0.00	36.65	7.68	0.86	0.00
34.05	7.68	0.86	0.00	36.70	7.68	0.86	0.00
34.10	7.68	0.86	0.00	36.75	7.68	0.86	0.00
34.15	7.68	0.86	0.00	36.80	7.68	0.86	0.00
34.20	7.68	0.86	0.00	36.85	7.68	0.86	0.00
34.25	7.68	0.86	0.00	36.90	7.68	0.86	0.00
34.30	7.68	0.86	0.00	36.95	7.68	0.86	0.00
34.35	7.68	0.86	0.00	37.00	7.68	0.86	0.00
34.40	7.68	0.86	0.00	37.05	7.68	0.86	0.00
34.45	7.68	0.86	0.00	37.10	7.68	0.86	0.00
34.50	7.68	0.86	0.00	37.15	7.68	0.86	0.00
34.55	7.68	0.86	0.00	37.20	7.68	0.86	0.00
34.60	7.68	0.86	0.00	37.25	7.68	0.86	0.00
34.65	7.68	0.86	0.00	37.30	7.68	0.86	0.00
34.70	7.68	0.86	0.00	37.35	7.68	0.86	0.00
34.75	7.68	0.86	0.00	37.40	7.68	0.86	0.00
34.80	7.68	0.86	0.00	37.45	7.68	0.86	0.00
34.85	7.68	0.86	0.00	37.50	7.68	0.86	0.00
34.90	7.68	0.86	0.00	37.55	7.68	0.86	0.00
34.95	7.68	0.86	0.00	37.60	7.68	0.86	0.00
35.00	7.68	0.86	0.00	37.65	7.68	0.86	0.00
35.05	7.68	0.86	0.00	37.70	7.68	0.86	0.00
35.10	7.68	0.86	0.00	37.75	7.68	0.86	0.00
35.15	7.68	0.86	0.00	37.80	7.68	0.86	0.00
35.20	7.68	0.86	0.00	37.85	7.68	0.86	0.00
35.25	7.68	0.86	0.00	37.90	7.68	0.86	0.00
35.30	7.68	0.86	0.00	37.95	7.68	0.86	0.00
35.35	7.68	0.86	0.00	38.00	7.68	0.86	0.00
35.40	7.68	0.86	0.00	38.05	7.68	0.86	0.00
35.45	7.68	0.86	0.00	38.10	7.68	0.86	0.00
35.50	7.68	0.86	0.00	38.15	7.68	0.86	0.00
35.55	7.68	0.86	0.00	38.20	7.68	0.86	0.00
35.60	7.68	0.86	0.00	38.25	7.68	0.86	0.00
35.65	7.68	0.86	0.00	38.30	7.68	0.86	0.00
35.70	7.68	0.86	0.00	38.35	7.68	0.86	0.00
35.75	7.68	0.86	0.00	38.40	7.68	0.86	0.00
35.80	7.68	0.86	0.00	38.45	7.68	0.86	0.00
35.85	7.68	0.86	0.00	38.50	7.68	0.86	0.00
35.90	7.68	0.86	0.00	38.55	7.68	0.86	0.00
35.95	7.68	0.86	0.00	38.60	7.68	0.86	0.00
36.00	7.68	0.86	0.00	38.65	7.68	0.86	0.00
36.05	7.68	0.86	0.00	38.70	7.68	0.86	0.00
36.10	7.68	0.86	0.00	38.75	7.68	0.86	0.00
36.15	7.68	0.86	0.00	38.80	7.68	0.86	0.00
36.20	7.68	0.86	0.00	38.85	7.68	0.86	0.00
36.25	7.68	0.86	0.00	38.90	7.68	0.86	0.00
36.30	7.68	0.86	0.00	38.95	7.68	0.86	0.00
36.35	7.68	0.86	0.00	39.00	7.68	0.86	0.00
36.40	7.68	0.86	0.00	39.05	7.68	0.86	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	7.68	0.86	0.00	41.75	7.68	0.86	0.00
39.15	7.68	0.86	0.00	41.80	7.68	0.86	0.00
39.20	7.68	0.86	0.00	41.85	7.68	0.86	0.00
39.25	7.68	0.86	0.00	41.90	7.68	0.86	0.00
39.30	7.68	0.86	0.00	41.95	7.68	0.86	0.00
39.35	7.68	0.86	0.00	42.00	7.68	0.86	0.00
39.40	7.68	0.86	0.00	42.05	7.68	0.86	0.00
39.45	7.68	0.86	0.00	42.10	7.68	0.86	0.00
39.50	7.68	0.86	0.00	42.15	7.68	0.86	0.00
39.55	7.68	0.86	0.00	42.20	7.68	0.86	0.00
39.60	7.68	0.86	0.00	42.25	7.68	0.86	0.00
39.65	7.68	0.86	0.00	42.30	7.68	0.86	0.00
39.70	7.68	0.86	0.00	42.35	7.68	0.86	0.00
39.75	7.68	0.86	0.00	42.40	7.68	0.86	0.00
39.80	7.68	0.86	0.00	42.45	7.68	0.86	0.00
39.85	7.68	0.86	0.00	42.50	7.68	0.86	0.00
39.90	7.68	0.86	0.00	42.55	7.68	0.86	0.00
39.95	7.68	0.86	0.00	42.60	7.68	0.86	0.00
40.00	7.68	0.86	0.00	42.65	7.68	0.86	0.00
40.05	7.68	0.86	0.00	42.70	7.68	0.86	0.00
40.10	7.68	0.86	0.00	42.75	7.68	0.86	0.00
40.15	7.68	0.86	0.00	42.80	7.68	0.86	0.00
40.20	7.68	0.86	0.00	42.85	7.68	0.86	0.00
40.25	7.68	0.86	0.00	42.90	7.68	0.86	0.00
40.30	7.68	0.86	0.00	42.95	7.68	0.86	0.00
40.35	7.68	0.86	0.00	43.00	7.68	0.86	0.00
40.40	7.68	0.86	0.00	43.05	7.68	0.86	0.00
40.45	7.68	0.86	0.00	43.10	7.68	0.86	0.00
40.50	7.68	0.86	0.00	43.15	7.68	0.86	0.00
40.55	7.68	0.86	0.00	43.20	7.68	0.86	0.00
40.60	7.68	0.86	0.00	43.25	7.68	0.86	0.00
40.65	7.68	0.86	0.00	43.30	7.68	0.86	0.00
40.70	7.68	0.86	0.00	43.35	7.68	0.86	0.00
40.75	7.68	0.86	0.00	43.40	7.68	0.86	0.00
40.80	7.68	0.86	0.00	43.45	7.68	0.86	0.00
40.85	7.68	0.86	0.00	43.50	7.68	0.86	0.00
40.90	7.68	0.86	0.00	43.55	7.68	0.86	0.00
40.95	7.68	0.86	0.00	43.60	7.68	0.86	0.00
41.00	7.68	0.86	0.00	43.65	7.68	0.86	0.00
41.05	7.68	0.86	0.00	43.70	7.68	0.86	0.00
41.10	7.68	0.86	0.00	43.75	7.68	0.86	0.00
41.15	7.68	0.86	0.00	43.80	7.68	0.86	0.00
41.20	7.68	0.86	0.00	43.85	7.68	0.86	0.00
41.25	7.68	0.86	0.00	43.90	7.68	0.86	0.00
41.30	7.68	0.86	0.00	43.95	7.68	0.86	0.00
41.35	7.68	0.86	0.00	44.00	7.68	0.86	0.00
41.40	7.68	0.86	0.00	44.05	7.68	0.86	0.00
41.45	7.68	0.86	0.00	44.10	7.68	0.86	0.00
41.50	7.68	0.86	0.00	44.15	7.68	0.86	0.00
41.55	7.68	0.86	0.00	44.20	7.68	0.86	0.00
41.60	7.68	0.86	0.00	44.25	7.68	0.86	0.00
41.65	7.68	0.86	0.00	44.30	7.68	0.86	0.00
41.70	7.68	0.86	0.00	44.35	7.68	0.86	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	7.68	0.86	0.00	47.05	7.68	0.86	0.00
44.45	7.68	0.86	0.00	47.10	7.68	0.86	0.00
44.50	7.68	0.86	0.00	47.15	7.68	0.86	0.00
44.55	7.68	0.86	0.00	47.20	7.68	0.86	0.00
44.60	7.68	0.86	0.00	47.25	7.68	0.86	0.00
44.65	7.68	0.86	0.00	47.30	7.68	0.86	0.00
44.70	7.68	0.86	0.00	47.35	7.68	0.86	0.00
44.75	7.68	0.86	0.00	47.40	7.68	0.86	0.00
44.80	7.68	0.86	0.00	47.45	7.68	0.86	0.00
44.85	7.68	0.86	0.00	47.50	7.68	0.86	0.00
44.90	7.68	0.86	0.00	47.55	7.68	0.86	0.00
44.95	7.68	0.86	0.00	47.60	7.68	0.86	0.00
45.00	7.68	0.86	0.00	47.65	7.68	0.86	0.00
45.05	7.68	0.86	0.00	47.70	7.68	0.86	0.00
45.10	7.68	0.86	0.00	47.75	7.68	0.86	0.00
45.15	7.68	0.86	0.00	47.80	7.68	0.86	0.00
45.20	7.68	0.86	0.00	47.85	7.68	0.86	0.00
45.25	7.68	0.86	0.00	47.90	7.68	0.86	0.00
45.30	7.68	0.86	0.00	47.95	7.68	0.86	0.00
45.35	7.68	0.86	0.00	48.00	7.68	0.86	0.00
45.40	7.68	0.86	0.00	48.05	7.68	0.86	0.00
45.45	7.68	0.86	0.00	48.10	7.68	0.86	0.00
45.50	7.68	0.86	0.00	48.15	7.68	0.86	0.00
45.55	7.68	0.86	0.00	48.20	7.68	0.86	0.00
45.60	7.68	0.86	0.00	48.25	7.68	0.86	0.00
45.65	7.68	0.86	0.00	48.30	7.68	0.86	0.00
45.70	7.68	0.86	0.00	48.35	7.68	0.86	0.00
45.75	7.68	0.86	0.00	48.40	7.68	0.86	0.00
45.80	7.68	0.86	0.00	48.45	7.68	0.86	0.00
45.85	7.68	0.86	0.00	48.50	7.68	0.86	0.00
45.90	7.68	0.86	0.00	48.55	7.68	0.86	0.00
45.95	7.68	0.86	0.00	48.60	7.68	0.86	0.00
46.00	7.68	0.86	0.00	48.65	7.68	0.86	0.00
46.05	7.68	0.86	0.00	48.70	7.68	0.86	0.00
46.10	7.68	0.86	0.00	48.75	7.68	0.86	0.00
46.15	7.68	0.86	0.00	48.80	7.68	0.86	0.00
46.20	7.68	0.86	0.00	48.85	7.68	0.86	0.00
46.25	7.68	0.86	0.00	48.90	7.68	0.86	0.00
46.30	7.68	0.86	0.00	48.95	7.68	0.86	0.00
46.35	7.68	0.86	0.00	49.00	7.68	0.86	0.00
46.40	7.68	0.86	0.00	49.05	7.68	0.86	0.00
46.45	7.68	0.86	0.00	49.10	7.68	0.86	0.00
46.50	7.68	0.86	0.00	49.15	7.68	0.86	0.00
46.55	7.68	0.86	0.00	49.20	7.68	0.86	0.00
46.60	7.68	0.86	0.00	49.25	7.68	0.86	0.00
46.65	7.68	0.86	0.00	49.30	7.68	0.86	0.00
46.70	7.68	0.86	0.00	49.35	7.68	0.86	0.00
46.75	7.68	0.86	0.00	49.40	7.68	0.86	0.00
46.80	7.68	0.86	0.00	49.45	7.68	0.86	0.00
46.85	7.68	0.86	0.00	49.50	7.68	0.86	0.00
46.90	7.68	0.86	0.00	49.55	7.68	0.86	0.00
46.95	7.68	0.86	0.00	49.60	7.68	0.86	0.00
47.00	7.68	0.86	0.00	49.65	7.68	0.86	0.00

Hydrograph for Subcatchment 2S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	7.68	0.86	0.00
49.75	7.68	0.86	0.00
49.80	7.68	0.86	0.00
49.85	7.68	0.86	0.00
49.90	7.68	0.86	0.00
49.95	7.68	0.86	0.00
50.00	7.68	0.86	0.00

Summary for Subcatchment 3S: SB-3

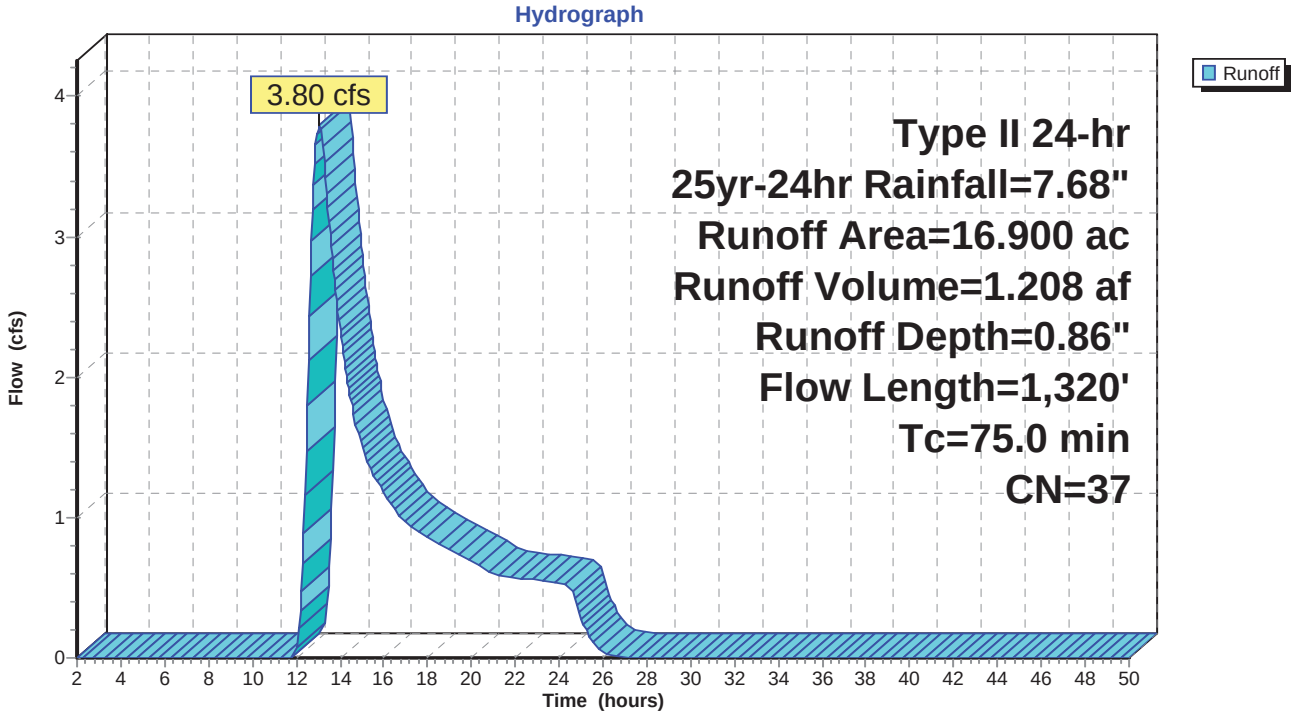
Runoff = 3.80 cfs @ 13.08 hrs, Volume= 1.208 af, Depth= 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
*	0.260	98	Impervious Area, HSG A
	16.640	36	Woods, Fair, HSG A
	16.900	37	Weighted Average
	16.640		98.46% Pervious Area
	0.260		1.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.4	300	0.0070	0.08		**Sheet Flow, Woods, Light Underbrush** Woods: Light underbrush n= 0.400 P2= 4.50"
8.6	1,020	0.0150	1.97		**Shallow Concentrated Flow, UNPAVED AREA** Unpaved Kv= 16.1 fps
75.0	1,320	Total			

Subcatchment 3S: SB-3



Hydrograph for Subcatchment 3S: SB-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.17	0.00	0.00	4.65	0.44	0.00	0.00
2.05	0.17	0.00	0.00	4.70	0.45	0.00	0.00
2.10	0.18	0.00	0.00	4.75	0.45	0.00	0.00
2.15	0.18	0.00	0.00	4.80	0.46	0.00	0.00
2.20	0.19	0.00	0.00	4.85	0.47	0.00	0.00
2.25	0.19	0.00	0.00	4.90	0.47	0.00	0.00
2.30	0.20	0.00	0.00	4.95	0.48	0.00	0.00
2.35	0.20	0.00	0.00	5.00	0.48	0.00	0.00
2.40	0.21	0.00	0.00	5.05	0.49	0.00	0.00
2.45	0.21	0.00	0.00	5.10	0.50	0.00	0.00
2.50	0.22	0.00	0.00	5.15	0.50	0.00	0.00
2.55	0.22	0.00	0.00	5.20	0.51	0.00	0.00
2.60	0.23	0.00	0.00	5.25	0.52	0.00	0.00
2.65	0.23	0.00	0.00	5.30	0.52	0.00	0.00
2.70	0.24	0.00	0.00	5.35	0.53	0.00	0.00
2.75	0.24	0.00	0.00	5.40	0.53	0.00	0.00
2.80	0.25	0.00	0.00	5.45	0.54	0.00	0.00
2.85	0.25	0.00	0.00	5.50	0.55	0.00	0.00
2.90	0.26	0.00	0.00	5.55	0.55	0.00	0.00
2.95	0.26	0.00	0.00	5.60	0.56	0.00	0.00
3.00	0.26	0.00	0.00	5.65	0.57	0.00	0.00
3.05	0.27	0.00	0.00	5.70	0.57	0.00	0.00
3.10	0.27	0.00	0.00	5.75	0.58	0.00	0.00
3.15	0.28	0.00	0.00	5.80	0.59	0.00	0.00
3.20	0.29	0.00	0.00	5.85	0.59	0.00	0.00
3.25	0.29	0.00	0.00	5.90	0.60	0.00	0.00
3.30	0.30	0.00	0.00	5.95	0.61	0.00	0.00
3.35	0.30	0.00	0.00	6.00	0.61	0.00	0.00
3.40	0.31	0.00	0.00	6.05	0.62	0.00	0.00
3.45	0.31	0.00	0.00	6.10	0.63	0.00	0.00
3.50	0.32	0.00	0.00	6.15	0.64	0.00	0.00
3.55	0.32	0.00	0.00	6.20	0.64	0.00	0.00
3.60	0.33	0.00	0.00	6.25	0.65	0.00	0.00
3.65	0.33	0.00	0.00	6.30	0.66	0.00	0.00
3.70	0.34	0.00	0.00	6.35	0.66	0.00	0.00
3.75	0.34	0.00	0.00	6.40	0.67	0.00	0.00
3.80	0.35	0.00	0.00	6.45	0.68	0.00	0.00
3.85	0.35	0.00	0.00	6.50	0.69	0.00	0.00
3.90	0.36	0.00	0.00	6.55	0.69	0.00	0.00
3.95	0.36	0.00	0.00	6.60	0.70	0.00	0.00
4.00	0.37	0.00	0.00	6.65	0.71	0.00	0.00
4.05	0.37	0.00	0.00	6.70	0.71	0.00	0.00
4.10	0.38	0.00	0.00	6.75	0.72	0.00	0.00
4.15	0.38	0.00	0.00	6.80	0.73	0.00	0.00
4.20	0.39	0.00	0.00	6.85	0.74	0.00	0.00
4.25	0.40	0.00	0.00	6.90	0.75	0.00	0.00
4.30	0.40	0.00	0.00	6.95	0.75	0.00	0.00
4.35	0.41	0.00	0.00	7.00	0.76	0.00	0.00
4.40	0.41	0.00	0.00	7.05	0.77	0.00	0.00
4.45	0.42	0.00	0.00	7.10	0.78	0.00	0.00
4.50	0.42	0.00	0.00	7.15	0.78	0.00	0.00
4.55	0.43	0.00	0.00	7.20	0.79	0.00	0.00
4.60	0.44	0.00	0.00	7.25	0.80	0.00	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.81	0.00	0.00	9.95	1.37	0.00	0.00
7.35	0.82	0.00	0.00	10.00	1.39	0.00	0.00
7.40	0.82	0.00	0.00	10.05	1.41	0.00	0.00
7.45	0.83	0.00	0.00	10.10	1.42	0.00	0.00
7.50	0.84	0.00	0.00	10.15	1.44	0.00	0.00
7.55	0.85	0.00	0.00	10.20	1.46	0.00	0.00
7.60	0.86	0.00	0.00	10.25	1.47	0.00	0.00
7.65	0.86	0.00	0.00	10.30	1.49	0.00	0.00
7.70	0.87	0.00	0.00	10.35	1.51	0.00	0.00
7.75	0.88	0.00	0.00	10.40	1.53	0.00	0.00
7.80	0.89	0.00	0.00	10.45	1.55	0.00	0.00
7.85	0.90	0.00	0.00	10.50	1.57	0.00	0.00
7.90	0.90	0.00	0.00	10.55	1.59	0.00	0.00
7.95	0.91	0.00	0.00	10.60	1.61	0.00	0.00
8.00	0.92	0.00	0.00	10.65	1.63	0.00	0.00
8.05	0.93	0.00	0.00	10.70	1.65	0.00	0.00
8.10	0.94	0.00	0.00	10.75	1.68	0.00	0.00
8.15	0.95	0.00	0.00	10.80	1.70	0.00	0.00
8.20	0.96	0.00	0.00	10.85	1.73	0.00	0.00
8.25	0.97	0.00	0.00	10.90	1.75	0.00	0.00
8.30	0.98	0.00	0.00	10.95	1.78	0.00	0.00
8.35	0.99	0.00	0.00	11.00	1.80	0.00	0.00
8.40	1.00	0.00	0.00	11.05	1.83	0.00	0.00
8.45	1.01	0.00	0.00	11.10	1.86	0.00	0.00
8.50	1.02	0.00	0.00	11.15	1.90	0.00	0.00
8.55	1.03	0.00	0.00	11.20	1.93	0.00	0.00
8.60	1.04	0.00	0.00	11.25	1.97	0.00	0.00
8.65	1.05	0.00	0.00	11.30	2.00	0.00	0.00
8.70	1.06	0.00	0.00	11.35	2.04	0.00	0.00
8.75	1.07	0.00	0.00	11.40	2.08	0.00	0.00
8.80	1.08	0.00	0.00	11.45	2.13	0.00	0.00
8.85	1.09	0.00	0.00	11.50	2.17	0.00	0.00
8.90	1.10	0.00	0.00	11.55	2.24	0.00	0.00
8.95	1.12	0.00	0.00	11.60	2.36	0.00	0.00
9.00	1.13	0.00	0.00	11.65	2.52	0.00	0.00
9.05	1.14	0.00	0.00	11.70	2.72	0.00	0.00
9.10	1.15	0.00	0.00	11.75	2.97	0.00	0.00
9.15	1.17	0.00	0.00	11.80	3.31	0.00	0.00
9.20	1.18	0.00	0.00	11.85	3.77	0.01	0.00
9.25	1.19	0.00	0.00	11.90	4.36	0.05	0.00
9.30	1.20	0.00	0.00	11.95	4.87	0.12	0.00
9.35	1.21	0.00	0.00	12.00	5.09	0.15	0.01
9.40	1.23	0.00	0.00	12.05	5.17	0.17	0.05
9.45	1.24	0.00	0.00	12.10	5.24	0.18	0.11
9.50	1.25	0.00	0.00	12.15	5.30	0.19	0.21
9.55	1.26	0.00	0.00	12.20	5.37	0.20	0.33
9.60	1.28	0.00	0.00	12.25	5.42	0.21	0.48
9.65	1.29	0.00	0.00	12.30	5.48	0.22	0.67
9.70	1.30	0.00	0.00	12.35	5.52	0.23	0.89
9.75	1.32	0.00	0.00	12.40	5.57	0.24	1.16
9.80	1.33	0.00	0.00	12.45	5.61	0.25	1.47
9.85	1.35	0.00	0.00	12.50	5.64	0.26	1.80
9.90	1.36	0.00	0.00	12.55	5.68	0.27	2.13

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	5.71	0.27	2.44	15.25	6.61	0.51	1.40
12.65	5.74	0.28	2.72	15.30	6.62	0.51	1.38
12.70	5.77	0.29	2.97	15.35	6.63	0.51	1.36
12.75	5.80	0.30	3.19	15.40	6.64	0.52	1.35
12.80	5.83	0.30	3.37	15.45	6.65	0.52	1.33
12.85	5.85	0.31	3.52	15.50	6.66	0.52	1.31
12.90	5.88	0.31	3.65	15.55	6.67	0.53	1.30
12.95	5.91	0.32	3.73	15.60	6.68	0.53	1.29
13.00	5.93	0.33	3.77	15.65	6.69	0.53	1.27
13.05	5.95	0.33	3.79	15.70	6.70	0.54	1.26
13.10	5.97	0.34	**3.80**	15.75	6.71	0.54	1.25
13.15	6.00	0.34	3.77	15.80	6.72	0.54	1.23
13.20	6.02	0.35	3.72	15.85	6.73	0.54	1.22
13.25	6.04	0.35	3.65	15.90	6.74	0.55	1.21
13.30	6.06	0.36	3.53	15.95	6.75	0.55	1.19
13.35	6.08	0.36	3.42	16.00	6.76	0.55	1.18
13.40	6.10	0.37	3.31	16.05	6.77	0.55	1.17
13.45	6.12	0.37	3.21	16.10	6.78	0.56	1.15
13.50	6.14	0.38	3.11	16.15	6.78	0.56	1.14
13.55	6.15	0.38	3.02	16.20	6.79	0.56	1.13
13.60	6.17	0.39	2.93	16.25	6.80	0.56	1.12
13.65	6.19	0.39	2.84	16.30	6.81	0.57	1.11
13.70	6.21	0.40	2.76	16.35	6.82	0.57	1.09
13.75	6.22	0.40	2.69	16.40	6.83	0.57	1.08
13.80	6.24	0.40	2.62	16.45	6.84	0.58	1.07
13.85	6.25	0.41	2.54	16.50	6.84	0.58	1.06
13.90	6.27	0.41	2.47	16.55	6.85	0.58	1.05
13.95	6.28	0.42	2.40	16.60	6.86	0.58	1.04
14.00	6.30	0.42	2.34	16.65	6.87	0.59	1.03
14.05	6.31	0.42	2.28	16.70	6.88	0.59	1.02
14.10	6.33	0.43	2.22	16.75	6.89	0.59	1.01
14.15	6.34	0.43	2.17	16.80	6.89	0.59	1.00
14.20	6.35	0.44	2.11	16.85	6.90	0.60	0.99
14.25	6.37	0.44	2.06	16.90	6.91	0.60	0.98
14.30	6.38	0.44	2.01	16.95	6.92	0.60	0.97
14.35	6.39	0.45	1.96	17.00	6.93	0.60	0.97
14.40	6.41	0.45	1.92	17.05	6.93	0.61	0.96
14.45	6.42	0.45	1.88	17.10	6.94	0.61	0.95
14.50	6.43	0.46	1.83	17.15	6.95	0.61	0.94
14.55	6.45	0.46	1.79	17.20	6.96	0.61	0.94
14.60	6.46	0.46	1.75	17.25	6.96	0.62	0.93
14.65	6.47	0.47	1.72	17.30	6.97	0.62	0.92
14.70	6.48	0.47	1.68	17.35	6.98	0.62	0.92
14.75	6.50	0.47	1.65	17.40	6.99	0.62	0.91
14.80	6.51	0.48	1.62	17.45	6.99	0.62	0.91
14.85	6.52	0.48	1.59	17.50	7.00	0.63	0.90
14.90	6.53	0.48	1.56	17.55	7.01	0.63	0.90
14.95	6.54	0.49	1.53	17.60	7.02	0.63	0.89
15.00	6.55	0.49	1.51	17.65	7.02	0.63	0.89
15.05	6.57	0.49	1.48	17.70	7.03	0.64	0.88
15.10	6.58	0.50	1.46	17.75	7.04	0.64	0.88
15.15	6.59	0.50	1.44	17.80	7.05	0.64	0.87
15.20	6.60	0.50	1.42	17.85	7.05	0.64	0.87

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	7.06	0.65	0.87	20.55	7.37	0.75	0.64
17.95	7.07	0.65	0.86	20.60	7.37	0.75	0.63
18.00	7.07	0.65	0.86	20.65	7.38	0.75	0.63
18.05	7.08	0.65	0.85	20.70	7.38	0.75	0.62
18.10	7.09	0.65	0.85	20.75	7.39	0.75	0.62
18.15	7.09	0.66	0.84	20.80	7.39	0.76	0.61
18.20	7.10	0.66	0.84	20.85	7.39	0.76	0.61
18.25	7.11	0.66	0.84	20.90	7.40	0.76	0.61
18.30	7.11	0.66	0.83	20.95	7.40	0.76	0.60
18.35	7.12	0.67	0.83	21.00	7.41	0.76	0.60
18.40	7.13	0.67	0.82	21.05	7.41	0.76	0.60
18.45	7.13	0.67	0.82	21.10	7.42	0.77	0.60
18.50	7.14	0.67	0.81	21.15	7.42	0.77	0.59
18.55	7.15	0.67	0.81	21.20	7.43	0.77	0.59
18.60	7.15	0.68	0.81	21.25	7.43	0.77	0.59
18.65	7.16	0.68	0.80	21.30	7.44	0.77	0.59
18.70	7.17	0.68	0.80	21.35	7.44	0.77	0.59
18.75	7.17	0.68	0.79	21.40	7.45	0.78	0.58
18.80	7.18	0.68	0.79	21.45	7.45	0.78	0.58
18.85	7.18	0.69	0.79	21.50	7.46	0.78	0.58
18.90	7.19	0.69	0.78	21.55	7.46	0.78	0.58
18.95	7.20	0.69	0.78	21.60	7.47	0.78	0.58
19.00	7.20	0.69	0.77	21.65	7.47	0.78	0.58
19.05	7.21	0.69	0.77	21.70	7.48	0.79	0.58
19.10	7.21	0.70	0.77	21.75	7.48	0.79	0.57
19.15	7.22	0.70	0.76	21.80	7.48	0.79	0.57
19.20	7.23	0.70	0.76	21.85	7.49	0.79	0.57
19.25	7.23	0.70	0.75	21.90	7.49	0.79	0.57
19.30	7.24	0.70	0.75	21.95	7.50	0.79	0.57
19.35	7.24	0.71	0.74	22.00	7.50	0.79	0.57
19.40	7.25	0.71	0.74	22.05	7.51	0.80	0.57
19.45	7.25	0.71	0.73	22.10	7.51	0.80	0.57
19.50	7.26	0.71	0.73	22.15	7.52	0.80	0.57
19.55	7.26	0.71	0.73	22.20	7.52	0.80	0.56
19.60	7.27	0.71	0.72	22.25	7.53	0.80	0.56
19.65	7.28	0.72	0.72	22.30	7.53	0.80	0.56
19.70	7.28	0.72	0.71	22.35	7.54	0.81	0.56
19.75	7.29	0.72	0.71	22.40	7.54	0.81	0.56
19.80	7.29	0.72	0.70	22.45	7.54	0.81	0.56
19.85	7.30	0.72	0.70	22.50	7.55	0.81	0.56
19.90	7.30	0.73	0.70	22.55	7.55	0.81	0.56
19.95	7.31	0.73	0.69	22.60	7.56	0.81	0.56
20.00	7.31	0.73	0.69	22.65	7.56	0.82	0.56
20.05	7.32	0.73	0.68	22.70	7.57	0.82	0.56
20.10	7.32	0.73	0.68	22.75	7.57	0.82	0.56
20.15	7.33	0.73	0.67	22.80	7.58	0.82	0.56
20.20	7.33	0.74	0.67	22.85	7.58	0.82	0.55
20.25	7.34	0.74	0.66	22.90	7.58	0.82	0.55
20.30	7.34	0.74	0.66	22.95	7.59	0.83	0.55
20.35	7.35	0.74	0.65	23.00	7.59	0.83	0.55
20.40	7.35	0.74	0.65	23.05	7.60	0.83	0.55
20.45	7.36	0.74	0.64	23.10	7.60	0.83	0.55
20.50	7.36	0.75	0.64	23.15	7.61	0.83	0.55

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	7.61	0.83	0.55	25.85	7.68	0.86	0.06
23.25	7.62	0.83	0.55	25.90	7.68	0.86	0.05
23.30	7.62	0.84	0.55	25.95	7.68	0.86	0.05
23.35	7.62	0.84	0.55	26.00	7.68	0.86	0.04
23.40	7.63	0.84	0.55	26.05	7.68	0.86	0.04
23.45	7.63	0.84	0.55	26.10	7.68	0.86	0.03
23.50	7.64	0.84	0.54	26.15	7.68	0.86	0.03
23.55	7.64	0.84	0.54	26.20	7.68	0.86	0.03
23.60	7.65	0.85	0.54	26.25	7.68	0.86	0.03
23.65	7.65	0.85	0.54	26.30	7.68	0.86	0.02
23.70	7.65	0.85	0.54	26.35	7.68	0.86	0.02
23.75	7.66	0.85	0.54	26.40	7.68	0.86	0.02
23.80	7.66	0.85	0.54	26.45	7.68	0.86	0.02
23.85	7.67	0.85	0.54	26.50	7.68	0.86	0.02
23.90	7.67	0.85	0.54	26.55	7.68	0.86	0.01
23.95	7.68	0.86	0.54	26.60	7.68	0.86	0.01
24.00	**7.68**	**0.86**	0.54	26.65	7.68	0.86	0.01
24.05	7.68	0.86	0.54	26.70	7.68	0.86	0.01
24.10	7.68	0.86	0.54	26.75	7.68	0.86	0.01
24.15	7.68	0.86	0.54	26.80	7.68	0.86	0.01
24.20	7.68	0.86	0.53	26.85	7.68	0.86	0.01
24.25	7.68	0.86	0.53	26.90	7.68	0.86	0.01
24.30	7.68	0.86	0.53	26.95	7.68	0.86	0.01
24.35	7.68	0.86	0.52	27.00	7.68	0.86	0.01
24.40	7.68	0.86	0.52	27.05	7.68	0.86	0.00
24.45	7.68	0.86	0.51	27.10	7.68	0.86	0.00
24.50	7.68	0.86	0.50	27.15	7.68	0.86	0.00
24.55	7.68	0.86	0.48	27.20	7.68	0.86	0.00
24.60	7.68	0.86	0.47	27.25	7.68	0.86	0.00
24.65	7.68	0.86	0.45	27.30	7.68	0.86	0.00
24.70	7.68	0.86	0.43	27.35	7.68	0.86	0.00
24.75	7.68	0.86	0.41	27.40	7.68	0.86	0.00
24.80	7.68	0.86	0.39	27.45	7.68	0.86	0.00
24.85	7.68	0.86	0.36	27.50	7.68	0.86	0.00
24.90	7.68	0.86	0.34	27.55	7.68	0.86	0.00
24.95	7.68	0.86	0.31	27.60	7.68	0.86	0.00
25.00	7.68	0.86	0.29	27.65	7.68	0.86	0.00
25.05	7.68	0.86	0.27	27.70	7.68	0.86	0.00
25.10	7.68	0.86	0.25	27.75	7.68	0.86	0.00
25.15	7.68	0.86	0.22	27.80	7.68	0.86	0.00
25.20	7.68	0.86	0.20	27.85	7.68	0.86	0.00
25.25	7.68	0.86	0.18	27.90	7.68	0.86	0.00
25.30	7.68	0.86	0.17	27.95	7.68	0.86	0.00
25.35	7.68	0.86	0.15	28.00	7.68	0.86	0.00
25.40	7.68	0.86	0.14	28.05	7.68	0.86	0.00
25.45	7.68	0.86	0.12	28.10	7.68	0.86	0.00
25.50	7.68	0.86	0.11	28.15	7.68	0.86	0.00
25.55	7.68	0.86	0.10	28.20	7.68	0.86	0.00
25.60	7.68	0.86	0.09	28.25	7.68	0.86	0.00
25.65	7.68	0.86	0.08	28.30	7.68	0.86	0.00
25.70	7.68	0.86	0.08	28.35	7.68	0.86	0.00
25.75	7.68	0.86	0.07	28.40	7.68	0.86	0.00
25.80	7.68	0.86	0.06	28.45	7.68	0.86	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	7.68	0.86	0.00	31.15	7.68	0.86	0.00
28.55	7.68	0.86	0.00	31.20	7.68	0.86	0.00
28.60	7.68	0.86	0.00	31.25	7.68	0.86	0.00
28.65	7.68	0.86	0.00	31.30	7.68	0.86	0.00
28.70	7.68	0.86	0.00	31.35	7.68	0.86	0.00
28.75	7.68	0.86	0.00	31.40	7.68	0.86	0.00
28.80	7.68	0.86	0.00	31.45	7.68	0.86	0.00
28.85	7.68	0.86	0.00	31.50	7.68	0.86	0.00
28.90	7.68	0.86	0.00	31.55	7.68	0.86	0.00
28.95	7.68	0.86	0.00	31.60	7.68	0.86	0.00
29.00	7.68	0.86	0.00	31.65	7.68	0.86	0.00
29.05	7.68	0.86	0.00	31.70	7.68	0.86	0.00
29.10	7.68	0.86	0.00	31.75	7.68	0.86	0.00
29.15	7.68	0.86	0.00	31.80	7.68	0.86	0.00
29.20	7.68	0.86	0.00	31.85	7.68	0.86	0.00
29.25	7.68	0.86	0.00	31.90	7.68	0.86	0.00
29.30	7.68	0.86	0.00	31.95	7.68	0.86	0.00
29.35	7.68	0.86	0.00	32.00	7.68	0.86	0.00
29.40	7.68	0.86	0.00	32.05	7.68	0.86	0.00
29.45	7.68	0.86	0.00	32.10	7.68	0.86	0.00
29.50	7.68	0.86	0.00	32.15	7.68	0.86	0.00
29.55	7.68	0.86	0.00	32.20	7.68	0.86	0.00
29.60	7.68	0.86	0.00	32.25	7.68	0.86	0.00
29.65	7.68	0.86	0.00	32.30	7.68	0.86	0.00
29.70	7.68	0.86	0.00	32.35	7.68	0.86	0.00
29.75	7.68	0.86	0.00	32.40	7.68	0.86	0.00
29.80	7.68	0.86	0.00	32.45	7.68	0.86	0.00
29.85	7.68	0.86	0.00	32.50	7.68	0.86	0.00
29.90	7.68	0.86	0.00	32.55	7.68	0.86	0.00
29.95	7.68	0.86	0.00	32.60	7.68	0.86	0.00
30.00	7.68	0.86	0.00	32.65	7.68	0.86	0.00
30.05	7.68	0.86	0.00	32.70	7.68	0.86	0.00
30.10	7.68	0.86	0.00	32.75	7.68	0.86	0.00
30.15	7.68	0.86	0.00	32.80	7.68	0.86	0.00
30.20	7.68	0.86	0.00	32.85	7.68	0.86	0.00
30.25	7.68	0.86	0.00	32.90	7.68	0.86	0.00
30.30	7.68	0.86	0.00	32.95	7.68	0.86	0.00
30.35	7.68	0.86	0.00	33.00	7.68	0.86	0.00
30.40	7.68	0.86	0.00	33.05	7.68	0.86	0.00
30.45	7.68	0.86	0.00	33.10	7.68	0.86	0.00
30.50	7.68	0.86	0.00	33.15	7.68	0.86	0.00
30.55	7.68	0.86	0.00	33.20	7.68	0.86	0.00
30.60	7.68	0.86	0.00	33.25	7.68	0.86	0.00
30.65	7.68	0.86	0.00	33.30	7.68	0.86	0.00
30.70	7.68	0.86	0.00	33.35	7.68	0.86	0.00
30.75	7.68	0.86	0.00	33.40	7.68	0.86	0.00
30.80	7.68	0.86	0.00	33.45	7.68	0.86	0.00
30.85	7.68	0.86	0.00	33.50	7.68	0.86	0.00
30.90	7.68	0.86	0.00	33.55	7.68	0.86	0.00
30.95	7.68	0.86	0.00	33.60	7.68	0.86	0.00
31.00	7.68	0.86	0.00	33.65	7.68	0.86	0.00
31.05	7.68	0.86	0.00	33.70	7.68	0.86	0.00
31.10	7.68	0.86	0.00	33.75	7.68	0.86	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	7.68	0.86	0.00	36.45	7.68	0.86	0.00
33.85	7.68	0.86	0.00	36.50	7.68	0.86	0.00
33.90	7.68	0.86	0.00	36.55	7.68	0.86	0.00
33.95	7.68	0.86	0.00	36.60	7.68	0.86	0.00
34.00	7.68	0.86	0.00	36.65	7.68	0.86	0.00
34.05	7.68	0.86	0.00	36.70	7.68	0.86	0.00
34.10	7.68	0.86	0.00	36.75	7.68	0.86	0.00
34.15	7.68	0.86	0.00	36.80	7.68	0.86	0.00
34.20	7.68	0.86	0.00	36.85	7.68	0.86	0.00
34.25	7.68	0.86	0.00	36.90	7.68	0.86	0.00
34.30	7.68	0.86	0.00	36.95	7.68	0.86	0.00
34.35	7.68	0.86	0.00	37.00	7.68	0.86	0.00
34.40	7.68	0.86	0.00	37.05	7.68	0.86	0.00
34.45	7.68	0.86	0.00	37.10	7.68	0.86	0.00
34.50	7.68	0.86	0.00	37.15	7.68	0.86	0.00
34.55	7.68	0.86	0.00	37.20	7.68	0.86	0.00
34.60	7.68	0.86	0.00	37.25	7.68	0.86	0.00
34.65	7.68	0.86	0.00	37.30	7.68	0.86	0.00
34.70	7.68	0.86	0.00	37.35	7.68	0.86	0.00
34.75	7.68	0.86	0.00	37.40	7.68	0.86	0.00
34.80	7.68	0.86	0.00	37.45	7.68	0.86	0.00
34.85	7.68	0.86	0.00	37.50	7.68	0.86	0.00
34.90	7.68	0.86	0.00	37.55	7.68	0.86	0.00
34.95	7.68	0.86	0.00	37.60	7.68	0.86	0.00
35.00	7.68	0.86	0.00	37.65	7.68	0.86	0.00
35.05	7.68	0.86	0.00	37.70	7.68	0.86	0.00
35.10	7.68	0.86	0.00	37.75	7.68	0.86	0.00
35.15	7.68	0.86	0.00	37.80	7.68	0.86	0.00
35.20	7.68	0.86	0.00	37.85	7.68	0.86	0.00
35.25	7.68	0.86	0.00	37.90	7.68	0.86	0.00
35.30	7.68	0.86	0.00	37.95	7.68	0.86	0.00
35.35	7.68	0.86	0.00	38.00	7.68	0.86	0.00
35.40	7.68	0.86	0.00	38.05	7.68	0.86	0.00
35.45	7.68	0.86	0.00	38.10	7.68	0.86	0.00
35.50	7.68	0.86	0.00	38.15	7.68	0.86	0.00
35.55	7.68	0.86	0.00	38.20	7.68	0.86	0.00
35.60	7.68	0.86	0.00	38.25	7.68	0.86	0.00
35.65	7.68	0.86	0.00	38.30	7.68	0.86	0.00
35.70	7.68	0.86	0.00	38.35	7.68	0.86	0.00
35.75	7.68	0.86	0.00	38.40	7.68	0.86	0.00
35.80	7.68	0.86	0.00	38.45	7.68	0.86	0.00
35.85	7.68	0.86	0.00	38.50	7.68	0.86	0.00
35.90	7.68	0.86	0.00	38.55	7.68	0.86	0.00
35.95	7.68	0.86	0.00	38.60	7.68	0.86	0.00
36.00	7.68	0.86	0.00	38.65	7.68	0.86	0.00
36.05	7.68	0.86	0.00	38.70	7.68	0.86	0.00
36.10	7.68	0.86	0.00	38.75	7.68	0.86	0.00
36.15	7.68	0.86	0.00	38.80	7.68	0.86	0.00
36.20	7.68	0.86	0.00	38.85	7.68	0.86	0.00
36.25	7.68	0.86	0.00	38.90	7.68	0.86	0.00
36.30	7.68	0.86	0.00	38.95	7.68	0.86	0.00
36.35	7.68	0.86	0.00	39.00	7.68	0.86	0.00
36.40	7.68	0.86	0.00	39.05	7.68	0.86	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	7.68	0.86	0.00	41.75	7.68	0.86	0.00
39.15	7.68	0.86	0.00	41.80	7.68	0.86	0.00
39.20	7.68	0.86	0.00	41.85	7.68	0.86	0.00
39.25	7.68	0.86	0.00	41.90	7.68	0.86	0.00
39.30	7.68	0.86	0.00	41.95	7.68	0.86	0.00
39.35	7.68	0.86	0.00	42.00	7.68	0.86	0.00
39.40	7.68	0.86	0.00	42.05	7.68	0.86	0.00
39.45	7.68	0.86	0.00	42.10	7.68	0.86	0.00
39.50	7.68	0.86	0.00	42.15	7.68	0.86	0.00
39.55	7.68	0.86	0.00	42.20	7.68	0.86	0.00
39.60	7.68	0.86	0.00	42.25	7.68	0.86	0.00
39.65	7.68	0.86	0.00	42.30	7.68	0.86	0.00
39.70	7.68	0.86	0.00	42.35	7.68	0.86	0.00
39.75	7.68	0.86	0.00	42.40	7.68	0.86	0.00
39.80	7.68	0.86	0.00	42.45	7.68	0.86	0.00
39.85	7.68	0.86	0.00	42.50	7.68	0.86	0.00
39.90	7.68	0.86	0.00	42.55	7.68	0.86	0.00
39.95	7.68	0.86	0.00	42.60	7.68	0.86	0.00
40.00	7.68	0.86	0.00	42.65	7.68	0.86	0.00
40.05	7.68	0.86	0.00	42.70	7.68	0.86	0.00
40.10	7.68	0.86	0.00	42.75	7.68	0.86	0.00
40.15	7.68	0.86	0.00	42.80	7.68	0.86	0.00
40.20	7.68	0.86	0.00	42.85	7.68	0.86	0.00
40.25	7.68	0.86	0.00	42.90	7.68	0.86	0.00
40.30	7.68	0.86	0.00	42.95	7.68	0.86	0.00
40.35	7.68	0.86	0.00	43.00	7.68	0.86	0.00
40.40	7.68	0.86	0.00	43.05	7.68	0.86	0.00
40.45	7.68	0.86	0.00	43.10	7.68	0.86	0.00
40.50	7.68	0.86	0.00	43.15	7.68	0.86	0.00
40.55	7.68	0.86	0.00	43.20	7.68	0.86	0.00
40.60	7.68	0.86	0.00	43.25	7.68	0.86	0.00
40.65	7.68	0.86	0.00	43.30	7.68	0.86	0.00
40.70	7.68	0.86	0.00	43.35	7.68	0.86	0.00
40.75	7.68	0.86	0.00	43.40	7.68	0.86	0.00
40.80	7.68	0.86	0.00	43.45	7.68	0.86	0.00
40.85	7.68	0.86	0.00	43.50	7.68	0.86	0.00
40.90	7.68	0.86	0.00	43.55	7.68	0.86	0.00
40.95	7.68	0.86	0.00	43.60	7.68	0.86	0.00
41.00	7.68	0.86	0.00	43.65	7.68	0.86	0.00
41.05	7.68	0.86	0.00	43.70	7.68	0.86	0.00
41.10	7.68	0.86	0.00	43.75	7.68	0.86	0.00
41.15	7.68	0.86	0.00	43.80	7.68	0.86	0.00
41.20	7.68	0.86	0.00	43.85	7.68	0.86	0.00
41.25	7.68	0.86	0.00	43.90	7.68	0.86	0.00
41.30	7.68	0.86	0.00	43.95	7.68	0.86	0.00
41.35	7.68	0.86	0.00	44.00	7.68	0.86	0.00
41.40	7.68	0.86	0.00	44.05	7.68	0.86	0.00
41.45	7.68	0.86	0.00	44.10	7.68	0.86	0.00
41.50	7.68	0.86	0.00	44.15	7.68	0.86	0.00
41.55	7.68	0.86	0.00	44.20	7.68	0.86	0.00
41.60	7.68	0.86	0.00	44.25	7.68	0.86	0.00
41.65	7.68	0.86	0.00	44.30	7.68	0.86	0.00
41.70	7.68	0.86	0.00	44.35	7.68	0.86	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	7.68	0.86	0.00	47.05	7.68	0.86	0.00
44.45	7.68	0.86	0.00	47.10	7.68	0.86	0.00
44.50	7.68	0.86	0.00	47.15	7.68	0.86	0.00
44.55	7.68	0.86	0.00	47.20	7.68	0.86	0.00
44.60	7.68	0.86	0.00	47.25	7.68	0.86	0.00
44.65	7.68	0.86	0.00	47.30	7.68	0.86	0.00
44.70	7.68	0.86	0.00	47.35	7.68	0.86	0.00
44.75	7.68	0.86	0.00	47.40	7.68	0.86	0.00
44.80	7.68	0.86	0.00	47.45	7.68	0.86	0.00
44.85	7.68	0.86	0.00	47.50	7.68	0.86	0.00
44.90	7.68	0.86	0.00	47.55	7.68	0.86	0.00
44.95	7.68	0.86	0.00	47.60	7.68	0.86	0.00
45.00	7.68	0.86	0.00	47.65	7.68	0.86	0.00
45.05	7.68	0.86	0.00	47.70	7.68	0.86	0.00
45.10	7.68	0.86	0.00	47.75	7.68	0.86	0.00
45.15	7.68	0.86	0.00	47.80	7.68	0.86	0.00
45.20	7.68	0.86	0.00	47.85	7.68	0.86	0.00
45.25	7.68	0.86	0.00	47.90	7.68	0.86	0.00
45.30	7.68	0.86	0.00	47.95	7.68	0.86	0.00
45.35	7.68	0.86	0.00	48.00	7.68	0.86	0.00
45.40	7.68	0.86	0.00	48.05	7.68	0.86	0.00
45.45	7.68	0.86	0.00	48.10	7.68	0.86	0.00
45.50	7.68	0.86	0.00	48.15	7.68	0.86	0.00
45.55	7.68	0.86	0.00	48.20	7.68	0.86	0.00
45.60	7.68	0.86	0.00	48.25	7.68	0.86	0.00
45.65	7.68	0.86	0.00	48.30	7.68	0.86	0.00
45.70	7.68	0.86	0.00	48.35	7.68	0.86	0.00
45.75	7.68	0.86	0.00	48.40	7.68	0.86	0.00
45.80	7.68	0.86	0.00	48.45	7.68	0.86	0.00
45.85	7.68	0.86	0.00	48.50	7.68	0.86	0.00
45.90	7.68	0.86	0.00	48.55	7.68	0.86	0.00
45.95	7.68	0.86	0.00	48.60	7.68	0.86	0.00
46.00	7.68	0.86	0.00	48.65	7.68	0.86	0.00
46.05	7.68	0.86	0.00	48.70	7.68	0.86	0.00
46.10	7.68	0.86	0.00	48.75	7.68	0.86	0.00
46.15	7.68	0.86	0.00	48.80	7.68	0.86	0.00
46.20	7.68	0.86	0.00	48.85	7.68	0.86	0.00
46.25	7.68	0.86	0.00	48.90	7.68	0.86	0.00
46.30	7.68	0.86	0.00	48.95	7.68	0.86	0.00
46.35	7.68	0.86	0.00	49.00	7.68	0.86	0.00
46.40	7.68	0.86	0.00	49.05	7.68	0.86	0.00
46.45	7.68	0.86	0.00	49.10	7.68	0.86	0.00
46.50	7.68	0.86	0.00	49.15	7.68	0.86	0.00
46.55	7.68	0.86	0.00	49.20	7.68	0.86	0.00
46.60	7.68	0.86	0.00	49.25	7.68	0.86	0.00
46.65	7.68	0.86	0.00	49.30	7.68	0.86	0.00
46.70	7.68	0.86	0.00	49.35	7.68	0.86	0.00
46.75	7.68	0.86	0.00	49.40	7.68	0.86	0.00
46.80	7.68	0.86	0.00	49.45	7.68	0.86	0.00
46.85	7.68	0.86	0.00	49.50	7.68	0.86	0.00
46.90	7.68	0.86	0.00	49.55	7.68	0.86	0.00
46.95	7.68	0.86	0.00	49.60	7.68	0.86	0.00
47.00	7.68	0.86	0.00	49.65	7.68	0.86	0.00

Hydrograph for Subcatchment 3S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	7.68	0.86	0.00
49.75	7.68	0.86	0.00
49.80	7.68	0.86	0.00
49.85	7.68	0.86	0.00
49.90	7.68	0.86	0.00
49.95	7.68	0.86	0.00
50.00	7.68	0.86	0.00

Summary for Subcatchment 4S: SB-4

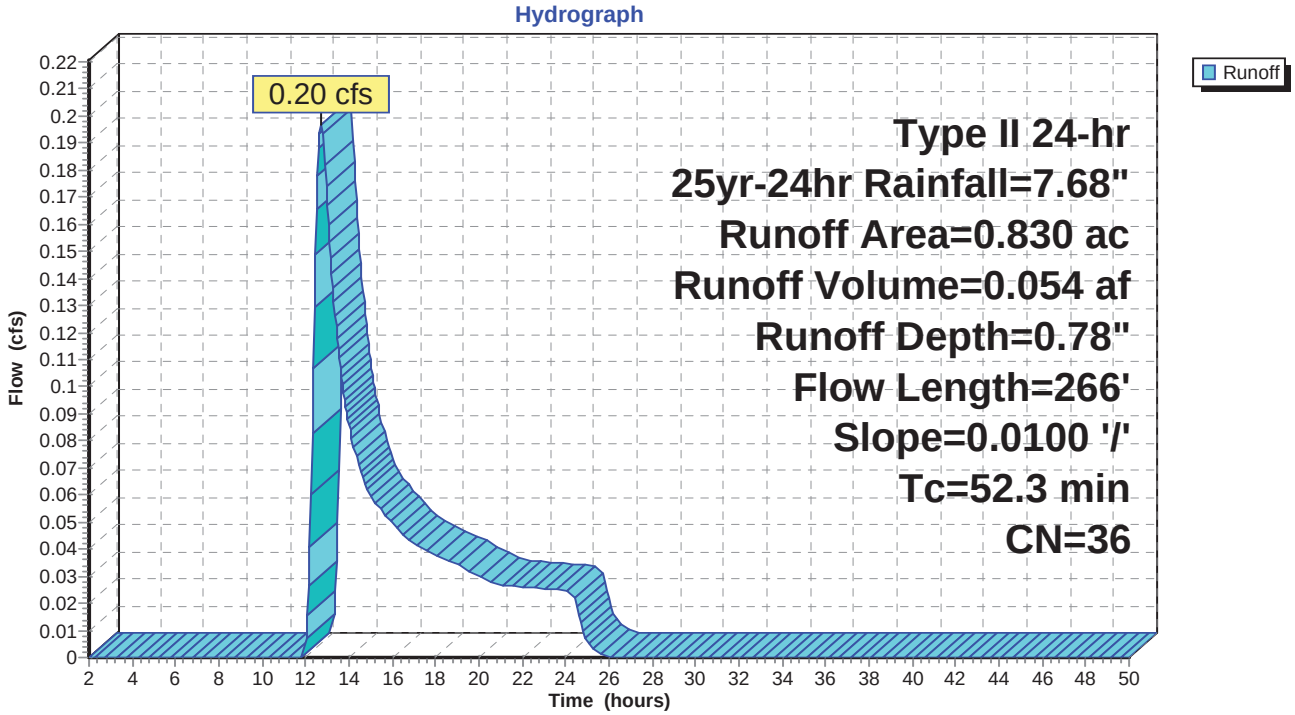
Runoff = 0.20 cfs @ 12.73 hrs, Volume= 0.054 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

Area (ac)	CN	Description
0.830	36	Woods, Fair, HSG A
0.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.3	266	0.0100	0.08		**Sheet Flow, Woods: Light Underbrush** Woods: Light underbrush n= 0.400 P2= 4.50"

Subcatchment 4S: SB-4



Hydrograph for Subcatchment 4S: SB-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.17	0.00	0.00	4.65	0.44	0.00	0.00
2.05	0.17	0.00	0.00	4.70	0.45	0.00	0.00
2.10	0.18	0.00	0.00	4.75	0.45	0.00	0.00
2.15	0.18	0.00	0.00	4.80	0.46	0.00	0.00
2.20	0.19	0.00	0.00	4.85	0.47	0.00	0.00
2.25	0.19	0.00	0.00	4.90	0.47	0.00	0.00
2.30	0.20	0.00	0.00	4.95	0.48	0.00	0.00
2.35	0.20	0.00	0.00	5.00	0.48	0.00	0.00
2.40	0.21	0.00	0.00	5.05	0.49	0.00	0.00
2.45	0.21	0.00	0.00	5.10	0.50	0.00	0.00
2.50	0.22	0.00	0.00	5.15	0.50	0.00	0.00
2.55	0.22	0.00	0.00	5.20	0.51	0.00	0.00
2.60	0.23	0.00	0.00	5.25	0.52	0.00	0.00
2.65	0.23	0.00	0.00	5.30	0.52	0.00	0.00
2.70	0.24	0.00	0.00	5.35	0.53	0.00	0.00
2.75	0.24	0.00	0.00	5.40	0.53	0.00	0.00
2.80	0.25	0.00	0.00	5.45	0.54	0.00	0.00
2.85	0.25	0.00	0.00	5.50	0.55	0.00	0.00
2.90	0.26	0.00	0.00	5.55	0.55	0.00	0.00
2.95	0.26	0.00	0.00	5.60	0.56	0.00	0.00
3.00	0.26	0.00	0.00	5.65	0.57	0.00	0.00
3.05	0.27	0.00	0.00	5.70	0.57	0.00	0.00
3.10	0.27	0.00	0.00	5.75	0.58	0.00	0.00
3.15	0.28	0.00	0.00	5.80	0.59	0.00	0.00
3.20	0.29	0.00	0.00	5.85	0.59	0.00	0.00
3.25	0.29	0.00	0.00	5.90	0.60	0.00	0.00
3.30	0.30	0.00	0.00	5.95	0.61	0.00	0.00
3.35	0.30	0.00	0.00	6.00	0.61	0.00	0.00
3.40	0.31	0.00	0.00	6.05	0.62	0.00	0.00
3.45	0.31	0.00	0.00	6.10	0.63	0.00	0.00
3.50	0.32	0.00	0.00	6.15	0.64	0.00	0.00
3.55	0.32	0.00	0.00	6.20	0.64	0.00	0.00
3.60	0.33	0.00	0.00	6.25	0.65	0.00	0.00
3.65	0.33	0.00	0.00	6.30	0.66	0.00	0.00
3.70	0.34	0.00	0.00	6.35	0.66	0.00	0.00
3.75	0.34	0.00	0.00	6.40	0.67	0.00	0.00
3.80	0.35	0.00	0.00	6.45	0.68	0.00	0.00
3.85	0.35	0.00	0.00	6.50	0.69	0.00	0.00
3.90	0.36	0.00	0.00	6.55	0.69	0.00	0.00
3.95	0.36	0.00	0.00	6.60	0.70	0.00	0.00
4.00	0.37	0.00	0.00	6.65	0.71	0.00	0.00
4.05	0.37	0.00	0.00	6.70	0.71	0.00	0.00
4.10	0.38	0.00	0.00	6.75	0.72	0.00	0.00
4.15	0.38	0.00	0.00	6.80	0.73	0.00	0.00
4.20	0.39	0.00	0.00	6.85	0.74	0.00	0.00
4.25	0.40	0.00	0.00	6.90	0.75	0.00	0.00
4.30	0.40	0.00	0.00	6.95	0.75	0.00	0.00
4.35	0.41	0.00	0.00	7.00	0.76	0.00	0.00
4.40	0.41	0.00	0.00	7.05	0.77	0.00	0.00
4.45	0.42	0.00	0.00	7.10	0.78	0.00	0.00
4.50	0.42	0.00	0.00	7.15	0.78	0.00	0.00
4.55	0.43	0.00	0.00	7.20	0.79	0.00	0.00
4.60	0.44	0.00	0.00	7.25	0.80	0.00	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.81	0.00	0.00	9.95	1.37	0.00	0.00
7.35	0.82	0.00	0.00	10.00	1.39	0.00	0.00
7.40	0.82	0.00	0.00	10.05	1.41	0.00	0.00
7.45	0.83	0.00	0.00	10.10	1.42	0.00	0.00
7.50	0.84	0.00	0.00	10.15	1.44	0.00	0.00
7.55	0.85	0.00	0.00	10.20	1.46	0.00	0.00
7.60	0.86	0.00	0.00	10.25	1.47	0.00	0.00
7.65	0.86	0.00	0.00	10.30	1.49	0.00	0.00
7.70	0.87	0.00	0.00	10.35	1.51	0.00	0.00
7.75	0.88	0.00	0.00	10.40	1.53	0.00	0.00
7.80	0.89	0.00	0.00	10.45	1.55	0.00	0.00
7.85	0.90	0.00	0.00	10.50	1.57	0.00	0.00
7.90	0.90	0.00	0.00	10.55	1.59	0.00	0.00
7.95	0.91	0.00	0.00	10.60	1.61	0.00	0.00
8.00	0.92	0.00	0.00	10.65	1.63	0.00	0.00
8.05	0.93	0.00	0.00	10.70	1.65	0.00	0.00
8.10	0.94	0.00	0.00	10.75	1.68	0.00	0.00
8.15	0.95	0.00	0.00	10.80	1.70	0.00	0.00
8.20	0.96	0.00	0.00	10.85	1.73	0.00	0.00
8.25	0.97	0.00	0.00	10.90	1.75	0.00	0.00
8.30	0.98	0.00	0.00	10.95	1.78	0.00	0.00
8.35	0.99	0.00	0.00	11.00	1.80	0.00	0.00
8.40	1.00	0.00	0.00	11.05	1.83	0.00	0.00
8.45	1.01	0.00	0.00	11.10	1.86	0.00	0.00
8.50	1.02	0.00	0.00	11.15	1.90	0.00	0.00
8.55	1.03	0.00	0.00	11.20	1.93	0.00	0.00
8.60	1.04	0.00	0.00	11.25	1.97	0.00	0.00
8.65	1.05	0.00	0.00	11.30	2.00	0.00	0.00
8.70	1.06	0.00	0.00	11.35	2.04	0.00	0.00
8.75	1.07	0.00	0.00	11.40	2.08	0.00	0.00
8.80	1.08	0.00	0.00	11.45	2.13	0.00	0.00
8.85	1.09	0.00	0.00	11.50	2.17	0.00	0.00
8.90	1.10	0.00	0.00	11.55	2.24	0.00	0.00
8.95	1.12	0.00	0.00	11.60	2.36	0.00	0.00
9.00	1.13	0.00	0.00	11.65	2.52	0.00	0.00
9.05	1.14	0.00	0.00	11.70	2.72	0.00	0.00
9.10	1.15	0.00	0.00	11.75	2.97	0.00	0.00
9.15	1.17	0.00	0.00	11.80	3.31	0.00	0.00
9.20	1.18	0.00	0.00	11.85	3.77	0.00	0.00
9.25	1.19	0.00	0.00	11.90	4.36	0.03	0.00
9.30	1.20	0.00	0.00	11.95	4.87	0.09	0.00
9.35	1.21	0.00	0.00	12.00	5.09	0.12	0.00
9.40	1.23	0.00	0.00	12.05	5.17	0.13	0.01
9.45	1.24	0.00	0.00	12.10	5.24	0.15	0.02
9.50	1.25	0.00	0.00	12.15	5.30	0.16	0.03
9.55	1.26	0.00	0.00	12.20	5.37	0.17	0.04
9.60	1.28	0.00	0.00	12.25	5.42	0.18	0.06
9.65	1.29	0.00	0.00	12.30	5.48	0.19	0.08
9.70	1.30	0.00	0.00	12.35	5.52	0.20	0.11
9.75	1.32	0.00	0.00	12.40	5.57	0.20	0.13
9.80	1.33	0.00	0.00	12.45	5.61	0.21	0.15
9.85	1.35	0.00	0.00	12.50	5.64	0.22	0.17
9.90	1.36	0.00	0.00	12.55	5.68	0.23	0.18

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	5.71	0.23	0.19	15.25	6.61	0.45	0.06
12.65	5.74	0.24	0.19	15.30	6.62	0.45	0.06
12.70	5.77	0.25	0.20	15.35	6.63	0.45	0.06
12.75	5.80	0.25	**0.20**	15.40	6.64	0.46	0.06
12.80	5.83	0.26	0.19	15.45	6.65	0.46	0.05
12.85	5.85	0.26	0.19	15.50	6.66	0.46	0.05
12.90	5.88	0.27	0.18	15.55	6.67	0.47	0.05
12.95	5.91	0.27	0.17	15.60	6.68	0.47	0.05
13.00	5.93	0.28	0.17	15.65	6.69	0.47	0.05
13.05	5.95	0.28	0.16	15.70	6.70	0.47	0.05
13.10	5.97	0.29	0.15	15.75	6.71	0.48	0.05
13.15	6.00	0.29	0.15	15.80	6.72	0.48	0.05
13.20	6.02	0.30	0.14	15.85	6.73	0.48	0.05
13.25	6.04	0.30	0.14	15.90	6.74	0.48	0.05
13.30	6.06	0.31	0.13	15.95	6.75	0.49	0.05
13.35	6.08	0.31	0.13	16.00	6.76	0.49	0.05
13.40	6.10	0.32	0.12	16.05	6.77	0.49	0.05
13.45	6.12	0.32	0.12	16.10	6.78	0.49	0.05
13.50	6.14	0.33	0.11	16.15	6.78	0.50	0.05
13.55	6.15	0.33	0.11	16.20	6.79	0.50	0.05
13.60	6.17	0.34	0.11	16.25	6.80	0.50	0.05
13.65	6.19	0.34	0.10	16.30	6.81	0.50	0.05
13.70	6.21	0.34	0.10	16.35	6.82	0.51	0.05
13.75	6.22	0.35	0.10	16.40	6.83	0.51	0.05
13.80	6.24	0.35	0.10	16.45	6.84	0.51	0.05
13.85	6.25	0.36	0.09	16.50	6.84	0.51	0.05
13.90	6.27	0.36	0.09	16.55	6.85	0.52	0.04
13.95	6.28	0.36	0.09	16.60	6.86	0.52	0.04
14.00	6.30	0.37	0.09	16.65	6.87	0.52	0.04
14.05	6.31	0.37	0.08	16.70	6.88	0.52	0.04
14.10	6.33	0.37	0.08	16.75	6.89	0.53	0.04
14.15	6.34	0.38	0.08	16.80	6.89	0.53	0.04
14.20	6.35	0.38	0.08	16.85	6.90	0.53	0.04
14.25	6.37	0.38	0.08	16.90	6.91	0.53	0.04
14.30	6.38	0.39	0.08	16.95	6.92	0.53	0.04
14.35	6.39	0.39	0.07	17.00	6.93	0.54	0.04
14.40	6.41	0.39	0.07	17.05	6.93	0.54	0.04
14.45	6.42	0.40	0.07	17.10	6.94	0.54	0.04
14.50	6.43	0.40	0.07	17.15	6.95	0.54	0.04
14.55	6.45	0.40	0.07	17.20	6.96	0.55	0.04
14.60	6.46	0.41	0.07	17.25	6.96	0.55	0.04
14.65	6.47	0.41	0.07	17.30	6.97	0.55	0.04
14.70	6.48	0.41	0.06	17.35	6.98	0.55	0.04
14.75	6.50	0.42	0.06	17.40	6.99	0.56	0.04
14.80	6.51	0.42	0.06	17.45	6.99	0.56	0.04
14.85	6.52	0.42	0.06	17.50	7.00	0.56	0.04
14.90	6.53	0.43	0.06	17.55	7.01	0.56	0.04
14.95	6.54	0.43	0.06	17.60	7.02	0.56	0.04
15.00	6.55	0.43	0.06	17.65	7.02	0.57	0.04
15.05	6.57	0.44	0.06	17.70	7.03	0.57	0.04
15.10	6.58	0.44	0.06	17.75	7.04	0.57	0.04
15.15	6.59	0.44	0.06	17.80	7.05	0.57	0.04
15.20	6.60	0.45	0.06	17.85	7.05	0.57	0.04

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	7.06	0.58	0.04	20.55	7.37	0.67	0.03
17.95	7.07	0.58	0.04	20.60	7.37	0.67	0.03
18.00	7.07	0.58	0.04	20.65	7.38	0.68	0.03
18.05	7.08	0.58	0.04	20.70	7.38	0.68	0.03
18.10	7.09	0.59	0.04	20.75	7.39	0.68	0.03
18.15	7.09	0.59	0.04	20.80	7.39	0.68	0.03
18.20	7.10	0.59	0.04	20.85	7.39	0.68	0.03
18.25	7.11	0.59	0.04	20.90	7.40	0.68	0.03
18.30	7.11	0.59	0.04	20.95	7.40	0.68	0.03
18.35	7.12	0.60	0.04	21.00	7.41	0.69	0.03
18.40	7.13	0.60	0.04	21.05	7.41	0.69	0.03
18.45	7.13	0.60	0.04	21.10	7.42	0.69	0.03
18.50	7.14	0.60	0.04	21.15	7.42	0.69	0.03
18.55	7.15	0.60	0.04	21.20	7.43	0.69	0.03
18.60	7.15	0.61	0.04	21.25	7.43	0.69	0.03
18.65	7.16	0.61	0.04	21.30	7.44	0.70	0.03
18.70	7.17	0.61	0.04	21.35	7.44	0.70	0.03
18.75	7.17	0.61	0.04	21.40	7.45	0.70	0.03
18.80	7.18	0.61	0.04	21.45	7.45	0.70	0.03
18.85	7.18	0.61	0.03	21.50	7.46	0.70	0.03
18.90	7.19	0.62	0.03	21.55	7.46	0.70	0.03
18.95	7.20	0.62	0.03	21.60	7.47	0.71	0.03
19.00	7.20	0.62	0.03	21.65	7.47	0.71	0.03
19.05	7.21	0.62	0.03	21.70	7.48	0.71	0.03
19.10	7.21	0.62	0.03	21.75	7.48	0.71	0.03
19.15	7.22	0.63	0.03	21.80	7.48	0.71	0.03
19.20	7.23	0.63	0.03	21.85	7.49	0.71	0.03
19.25	7.23	0.63	0.03	21.90	7.49	0.71	0.03
19.30	7.24	0.63	0.03	21.95	7.50	0.72	0.03
19.35	7.24	0.63	0.03	22.00	7.50	0.72	0.03
19.40	7.25	0.64	0.03	22.05	7.51	0.72	0.03
19.45	7.25	0.64	0.03	22.10	7.51	0.72	0.03
19.50	7.26	0.64	0.03	22.15	7.52	0.72	0.03
19.55	7.26	0.64	0.03	22.20	7.52	0.72	0.03
19.60	7.27	0.64	0.03	22.25	7.53	0.72	0.03
19.65	7.28	0.64	0.03	22.30	7.53	0.73	0.03
19.70	7.28	0.65	0.03	22.35	7.54	0.73	0.03
19.75	7.29	0.65	0.03	22.40	7.54	0.73	0.03
19.80	7.29	0.65	0.03	22.45	7.54	0.73	0.03
19.85	7.30	0.65	0.03	22.50	7.55	0.73	0.03
19.90	7.30	0.65	0.03	22.55	7.55	0.73	0.03
19.95	7.31	0.65	0.03	22.60	7.56	0.74	0.03
20.00	7.31	0.66	0.03	22.65	7.56	0.74	0.03
20.05	7.32	0.66	0.03	22.70	7.57	0.74	0.03
20.10	7.32	0.66	0.03	22.75	7.57	0.74	0.03
20.15	7.33	0.66	0.03	22.80	7.58	0.74	0.03
20.20	7.33	0.66	0.03	22.85	7.58	0.74	0.03
20.25	7.34	0.66	0.03	22.90	7.58	0.74	0.03
20.30	7.34	0.66	0.03	22.95	7.59	0.75	0.03
20.35	7.35	0.67	0.03	23.00	7.59	0.75	0.03
20.40	7.35	0.67	0.03	23.05	7.60	0.75	0.03
20.45	7.36	0.67	0.03	23.10	7.60	0.75	0.03
20.50	7.36	0.67	0.03	23.15	7.61	0.75	0.03

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	7.61	0.75	0.03	25.85	7.68	0.78	0.00
23.25	7.62	0.75	0.03	25.90	7.68	0.78	0.00
23.30	7.62	0.76	0.03	25.95	7.68	0.78	0.00
23.35	7.62	0.76	0.03	26.00	7.68	0.78	0.00
23.40	7.63	0.76	0.03	26.05	7.68	0.78	0.00
23.45	7.63	0.76	0.03	26.10	7.68	0.78	0.00
23.50	7.64	0.76	0.03	26.15	7.68	0.78	0.00
23.55	7.64	0.76	0.03	26.20	7.68	0.78	0.00
23.60	7.65	0.77	0.02	26.25	7.68	0.78	0.00
23.65	7.65	0.77	0.02	26.30	7.68	0.78	0.00
23.70	7.65	0.77	0.02	26.35	7.68	0.78	0.00
23.75	7.66	0.77	0.02	26.40	7.68	0.78	0.00
23.80	7.66	0.77	0.02	26.45	7.68	0.78	0.00
23.85	7.67	0.77	0.02	26.50	7.68	0.78	0.00
23.90	7.67	0.77	0.02	26.55	7.68	0.78	0.00
23.95	7.68	0.78	0.02	26.60	7.68	0.78	0.00
24.00	**7.68**	**0.78**	0.02	26.65	7.68	0.78	0.00
24.05	7.68	0.78	0.02	26.70	7.68	0.78	0.00
24.10	7.68	0.78	0.02	26.75	7.68	0.78	0.00
24.15	7.68	0.78	0.02	26.80	7.68	0.78	0.00
24.20	7.68	0.78	0.02	26.85	7.68	0.78	0.00
24.25	7.68	0.78	0.02	26.90	7.68	0.78	0.00
24.30	7.68	0.78	0.02	26.95	7.68	0.78	0.00
24.35	7.68	0.78	0.02	27.00	7.68	0.78	0.00
24.40	7.68	0.78	0.02	27.05	7.68	0.78	0.00
24.45	7.68	0.78	0.02	27.10	7.68	0.78	0.00
24.50	7.68	0.78	0.02	27.15	7.68	0.78	0.00
24.55	7.68	0.78	0.02	27.20	7.68	0.78	0.00
24.60	7.68	0.78	0.02	27.25	7.68	0.78	0.00
24.65	7.68	0.78	0.01	27.30	7.68	0.78	0.00
24.70	7.68	0.78	0.01	27.35	7.68	0.78	0.00
24.75	7.68	0.78	0.01	27.40	7.68	0.78	0.00
24.80	7.68	0.78	0.01	27.45	7.68	0.78	0.00
24.85	7.68	0.78	0.01	27.50	7.68	0.78	0.00
24.90	7.68	0.78	0.01	27.55	7.68	0.78	0.00
24.95	7.68	0.78	0.01	27.60	7.68	0.78	0.00
25.00	7.68	0.78	0.01	27.65	7.68	0.78	0.00
25.05	7.68	0.78	0.01	27.70	7.68	0.78	0.00
25.10	7.68	0.78	0.00	27.75	7.68	0.78	0.00
25.15	7.68	0.78	0.00	27.80	7.68	0.78	0.00
25.20	7.68	0.78	0.00	27.85	7.68	0.78	0.00
25.25	7.68	0.78	0.00	27.90	7.68	0.78	0.00
25.30	7.68	0.78	0.00	27.95	7.68	0.78	0.00
25.35	7.68	0.78	0.00	28.00	7.68	0.78	0.00
25.40	7.68	0.78	0.00	28.05	7.68	0.78	0.00
25.45	7.68	0.78	0.00	28.10	7.68	0.78	0.00
25.50	7.68	0.78	0.00	28.15	7.68	0.78	0.00
25.55	7.68	0.78	0.00	28.20	7.68	0.78	0.00
25.60	7.68	0.78	0.00	28.25	7.68	0.78	0.00
25.65	7.68	0.78	0.00	28.30	7.68	0.78	0.00
25.70	7.68	0.78	0.00	28.35	7.68	0.78	0.00
25.75	7.68	0.78	0.00	28.40	7.68	0.78	0.00
25.80	7.68	0.78	0.00	28.45	7.68	0.78	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	7.68	0.78	0.00	31.15	7.68	0.78	0.00
28.55	7.68	0.78	0.00	31.20	7.68	0.78	0.00
28.60	7.68	0.78	0.00	31.25	7.68	0.78	0.00
28.65	7.68	0.78	0.00	31.30	7.68	0.78	0.00
28.70	7.68	0.78	0.00	31.35	7.68	0.78	0.00
28.75	7.68	0.78	0.00	31.40	7.68	0.78	0.00
28.80	7.68	0.78	0.00	31.45	7.68	0.78	0.00
28.85	7.68	0.78	0.00	31.50	7.68	0.78	0.00
28.90	7.68	0.78	0.00	31.55	7.68	0.78	0.00
28.95	7.68	0.78	0.00	31.60	7.68	0.78	0.00
29.00	7.68	0.78	0.00	31.65	7.68	0.78	0.00
29.05	7.68	0.78	0.00	31.70	7.68	0.78	0.00
29.10	7.68	0.78	0.00	31.75	7.68	0.78	0.00
29.15	7.68	0.78	0.00	31.80	7.68	0.78	0.00
29.20	7.68	0.78	0.00	31.85	7.68	0.78	0.00
29.25	7.68	0.78	0.00	31.90	7.68	0.78	0.00
29.30	7.68	0.78	0.00	31.95	7.68	0.78	0.00
29.35	7.68	0.78	0.00	32.00	7.68	0.78	0.00
29.40	7.68	0.78	0.00	32.05	7.68	0.78	0.00
29.45	7.68	0.78	0.00	32.10	7.68	0.78	0.00
29.50	7.68	0.78	0.00	32.15	7.68	0.78	0.00
29.55	7.68	0.78	0.00	32.20	7.68	0.78	0.00
29.60	7.68	0.78	0.00	32.25	7.68	0.78	0.00
29.65	7.68	0.78	0.00	32.30	7.68	0.78	0.00
29.70	7.68	0.78	0.00	32.35	7.68	0.78	0.00
29.75	7.68	0.78	0.00	32.40	7.68	0.78	0.00
29.80	7.68	0.78	0.00	32.45	7.68	0.78	0.00
29.85	7.68	0.78	0.00	32.50	7.68	0.78	0.00
29.90	7.68	0.78	0.00	32.55	7.68	0.78	0.00
29.95	7.68	0.78	0.00	32.60	7.68	0.78	0.00
30.00	7.68	0.78	0.00	32.65	7.68	0.78	0.00
30.05	7.68	0.78	0.00	32.70	7.68	0.78	0.00
30.10	7.68	0.78	0.00	32.75	7.68	0.78	0.00
30.15	7.68	0.78	0.00	32.80	7.68	0.78	0.00
30.20	7.68	0.78	0.00	32.85	7.68	0.78	0.00
30.25	7.68	0.78	0.00	32.90	7.68	0.78	0.00
30.30	7.68	0.78	0.00	32.95	7.68	0.78	0.00
30.35	7.68	0.78	0.00	33.00	7.68	0.78	0.00
30.40	7.68	0.78	0.00	33.05	7.68	0.78	0.00
30.45	7.68	0.78	0.00	33.10	7.68	0.78	0.00
30.50	7.68	0.78	0.00	33.15	7.68	0.78	0.00
30.55	7.68	0.78	0.00	33.20	7.68	0.78	0.00
30.60	7.68	0.78	0.00	33.25	7.68	0.78	0.00
30.65	7.68	0.78	0.00	33.30	7.68	0.78	0.00
30.70	7.68	0.78	0.00	33.35	7.68	0.78	0.00
30.75	7.68	0.78	0.00	33.40	7.68	0.78	0.00
30.80	7.68	0.78	0.00	33.45	7.68	0.78	0.00
30.85	7.68	0.78	0.00	33.50	7.68	0.78	0.00
30.90	7.68	0.78	0.00	33.55	7.68	0.78	0.00
30.95	7.68	0.78	0.00	33.60	7.68	0.78	0.00
31.00	7.68	0.78	0.00	33.65	7.68	0.78	0.00
31.05	7.68	0.78	0.00	33.70	7.68	0.78	0.00
31.10	7.68	0.78	0.00	33.75	7.68	0.78	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	7.68	0.78	0.00	36.45	7.68	0.78	0.00
33.85	7.68	0.78	0.00	36.50	7.68	0.78	0.00
33.90	7.68	0.78	0.00	36.55	7.68	0.78	0.00
33.95	7.68	0.78	0.00	36.60	7.68	0.78	0.00
34.00	7.68	0.78	0.00	36.65	7.68	0.78	0.00
34.05	7.68	0.78	0.00	36.70	7.68	0.78	0.00
34.10	7.68	0.78	0.00	36.75	7.68	0.78	0.00
34.15	7.68	0.78	0.00	36.80	7.68	0.78	0.00
34.20	7.68	0.78	0.00	36.85	7.68	0.78	0.00
34.25	7.68	0.78	0.00	36.90	7.68	0.78	0.00
34.30	7.68	0.78	0.00	36.95	7.68	0.78	0.00
34.35	7.68	0.78	0.00	37.00	7.68	0.78	0.00
34.40	7.68	0.78	0.00	37.05	7.68	0.78	0.00
34.45	7.68	0.78	0.00	37.10	7.68	0.78	0.00
34.50	7.68	0.78	0.00	37.15	7.68	0.78	0.00
34.55	7.68	0.78	0.00	37.20	7.68	0.78	0.00
34.60	7.68	0.78	0.00	37.25	7.68	0.78	0.00
34.65	7.68	0.78	0.00	37.30	7.68	0.78	0.00
34.70	7.68	0.78	0.00	37.35	7.68	0.78	0.00
34.75	7.68	0.78	0.00	37.40	7.68	0.78	0.00
34.80	7.68	0.78	0.00	37.45	7.68	0.78	0.00
34.85	7.68	0.78	0.00	37.50	7.68	0.78	0.00
34.90	7.68	0.78	0.00	37.55	7.68	0.78	0.00
34.95	7.68	0.78	0.00	37.60	7.68	0.78	0.00
35.00	7.68	0.78	0.00	37.65	7.68	0.78	0.00
35.05	7.68	0.78	0.00	37.70	7.68	0.78	0.00
35.10	7.68	0.78	0.00	37.75	7.68	0.78	0.00
35.15	7.68	0.78	0.00	37.80	7.68	0.78	0.00
35.20	7.68	0.78	0.00	37.85	7.68	0.78	0.00
35.25	7.68	0.78	0.00	37.90	7.68	0.78	0.00
35.30	7.68	0.78	0.00	37.95	7.68	0.78	0.00
35.35	7.68	0.78	0.00	38.00	7.68	0.78	0.00
35.40	7.68	0.78	0.00	38.05	7.68	0.78	0.00
35.45	7.68	0.78	0.00	38.10	7.68	0.78	0.00
35.50	7.68	0.78	0.00	38.15	7.68	0.78	0.00
35.55	7.68	0.78	0.00	38.20	7.68	0.78	0.00
35.60	7.68	0.78	0.00	38.25	7.68	0.78	0.00
35.65	7.68	0.78	0.00	38.30	7.68	0.78	0.00
35.70	7.68	0.78	0.00	38.35	7.68	0.78	0.00
35.75	7.68	0.78	0.00	38.40	7.68	0.78	0.00
35.80	7.68	0.78	0.00	38.45	7.68	0.78	0.00
35.85	7.68	0.78	0.00	38.50	7.68	0.78	0.00
35.90	7.68	0.78	0.00	38.55	7.68	0.78	0.00
35.95	7.68	0.78	0.00	38.60	7.68	0.78	0.00
36.00	7.68	0.78	0.00	38.65	7.68	0.78	0.00
36.05	7.68	0.78	0.00	38.70	7.68	0.78	0.00
36.10	7.68	0.78	0.00	38.75	7.68	0.78	0.00
36.15	7.68	0.78	0.00	38.80	7.68	0.78	0.00
36.20	7.68	0.78	0.00	38.85	7.68	0.78	0.00
36.25	7.68	0.78	0.00	38.90	7.68	0.78	0.00
36.30	7.68	0.78	0.00	38.95	7.68	0.78	0.00
36.35	7.68	0.78	0.00	39.00	7.68	0.78	0.00
36.40	7.68	0.78	0.00	39.05	7.68	0.78	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	7.68	0.78	0.00	41.75	7.68	0.78	0.00
39.15	7.68	0.78	0.00	41.80	7.68	0.78	0.00
39.20	7.68	0.78	0.00	41.85	7.68	0.78	0.00
39.25	7.68	0.78	0.00	41.90	7.68	0.78	0.00
39.30	7.68	0.78	0.00	41.95	7.68	0.78	0.00
39.35	7.68	0.78	0.00	42.00	7.68	0.78	0.00
39.40	7.68	0.78	0.00	42.05	7.68	0.78	0.00
39.45	7.68	0.78	0.00	42.10	7.68	0.78	0.00
39.50	7.68	0.78	0.00	42.15	7.68	0.78	0.00
39.55	7.68	0.78	0.00	42.20	7.68	0.78	0.00
39.60	7.68	0.78	0.00	42.25	7.68	0.78	0.00
39.65	7.68	0.78	0.00	42.30	7.68	0.78	0.00
39.70	7.68	0.78	0.00	42.35	7.68	0.78	0.00
39.75	7.68	0.78	0.00	42.40	7.68	0.78	0.00
39.80	7.68	0.78	0.00	42.45	7.68	0.78	0.00
39.85	7.68	0.78	0.00	42.50	7.68	0.78	0.00
39.90	7.68	0.78	0.00	42.55	7.68	0.78	0.00
39.95	7.68	0.78	0.00	42.60	7.68	0.78	0.00
40.00	7.68	0.78	0.00	42.65	7.68	0.78	0.00
40.05	7.68	0.78	0.00	42.70	7.68	0.78	0.00
40.10	7.68	0.78	0.00	42.75	7.68	0.78	0.00
40.15	7.68	0.78	0.00	42.80	7.68	0.78	0.00
40.20	7.68	0.78	0.00	42.85	7.68	0.78	0.00
40.25	7.68	0.78	0.00	42.90	7.68	0.78	0.00
40.30	7.68	0.78	0.00	42.95	7.68	0.78	0.00
40.35	7.68	0.78	0.00	43.00	7.68	0.78	0.00
40.40	7.68	0.78	0.00	43.05	7.68	0.78	0.00
40.45	7.68	0.78	0.00	43.10	7.68	0.78	0.00
40.50	7.68	0.78	0.00	43.15	7.68	0.78	0.00
40.55	7.68	0.78	0.00	43.20	7.68	0.78	0.00
40.60	7.68	0.78	0.00	43.25	7.68	0.78	0.00
40.65	7.68	0.78	0.00	43.30	7.68	0.78	0.00
40.70	7.68	0.78	0.00	43.35	7.68	0.78	0.00
40.75	7.68	0.78	0.00	43.40	7.68	0.78	0.00
40.80	7.68	0.78	0.00	43.45	7.68	0.78	0.00
40.85	7.68	0.78	0.00	43.50	7.68	0.78	0.00
40.90	7.68	0.78	0.00	43.55	7.68	0.78	0.00
40.95	7.68	0.78	0.00	43.60	7.68	0.78	0.00
41.00	7.68	0.78	0.00	43.65	7.68	0.78	0.00
41.05	7.68	0.78	0.00	43.70	7.68	0.78	0.00
41.10	7.68	0.78	0.00	43.75	7.68	0.78	0.00
41.15	7.68	0.78	0.00	43.80	7.68	0.78	0.00
41.20	7.68	0.78	0.00	43.85	7.68	0.78	0.00
41.25	7.68	0.78	0.00	43.90	7.68	0.78	0.00
41.30	7.68	0.78	0.00	43.95	7.68	0.78	0.00
41.35	7.68	0.78	0.00	44.00	7.68	0.78	0.00
41.40	7.68	0.78	0.00	44.05	7.68	0.78	0.00
41.45	7.68	0.78	0.00	44.10	7.68	0.78	0.00
41.50	7.68	0.78	0.00	44.15	7.68	0.78	0.00
41.55	7.68	0.78	0.00	44.20	7.68	0.78	0.00
41.60	7.68	0.78	0.00	44.25	7.68	0.78	0.00
41.65	7.68	0.78	0.00	44.30	7.68	0.78	0.00
41.70	7.68	0.78	0.00	44.35	7.68	0.78	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	7.68	0.78	0.00	47.05	7.68	0.78	0.00
44.45	7.68	0.78	0.00	47.10	7.68	0.78	0.00
44.50	7.68	0.78	0.00	47.15	7.68	0.78	0.00
44.55	7.68	0.78	0.00	47.20	7.68	0.78	0.00
44.60	7.68	0.78	0.00	47.25	7.68	0.78	0.00
44.65	7.68	0.78	0.00	47.30	7.68	0.78	0.00
44.70	7.68	0.78	0.00	47.35	7.68	0.78	0.00
44.75	7.68	0.78	0.00	47.40	7.68	0.78	0.00
44.80	7.68	0.78	0.00	47.45	7.68	0.78	0.00
44.85	7.68	0.78	0.00	47.50	7.68	0.78	0.00
44.90	7.68	0.78	0.00	47.55	7.68	0.78	0.00
44.95	7.68	0.78	0.00	47.60	7.68	0.78	0.00
45.00	7.68	0.78	0.00	47.65	7.68	0.78	0.00
45.05	7.68	0.78	0.00	47.70	7.68	0.78	0.00
45.10	7.68	0.78	0.00	47.75	7.68	0.78	0.00
45.15	7.68	0.78	0.00	47.80	7.68	0.78	0.00
45.20	7.68	0.78	0.00	47.85	7.68	0.78	0.00
45.25	7.68	0.78	0.00	47.90	7.68	0.78	0.00
45.30	7.68	0.78	0.00	47.95	7.68	0.78	0.00
45.35	7.68	0.78	0.00	48.00	7.68	0.78	0.00
45.40	7.68	0.78	0.00	48.05	7.68	0.78	0.00
45.45	7.68	0.78	0.00	48.10	7.68	0.78	0.00
45.50	7.68	0.78	0.00	48.15	7.68	0.78	0.00
45.55	7.68	0.78	0.00	48.20	7.68	0.78	0.00
45.60	7.68	0.78	0.00	48.25	7.68	0.78	0.00
45.65	7.68	0.78	0.00	48.30	7.68	0.78	0.00
45.70	7.68	0.78	0.00	48.35	7.68	0.78	0.00
45.75	7.68	0.78	0.00	48.40	7.68	0.78	0.00
45.80	7.68	0.78	0.00	48.45	7.68	0.78	0.00
45.85	7.68	0.78	0.00	48.50	7.68	0.78	0.00
45.90	7.68	0.78	0.00	48.55	7.68	0.78	0.00
45.95	7.68	0.78	0.00	48.60	7.68	0.78	0.00
46.00	7.68	0.78	0.00	48.65	7.68	0.78	0.00
46.05	7.68	0.78	0.00	48.70	7.68	0.78	0.00
46.10	7.68	0.78	0.00	48.75	7.68	0.78	0.00
46.15	7.68	0.78	0.00	48.80	7.68	0.78	0.00
46.20	7.68	0.78	0.00	48.85	7.68	0.78	0.00
46.25	7.68	0.78	0.00	48.90	7.68	0.78	0.00
46.30	7.68	0.78	0.00	48.95	7.68	0.78	0.00
46.35	7.68	0.78	0.00	49.00	7.68	0.78	0.00
46.40	7.68	0.78	0.00	49.05	7.68	0.78	0.00
46.45	7.68	0.78	0.00	49.10	7.68	0.78	0.00
46.50	7.68	0.78	0.00	49.15	7.68	0.78	0.00
46.55	7.68	0.78	0.00	49.20	7.68	0.78	0.00
46.60	7.68	0.78	0.00	49.25	7.68	0.78	0.00
46.65	7.68	0.78	0.00	49.30	7.68	0.78	0.00
46.70	7.68	0.78	0.00	49.35	7.68	0.78	0.00
46.75	7.68	0.78	0.00	49.40	7.68	0.78	0.00
46.80	7.68	0.78	0.00	49.45	7.68	0.78	0.00
46.85	7.68	0.78	0.00	49.50	7.68	0.78	0.00
46.90	7.68	0.78	0.00	49.55	7.68	0.78	0.00
46.95	7.68	0.78	0.00	49.60	7.68	0.78	0.00
47.00	7.68	0.78	0.00	49.65	7.68	0.78	0.00

Hydrograph for Subcatchment 4S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	7.68	0.78	0.00
49.75	7.68	0.78	0.00
49.80	7.68	0.78	0.00
49.85	7.68	0.78	0.00
49.90	7.68	0.78	0.00
49.95	7.68	0.78	0.00
50.00	7.68	0.78	0.00

Summary for Subcatchment 5S: OSB-1

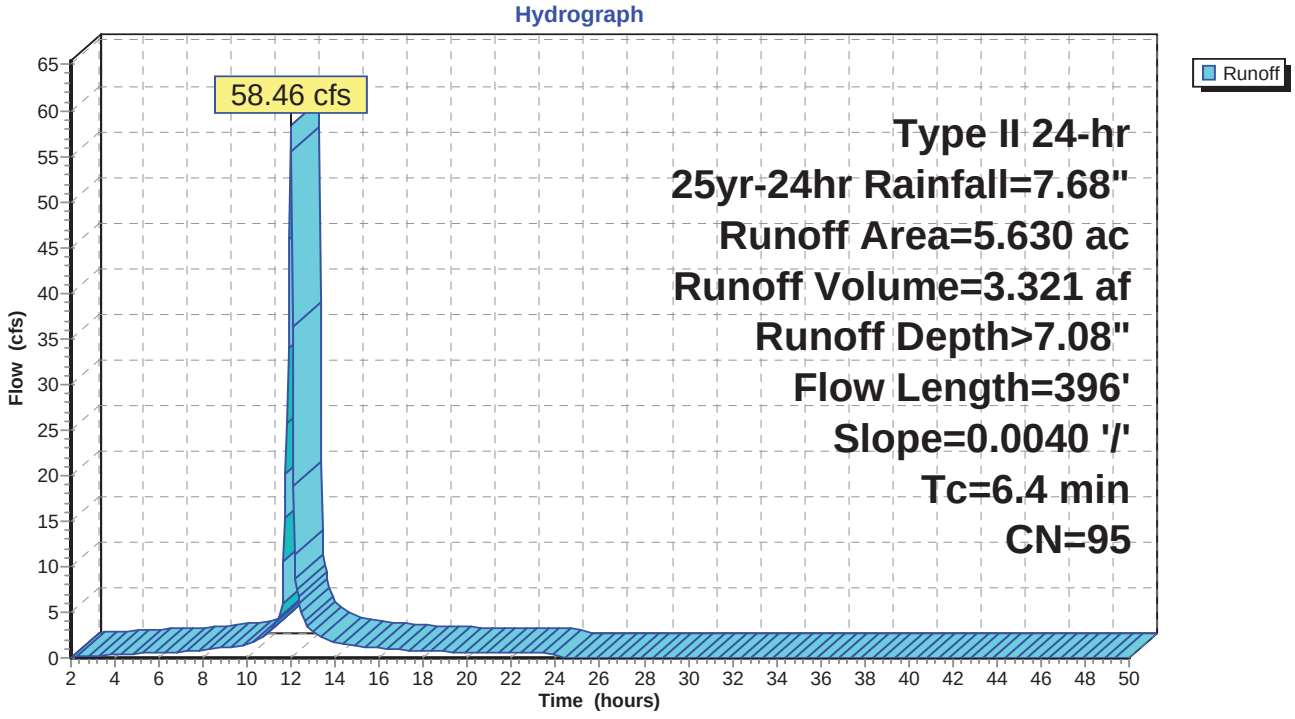
Runoff = 58.46 cfs @ 11.97 hrs, Volume= 3.321 af, Depth> 7.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-50.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
*	5.350	98	Gravel surface, HSG A
	0.280	36	Woods, Fair, HSG A
	5.630	95	Weighted Average
	0.280		4.97% Pervious Area
	5.350		95.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	264	0.0040	1.04		**Sheet Flow, Gravel Surface** Smooth surfaces n= 0.011 P2= 4.50"
2.2	132	0.0040	1.02		**Shallow Concentrated Flow, Gravel Surface** Unpaved Kv= 16.1 fps
6.4	396	Total			

Subcatchment 5S: OSB-1



Hydrograph for Subcatchment 5S: OSB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
2.00	0.17	0.01	0.09	4.65	0.44	0.13	0.41
2.05	0.17	0.01	0.10	4.70	0.45	0.13	0.41
2.10	0.18	0.01	0.11	4.75	0.45	0.14	0.42
2.15	0.18	0.01	0.11	4.80	0.46	0.14	0.43
2.20	0.19	0.01	0.12	4.85	0.47	0.15	0.43
2.25	0.19	0.01	0.13	4.90	0.47	0.15	0.44
2.30	0.20	0.01	0.13	4.95	0.48	0.15	0.44
2.35	0.20	0.01	0.14	5.00	0.48	0.16	0.45
2.40	0.21	0.02	0.15	5.05	0.49	0.16	0.46
2.45	0.21	0.02	0.15	5.10	0.50	0.17	0.46
2.50	0.22	0.02	0.16	5.15	0.50	0.17	0.47
2.55	0.22	0.02	0.17	5.20	0.51	0.18	0.47
2.60	0.23	0.02	0.17	5.25	0.52	0.18	0.48
2.65	0.23	0.02	0.18	5.30	0.52	0.18	0.49
2.70	0.24	0.03	0.19	5.35	0.53	0.19	0.49
2.75	0.24	0.03	0.19	5.40	0.53	0.19	0.50
2.80	0.25	0.03	0.20	5.45	0.54	0.20	0.50
2.85	0.25	0.03	0.20	5.50	0.55	0.20	0.51
2.90	0.26	0.03	0.21	5.55	0.55	0.21	0.52
2.95	0.26	0.04	0.22	5.60	0.56	0.21	0.52
3.00	0.26	0.04	0.22	5.65	0.57	0.22	0.53
3.05	0.27	0.04	0.23	5.70	0.57	0.22	0.53
3.10	0.27	0.04	0.23	5.75	0.58	0.23	0.54
3.15	0.28	0.04	0.24	5.80	0.59	0.23	0.55
3.20	0.29	0.05	0.24	5.85	0.59	0.24	0.55
3.25	0.29	0.05	0.25	5.90	0.60	0.24	0.56
3.30	0.30	0.05	0.26	5.95	0.61	0.25	0.56
3.35	0.30	0.05	0.26	6.00	0.61	0.25	0.57
3.40	0.31	0.06	0.27	6.05	0.62	0.26	0.58
3.45	0.31	0.06	0.27	6.10	0.63	0.26	0.58
3.50	0.32	0.06	0.28	6.15	0.64	0.27	0.59
3.55	0.32	0.06	0.28	6.20	0.64	0.27	0.59
3.60	0.33	0.07	0.29	6.25	0.65	0.28	0.60
3.65	0.33	0.07	0.29	6.30	0.66	0.28	0.61
3.70	0.34	0.07	0.30	6.35	0.66	0.29	0.61
3.75	0.34	0.07	0.30	6.40	0.67	0.29	0.62
3.80	0.35	0.08	0.31	6.45	0.68	0.30	0.62
3.85	0.35	0.08	0.31	6.50	0.69	0.30	0.63
3.90	0.36	0.08	0.32	6.55	0.69	0.31	0.64
3.95	0.36	0.08	0.32	6.60	0.70	0.32	0.64
4.00	0.37	0.09	0.33	6.65	0.71	0.32	0.65
4.05	0.37	0.09	0.33	6.70	0.71	0.33	0.65
4.10	0.38	0.09	0.34	6.75	0.72	0.33	0.66
4.15	0.38	0.10	0.35	6.80	0.73	0.34	0.66
4.20	0.39	0.10	0.35	6.85	0.74	0.34	0.67
4.25	0.40	0.10	0.36	6.90	0.75	0.35	0.68
4.30	0.40	0.11	0.36	6.95	0.75	0.36	0.68
4.35	0.41	0.11	0.37	7.00	0.76	0.36	0.69
4.40	0.41	0.11	0.38	7.05	0.77	0.37	0.69
4.45	0.42	0.12	0.38	7.10	0.78	0.38	0.70
4.50	0.42	0.12	0.39	7.15	0.78	0.38	0.70
4.55	0.43	0.12	0.39	7.20	0.79	0.39	0.71
4.60	0.44	0.13	0.40	7.25	0.80	0.39	0.72

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
7.30	0.81	0.40	0.72	9.95	1.37	0.90	1.49
7.35	0.82	0.41	0.73	10.00	1.39	0.91	1.53
7.40	0.82	0.41	0.73	10.05	1.41	0.93	1.56
7.45	0.83	0.42	0.74	10.10	1.42	0.94	1.60
7.50	0.84	0.43	0.74	10.15	1.44	0.96	1.65
7.55	0.85	0.43	0.75	10.20	1.46	0.97	1.70
7.60	0.86	0.44	0.76	10.25	1.47	0.99	1.75
7.65	0.86	0.45	0.76	10.30	1.49	1.00	1.80
7.70	0.87	0.45	0.77	10.35	1.51	1.02	1.85
7.75	0.88	0.46	0.77	10.40	1.53	1.04	1.90
7.80	0.89	0.47	0.78	10.45	1.55	1.06	1.95
7.85	0.90	0.48	0.78	10.50	1.57	1.07	2.01
7.90	0.90	0.48	0.79	10.55	1.59	1.09	2.06
7.95	0.91	0.49	0.80	10.60	1.61	1.11	2.12
8.00	0.92	0.50	0.80	10.65	1.63	1.13	2.20
8.05	0.93	0.50	0.81	10.70	1.65	1.15	2.28
8.10	0.94	0.51	0.82	10.75	1.68	1.18	2.36
8.15	0.95	0.52	0.83	10.80	1.70	1.20	2.45
8.20	0.96	0.53	0.85	10.85	1.73	1.22	2.53
8.25	0.97	0.53	0.87	10.90	1.75	1.25	2.62
8.30	0.98	0.54	0.89	10.95	1.78	1.27	2.71
8.35	0.99	0.55	0.91	11.00	1.80	1.30	2.79
8.40	1.00	0.56	0.94	11.05	1.83	1.32	2.88
8.45	1.01	0.57	0.96	11.10	1.86	1.35	3.01
8.50	1.02	0.58	0.98	11.15	1.90	1.38	3.18
8.55	1.03	0.59	1.00	11.20	1.93	1.42	3.38
8.60	1.04	0.60	1.02	11.25	1.97	1.45	3.58
8.65	1.05	0.60	1.04	11.30	2.00	1.49	3.78
8.70	1.06	0.61	1.06	11.35	2.04	1.52	3.99
8.75	1.07	0.62	1.08	11.40	2.08	1.56	4.19
8.80	1.08	0.63	1.10	11.45	2.13	1.61	4.40
8.85	1.09	0.64	1.13	11.50	2.17	1.65	4.61
8.90	1.10	0.65	1.15	11.55	2.24	1.71	5.01
8.95	1.12	0.67	1.17	11.60	2.36	1.82	6.87
9.00	1.13	0.68	1.19	11.65	2.52	1.98	10.65
9.05	1.14	0.69	1.21	11.70	2.72	2.18	15.28
9.10	1.15	0.70	1.23	11.75	2.97	2.42	20.23
9.15	1.17	0.71	1.23	11.80	3.31	2.75	25.65
9.20	1.18	0.72	1.24	11.85	3.77	3.21	33.92
9.25	1.19	0.73	1.24	11.90	4.36	3.79	45.86
9.30	1.20	0.74	1.24	11.95	4.87	4.29	**57.61**
9.35	1.21	0.75	1.25	12.00	5.09	4.51	55.55
9.40	1.23	0.76	1.25	12.05	5.17	4.58	36.33
9.45	1.24	0.77	1.25	12.10	5.24	4.65	18.82
9.50	1.25	0.79	1.25	12.15	5.30	4.72	11.39
9.55	1.26	0.80	1.26	12.20	5.37	4.78	8.68
9.60	1.28	0.81	1.27	12.25	5.42	4.84	7.47
9.65	1.29	0.82	1.29	12.30	5.48	4.89	6.75
9.70	1.30	0.83	1.33	12.35	5.52	4.94	6.22
9.75	1.32	0.84	1.36	12.40	5.57	4.98	5.72
9.80	1.33	0.86	1.39	12.45	5.61	5.02	5.23
9.85	1.35	0.87	1.43	12.50	5.64	5.06	4.74
9.90	1.36	0.88	1.46	12.55	5.68	5.09	4.26

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
12.60	5.71	5.12	3.90	15.25	6.61	6.02	1.25
12.65	5.74	5.15	3.69	15.30	6.62	6.03	1.24
12.70	5.77	5.18	3.55	15.35	6.63	6.04	1.22
12.75	5.80	5.21	3.43	15.40	6.64	6.05	1.21
12.80	5.83	5.24	3.31	15.45	6.65	6.06	1.19
12.85	5.85	5.27	3.20	15.50	6.66	6.07	1.18
12.90	5.88	5.29	3.09	15.55	6.67	6.08	1.16
12.95	5.91	5.32	2.98	15.60	6.68	6.09	1.15
13.00	5.93	5.34	2.86	15.65	6.69	6.10	1.13
13.05	5.95	5.36	2.75	15.70	6.70	6.11	1.12
13.10	5.97	5.39	2.66	15.75	6.71	6.12	1.10
13.15	6.00	5.41	2.59	15.80	6.72	6.13	1.09
13.20	6.02	5.43	2.52	15.85	6.73	6.14	1.07
13.25	6.04	5.45	2.46	15.90	6.74	6.15	1.06
13.30	6.06	5.47	2.40	15.95	6.75	6.16	1.04
13.35	6.08	5.49	2.34	16.00	6.76	6.17	1.03
13.40	6.10	5.51	2.28	16.05	6.77	6.17	1.01
13.45	6.12	5.53	2.22	16.10	6.78	6.18	1.00
13.50	6.14	5.55	2.16	16.15	6.78	6.19	0.99
13.55	6.15	5.56	2.10	16.20	6.79	6.20	0.99
13.60	6.17	5.58	2.04	16.25	6.80	6.21	0.98
13.65	6.19	5.60	1.99	16.30	6.81	6.22	0.98
13.70	6.21	5.62	1.95	16.35	6.82	6.23	0.97
13.75	6.22	5.63	1.91	16.40	6.83	6.23	0.96
13.80	6.24	5.65	1.86	16.45	6.84	6.24	0.96
13.85	6.25	5.66	1.82	16.50	6.84	6.25	0.95
13.90	6.27	5.68	1.78	16.55	6.85	6.26	0.95
13.95	6.28	5.69	1.73	16.60	6.86	6.27	0.94
14.00	6.30	5.71	1.69	16.65	6.87	6.28	0.94
14.05	6.31	5.72	1.65	16.70	6.88	6.28	0.93
14.10	6.33	5.74	1.61	16.75	6.89	6.29	0.93
14.15	6.34	5.75	1.59	16.80	6.89	6.30	0.92
14.20	6.35	5.76	1.57	16.85	6.90	6.31	0.92
14.25	6.37	5.78	1.56	16.90	6.91	6.32	0.91
14.30	6.38	5.79	1.54	16.95	6.92	6.32	0.91
14.35	6.39	5.80	1.53	17.00	6.93	6.33	0.90
14.40	6.41	5.82	1.51	17.05	6.93	6.34	0.89
14.45	6.42	5.83	1.50	17.10	6.94	6.35	0.89
14.50	6.43	5.84	1.48	17.15	6.95	6.35	0.88
14.55	6.45	5.85	1.47	17.20	6.96	6.36	0.88
14.60	6.46	5.87	1.45	17.25	6.96	6.37	0.87
14.65	6.47	5.88	1.44	17.30	6.97	6.38	0.87
14.70	6.48	5.89	1.42	17.35	6.98	6.39	0.86
14.75	6.50	5.90	1.41	17.40	6.99	6.39	0.86
14.80	6.51	5.92	1.39	17.45	6.99	6.40	0.85
14.85	6.52	5.93	1.38	17.50	7.00	6.41	0.85
14.90	6.53	5.94	1.36	17.55	7.01	6.41	0.84
14.95	6.54	5.95	1.35	17.60	7.02	6.42	0.83
15.00	6.55	5.96	1.33	17.65	7.02	6.43	0.83
15.05	6.57	5.97	1.32	17.70	7.03	6.44	0.82
15.10	6.58	5.99	1.30	17.75	7.04	6.44	0.82
15.15	6.59	6.00	1.29	17.80	7.05	6.45	0.81
15.20	6.60	6.01	1.27	17.85	7.05	6.46	0.81

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
17.90	7.06	6.46	0.80	20.55	7.37	6.77	0.55
17.95	7.07	6.47	0.80	20.60	7.37	6.77	0.55
18.00	7.07	6.48	0.79	20.65	7.38	6.78	0.55
18.05	7.08	6.49	0.79	20.70	7.38	6.78	0.55
18.10	7.09	6.49	0.78	20.75	7.39	6.79	0.55
18.15	7.09	6.50	0.78	20.80	7.39	6.79	0.55
18.20	7.10	6.51	0.77	20.85	7.39	6.80	0.55
18.25	7.11	6.51	0.76	20.90	7.40	6.80	0.55
18.30	7.11	6.52	0.76	20.95	7.40	6.81	0.55
18.35	7.12	6.53	0.75	21.00	7.41	6.81	0.54
18.40	7.13	6.53	0.75	21.05	7.41	6.82	0.54
18.45	7.13	6.54	0.74	21.10	7.42	6.82	0.54
18.50	7.14	6.55	0.74	21.15	7.42	6.83	0.54
18.55	7.15	6.55	0.73	21.20	7.43	6.83	0.54
18.60	7.15	6.56	0.73	21.25	7.43	6.84	0.54
18.65	7.16	6.56	0.72	21.30	7.44	6.84	0.54
18.70	7.17	6.57	0.72	21.35	7.44	6.85	0.54
18.75	7.17	6.58	0.71	21.40	7.45	6.85	0.54
18.80	7.18	6.58	0.70	21.45	7.45	6.86	0.53
18.85	7.18	6.59	0.70	21.50	7.46	6.86	0.53
18.90	7.19	6.59	0.69	21.55	7.46	6.87	0.53
18.95	7.20	6.60	0.69	21.60	7.47	6.87	0.53
19.00	7.20	6.61	0.68	21.65	7.47	6.87	0.53
19.05	7.21	6.61	0.68	21.70	7.48	6.88	0.53
19.10	7.21	6.62	0.67	21.75	7.48	6.88	0.53
19.15	7.22	6.62	0.67	21.80	7.48	6.89	0.53
19.20	7.23	6.63	0.66	21.85	7.49	6.89	0.53
19.25	7.23	6.64	0.66	21.90	7.49	6.90	0.53
19.30	7.24	6.64	0.65	21.95	7.50	6.90	0.52
19.35	7.24	6.65	0.65	22.00	7.50	6.91	0.52
19.40	7.25	6.65	0.64	22.05	7.51	6.91	0.52
19.45	7.25	6.66	0.63	22.10	7.51	6.92	0.52
19.50	7.26	6.66	0.63	22.15	7.52	6.92	0.52
19.55	7.26	6.67	0.62	22.20	7.52	6.93	0.52
19.60	7.27	6.67	0.62	22.25	7.53	6.93	0.52
19.65	7.28	6.68	0.61	22.30	7.53	6.93	0.52
19.70	7.28	6.68	0.61	22.35	7.54	6.94	0.52
19.75	7.29	6.69	0.60	22.40	7.54	6.94	0.51
19.80	7.29	6.70	0.60	22.45	7.54	6.95	0.51
19.85	7.30	6.70	0.59	22.50	7.55	6.95	0.51
19.90	7.30	6.71	0.59	22.55	7.55	6.96	0.51
19.95	7.31	6.71	0.58	22.60	7.56	6.96	0.51
20.00	7.31	6.72	0.57	22.65	7.56	6.97	0.51
20.05	7.32	6.72	0.57	22.70	7.57	6.97	0.51
20.10	7.32	6.73	0.57	22.75	7.57	6.97	0.51
20.15	7.33	6.73	0.56	22.80	7.58	6.98	0.51
20.20	7.33	6.74	0.56	22.85	7.58	6.98	0.50
20.25	7.34	6.74	0.56	22.90	7.58	6.99	0.50
20.30	7.34	6.75	0.56	22.95	7.59	6.99	0.50
20.35	7.35	6.75	0.56	23.00	7.59	7.00	0.50
20.40	7.35	6.76	0.56	23.05	7.60	7.00	0.50
20.45	7.36	6.76	0.56	23.10	7.60	7.01	0.50
20.50	7.36	6.76	0.56	23.15	7.61	7.01	0.50

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
23.20	7.61	7.01	0.50	25.85	7.68	7.08	0.00
23.25	7.62	7.02	0.50	25.90	7.68	7.08	0.00
23.30	7.62	7.02	0.49	25.95	7.68	7.08	0.00
23.35	7.62	7.03	0.49	26.00	7.68	7.08	0.00
23.40	7.63	7.03	0.49	26.05	7.68	7.08	0.00
23.45	7.63	7.04	0.49	26.10	7.68	7.08	0.00
23.50	7.64	7.04	0.49	26.15	7.68	7.08	0.00
23.55	7.64	7.04	0.49	26.20	7.68	7.08	0.00
23.60	7.65	7.05	0.49	26.25	7.68	7.08	0.00
23.65	7.65	7.05	0.49	26.30	7.68	7.08	0.00
23.70	7.65	7.06	0.49	26.35	7.68	7.08	0.00
23.75	7.66	7.06	0.49	26.40	7.68	7.08	0.00
23.80	7.66	7.07	0.48	26.45	7.68	7.08	0.00
23.85	7.67	7.07	0.48	26.50	7.68	7.08	0.00
23.90	7.67	7.07	0.48	26.55	7.68	7.08	0.00
23.95	7.68	7.08	0.48	26.60	7.68	7.08	0.00
24.00	**7.68**	**7.08**	0.48	26.65	7.68	7.08	0.00
24.05	7.68	7.08	0.41	26.70	7.68	7.08	0.00
24.10	7.68	7.08	0.20	26.75	7.68	7.08	0.00
24.15	7.68	7.08	0.06	26.80	7.68	7.08	0.00
24.20	7.68	7.08	0.02	26.85	7.68	7.08	0.00
24.25	7.68	7.08	0.01	26.90	7.68	7.08	0.00
24.30	7.68	7.08	0.00	26.95	7.68	7.08	0.00
24.35	7.68	7.08	0.00	27.00	7.68	7.08	0.00
24.40	7.68	7.08	0.00	27.05	7.68	7.08	0.00
24.45	7.68	7.08	0.00	27.10	7.68	7.08	0.00
24.50	7.68	7.08	0.00	27.15	7.68	7.08	0.00
24.55	7.68	7.08	0.00	27.20	7.68	7.08	0.00
24.60	7.68	7.08	0.00	27.25	7.68	7.08	0.00
24.65	7.68	7.08	0.00	27.30	7.68	7.08	0.00
24.70	7.68	7.08	0.00	27.35	7.68	7.08	0.00
24.75	7.68	7.08	0.00	27.40	7.68	7.08	0.00
24.80	7.68	7.08	0.00	27.45	7.68	7.08	0.00
24.85	7.68	7.08	0.00	27.50	7.68	7.08	0.00
24.90	7.68	7.08	0.00	27.55	7.68	7.08	0.00
24.95	7.68	7.08	0.00	27.60	7.68	7.08	0.00
25.00	7.68	7.08	0.00	27.65	7.68	7.08	0.00
25.05	7.68	7.08	0.00	27.70	7.68	7.08	0.00
25.10	7.68	7.08	0.00	27.75	7.68	7.08	0.00
25.15	7.68	7.08	0.00	27.80	7.68	7.08	0.00
25.20	7.68	7.08	0.00	27.85	7.68	7.08	0.00
25.25	7.68	7.08	0.00	27.90	7.68	7.08	0.00
25.30	7.68	7.08	0.00	27.95	7.68	7.08	0.00
25.35	7.68	7.08	0.00	28.00	7.68	7.08	0.00
25.40	7.68	7.08	0.00	28.05	7.68	7.08	0.00
25.45	7.68	7.08	0.00	28.10	7.68	7.08	0.00
25.50	7.68	7.08	0.00	28.15	7.68	7.08	0.00
25.55	7.68	7.08	0.00	28.20	7.68	7.08	0.00
25.60	7.68	7.08	0.00	28.25	7.68	7.08	0.00
25.65	7.68	7.08	0.00	28.30	7.68	7.08	0.00
25.70	7.68	7.08	0.00	28.35	7.68	7.08	0.00
25.75	7.68	7.08	0.00	28.40	7.68	7.08	0.00
25.80	7.68	7.08	0.00	28.45	7.68	7.08	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
28.50	7.68	7.08	0.00	31.15	7.68	7.08	0.00
28.55	7.68	7.08	0.00	31.20	7.68	7.08	0.00
28.60	7.68	7.08	0.00	31.25	7.68	7.08	0.00
28.65	7.68	7.08	0.00	31.30	7.68	7.08	0.00
28.70	7.68	7.08	0.00	31.35	7.68	7.08	0.00
28.75	7.68	7.08	0.00	31.40	7.68	7.08	0.00
28.80	7.68	7.08	0.00	31.45	7.68	7.08	0.00
28.85	7.68	7.08	0.00	31.50	7.68	7.08	0.00
28.90	7.68	7.08	0.00	31.55	7.68	7.08	0.00
28.95	7.68	7.08	0.00	31.60	7.68	7.08	0.00
29.00	7.68	7.08	0.00	31.65	7.68	7.08	0.00
29.05	7.68	7.08	0.00	31.70	7.68	7.08	0.00
29.10	7.68	7.08	0.00	31.75	7.68	7.08	0.00
29.15	7.68	7.08	0.00	31.80	7.68	7.08	0.00
29.20	7.68	7.08	0.00	31.85	7.68	7.08	0.00
29.25	7.68	7.08	0.00	31.90	7.68	7.08	0.00
29.30	7.68	7.08	0.00	31.95	7.68	7.08	0.00
29.35	7.68	7.08	0.00	32.00	7.68	7.08	0.00
29.40	7.68	7.08	0.00	32.05	7.68	7.08	0.00
29.45	7.68	7.08	0.00	32.10	7.68	7.08	0.00
29.50	7.68	7.08	0.00	32.15	7.68	7.08	0.00
29.55	7.68	7.08	0.00	32.20	7.68	7.08	0.00
29.60	7.68	7.08	0.00	32.25	7.68	7.08	0.00
29.65	7.68	7.08	0.00	32.30	7.68	7.08	0.00
29.70	7.68	7.08	0.00	32.35	7.68	7.08	0.00
29.75	7.68	7.08	0.00	32.40	7.68	7.08	0.00
29.80	7.68	7.08	0.00	32.45	7.68	7.08	0.00
29.85	7.68	7.08	0.00	32.50	7.68	7.08	0.00
29.90	7.68	7.08	0.00	32.55	7.68	7.08	0.00
29.95	7.68	7.08	0.00	32.60	7.68	7.08	0.00
30.00	7.68	7.08	0.00	32.65	7.68	7.08	0.00
30.05	7.68	7.08	0.00	32.70	7.68	7.08	0.00
30.10	7.68	7.08	0.00	32.75	7.68	7.08	0.00
30.15	7.68	7.08	0.00	32.80	7.68	7.08	0.00
30.20	7.68	7.08	0.00	32.85	7.68	7.08	0.00
30.25	7.68	7.08	0.00	32.90	7.68	7.08	0.00
30.30	7.68	7.08	0.00	32.95	7.68	7.08	0.00
30.35	7.68	7.08	0.00	33.00	7.68	7.08	0.00
30.40	7.68	7.08	0.00	33.05	7.68	7.08	0.00
30.45	7.68	7.08	0.00	33.10	7.68	7.08	0.00
30.50	7.68	7.08	0.00	33.15	7.68	7.08	0.00
30.55	7.68	7.08	0.00	33.20	7.68	7.08	0.00
30.60	7.68	7.08	0.00	33.25	7.68	7.08	0.00
30.65	7.68	7.08	0.00	33.30	7.68	7.08	0.00
30.70	7.68	7.08	0.00	33.35	7.68	7.08	0.00
30.75	7.68	7.08	0.00	33.40	7.68	7.08	0.00
30.80	7.68	7.08	0.00	33.45	7.68	7.08	0.00
30.85	7.68	7.08	0.00	33.50	7.68	7.08	0.00
30.90	7.68	7.08	0.00	33.55	7.68	7.08	0.00
30.95	7.68	7.08	0.00	33.60	7.68	7.08	0.00
31.00	7.68	7.08	0.00	33.65	7.68	7.08	0.00
31.05	7.68	7.08	0.00	33.70	7.68	7.08	0.00
31.10	7.68	7.08	0.00	33.75	7.68	7.08	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
33.80	7.68	7.08	0.00	36.45	7.68	7.08	0.00
33.85	7.68	7.08	0.00	36.50	7.68	7.08	0.00
33.90	7.68	7.08	0.00	36.55	7.68	7.08	0.00
33.95	7.68	7.08	0.00	36.60	7.68	7.08	0.00
34.00	7.68	7.08	0.00	36.65	7.68	7.08	0.00
34.05	7.68	7.08	0.00	36.70	7.68	7.08	0.00
34.10	7.68	7.08	0.00	36.75	7.68	7.08	0.00
34.15	7.68	7.08	0.00	36.80	7.68	7.08	0.00
34.20	7.68	7.08	0.00	36.85	7.68	7.08	0.00
34.25	7.68	7.08	0.00	36.90	7.68	7.08	0.00
34.30	7.68	7.08	0.00	36.95	7.68	7.08	0.00
34.35	7.68	7.08	0.00	37.00	7.68	7.08	0.00
34.40	7.68	7.08	0.00	37.05	7.68	7.08	0.00
34.45	7.68	7.08	0.00	37.10	7.68	7.08	0.00
34.50	7.68	7.08	0.00	37.15	7.68	7.08	0.00
34.55	7.68	7.08	0.00	37.20	7.68	7.08	0.00
34.60	7.68	7.08	0.00	37.25	7.68	7.08	0.00
34.65	7.68	7.08	0.00	37.30	7.68	7.08	0.00
34.70	7.68	7.08	0.00	37.35	7.68	7.08	0.00
34.75	7.68	7.08	0.00	37.40	7.68	7.08	0.00
34.80	7.68	7.08	0.00	37.45	7.68	7.08	0.00
34.85	7.68	7.08	0.00	37.50	7.68	7.08	0.00
34.90	7.68	7.08	0.00	37.55	7.68	7.08	0.00
34.95	7.68	7.08	0.00	37.60	7.68	7.08	0.00
35.00	7.68	7.08	0.00	37.65	7.68	7.08	0.00
35.05	7.68	7.08	0.00	37.70	7.68	7.08	0.00
35.10	7.68	7.08	0.00	37.75	7.68	7.08	0.00
35.15	7.68	7.08	0.00	37.80	7.68	7.08	0.00
35.20	7.68	7.08	0.00	37.85	7.68	7.08	0.00
35.25	7.68	7.08	0.00	37.90	7.68	7.08	0.00
35.30	7.68	7.08	0.00	37.95	7.68	7.08	0.00
35.35	7.68	7.08	0.00	38.00	7.68	7.08	0.00
35.40	7.68	7.08	0.00	38.05	7.68	7.08	0.00
35.45	7.68	7.08	0.00	38.10	7.68	7.08	0.00
35.50	7.68	7.08	0.00	38.15	7.68	7.08	0.00
35.55	7.68	7.08	0.00	38.20	7.68	7.08	0.00
35.60	7.68	7.08	0.00	38.25	7.68	7.08	0.00
35.65	7.68	7.08	0.00	38.30	7.68	7.08	0.00
35.70	7.68	7.08	0.00	38.35	7.68	7.08	0.00
35.75	7.68	7.08	0.00	38.40	7.68	7.08	0.00
35.80	7.68	7.08	0.00	38.45	7.68	7.08	0.00
35.85	7.68	7.08	0.00	38.50	7.68	7.08	0.00
35.90	7.68	7.08	0.00	38.55	7.68	7.08	0.00
35.95	7.68	7.08	0.00	38.60	7.68	7.08	0.00
36.00	7.68	7.08	0.00	38.65	7.68	7.08	0.00
36.05	7.68	7.08	0.00	38.70	7.68	7.08	0.00
36.10	7.68	7.08	0.00	38.75	7.68	7.08	0.00
36.15	7.68	7.08	0.00	38.80	7.68	7.08	0.00
36.20	7.68	7.08	0.00	38.85	7.68	7.08	0.00
36.25	7.68	7.08	0.00	38.90	7.68	7.08	0.00
36.30	7.68	7.08	0.00	38.95	7.68	7.08	0.00
36.35	7.68	7.08	0.00	39.00	7.68	7.08	0.00
36.40	7.68	7.08	0.00	39.05	7.68	7.08	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
39.10	7.68	7.08	0.00	41.75	7.68	7.08	0.00
39.15	7.68	7.08	0.00	41.80	7.68	7.08	0.00
39.20	7.68	7.08	0.00	41.85	7.68	7.08	0.00
39.25	7.68	7.08	0.00	41.90	7.68	7.08	0.00
39.30	7.68	7.08	0.00	41.95	7.68	7.08	0.00
39.35	7.68	7.08	0.00	42.00	7.68	7.08	0.00
39.40	7.68	7.08	0.00	42.05	7.68	7.08	0.00
39.45	7.68	7.08	0.00	42.10	7.68	7.08	0.00
39.50	7.68	7.08	0.00	42.15	7.68	7.08	0.00
39.55	7.68	7.08	0.00	42.20	7.68	7.08	0.00
39.60	7.68	7.08	0.00	42.25	7.68	7.08	0.00
39.65	7.68	7.08	0.00	42.30	7.68	7.08	0.00
39.70	7.68	7.08	0.00	42.35	7.68	7.08	0.00
39.75	7.68	7.08	0.00	42.40	7.68	7.08	0.00
39.80	7.68	7.08	0.00	42.45	7.68	7.08	0.00
39.85	7.68	7.08	0.00	42.50	7.68	7.08	0.00
39.90	7.68	7.08	0.00	42.55	7.68	7.08	0.00
39.95	7.68	7.08	0.00	42.60	7.68	7.08	0.00
40.00	7.68	7.08	0.00	42.65	7.68	7.08	0.00
40.05	7.68	7.08	0.00	42.70	7.68	7.08	0.00
40.10	7.68	7.08	0.00	42.75	7.68	7.08	0.00
40.15	7.68	7.08	0.00	42.80	7.68	7.08	0.00
40.20	7.68	7.08	0.00	42.85	7.68	7.08	0.00
40.25	7.68	7.08	0.00	42.90	7.68	7.08	0.00
40.30	7.68	7.08	0.00	42.95	7.68	7.08	0.00
40.35	7.68	7.08	0.00	43.00	7.68	7.08	0.00
40.40	7.68	7.08	0.00	43.05	7.68	7.08	0.00
40.45	7.68	7.08	0.00	43.10	7.68	7.08	0.00
40.50	7.68	7.08	0.00	43.15	7.68	7.08	0.00
40.55	7.68	7.08	0.00	43.20	7.68	7.08	0.00
40.60	7.68	7.08	0.00	43.25	7.68	7.08	0.00
40.65	7.68	7.08	0.00	43.30	7.68	7.08	0.00
40.70	7.68	7.08	0.00	43.35	7.68	7.08	0.00
40.75	7.68	7.08	0.00	43.40	7.68	7.08	0.00
40.80	7.68	7.08	0.00	43.45	7.68	7.08	0.00
40.85	7.68	7.08	0.00	43.50	7.68	7.08	0.00
40.90	7.68	7.08	0.00	43.55	7.68	7.08	0.00
40.95	7.68	7.08	0.00	43.60	7.68	7.08	0.00
41.00	7.68	7.08	0.00	43.65	7.68	7.08	0.00
41.05	7.68	7.08	0.00	43.70	7.68	7.08	0.00
41.10	7.68	7.08	0.00	43.75	7.68	7.08	0.00
41.15	7.68	7.08	0.00	43.80	7.68	7.08	0.00
41.20	7.68	7.08	0.00	43.85	7.68	7.08	0.00
41.25	7.68	7.08	0.00	43.90	7.68	7.08	0.00
41.30	7.68	7.08	0.00	43.95	7.68	7.08	0.00
41.35	7.68	7.08	0.00	44.00	7.68	7.08	0.00
41.40	7.68	7.08	0.00	44.05	7.68	7.08	0.00
41.45	7.68	7.08	0.00	44.10	7.68	7.08	0.00
41.50	7.68	7.08	0.00	44.15	7.68	7.08	0.00
41.55	7.68	7.08	0.00	44.20	7.68	7.08	0.00
41.60	7.68	7.08	0.00	44.25	7.68	7.08	0.00
41.65	7.68	7.08	0.00	44.30	7.68	7.08	0.00
41.70	7.68	7.08	0.00	44.35	7.68	7.08	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
44.40	7.68	7.08	0.00	47.05	7.68	7.08	0.00
44.45	7.68	7.08	0.00	47.10	7.68	7.08	0.00
44.50	7.68	7.08	0.00	47.15	7.68	7.08	0.00
44.55	7.68	7.08	0.00	47.20	7.68	7.08	0.00
44.60	7.68	7.08	0.00	47.25	7.68	7.08	0.00
44.65	7.68	7.08	0.00	47.30	7.68	7.08	0.00
44.70	7.68	7.08	0.00	47.35	7.68	7.08	0.00
44.75	7.68	7.08	0.00	47.40	7.68	7.08	0.00
44.80	7.68	7.08	0.00	47.45	7.68	7.08	0.00
44.85	7.68	7.08	0.00	47.50	7.68	7.08	0.00
44.90	7.68	7.08	0.00	47.55	7.68	7.08	0.00
44.95	7.68	7.08	0.00	47.60	7.68	7.08	0.00
45.00	7.68	7.08	0.00	47.65	7.68	7.08	0.00
45.05	7.68	7.08	0.00	47.70	7.68	7.08	0.00
45.10	7.68	7.08	0.00	47.75	7.68	7.08	0.00
45.15	7.68	7.08	0.00	47.80	7.68	7.08	0.00
45.20	7.68	7.08	0.00	47.85	7.68	7.08	0.00
45.25	7.68	7.08	0.00	47.90	7.68	7.08	0.00
45.30	7.68	7.08	0.00	47.95	7.68	7.08	0.00
45.35	7.68	7.08	0.00	48.00	7.68	7.08	0.00
45.40	7.68	7.08	0.00	48.05	7.68	7.08	0.00
45.45	7.68	7.08	0.00	48.10	7.68	7.08	0.00
45.50	7.68	7.08	0.00	48.15	7.68	7.08	0.00
45.55	7.68	7.08	0.00	48.20	7.68	7.08	0.00
45.60	7.68	7.08	0.00	48.25	7.68	7.08	0.00
45.65	7.68	7.08	0.00	48.30	7.68	7.08	0.00
45.70	7.68	7.08	0.00	48.35	7.68	7.08	0.00
45.75	7.68	7.08	0.00	48.40	7.68	7.08	0.00
45.80	7.68	7.08	0.00	48.45	7.68	7.08	0.00
45.85	7.68	7.08	0.00	48.50	7.68	7.08	0.00
45.90	7.68	7.08	0.00	48.55	7.68	7.08	0.00
45.95	7.68	7.08	0.00	48.60	7.68	7.08	0.00
46.00	7.68	7.08	0.00	48.65	7.68	7.08	0.00
46.05	7.68	7.08	0.00	48.70	7.68	7.08	0.00
46.10	7.68	7.08	0.00	48.75	7.68	7.08	0.00
46.15	7.68	7.08	0.00	48.80	7.68	7.08	0.00
46.20	7.68	7.08	0.00	48.85	7.68	7.08	0.00
46.25	7.68	7.08	0.00	48.90	7.68	7.08	0.00
46.30	7.68	7.08	0.00	48.95	7.68	7.08	0.00
46.35	7.68	7.08	0.00	49.00	7.68	7.08	0.00
46.40	7.68	7.08	0.00	49.05	7.68	7.08	0.00
46.45	7.68	7.08	0.00	49.10	7.68	7.08	0.00
46.50	7.68	7.08	0.00	49.15	7.68	7.08	0.00
46.55	7.68	7.08	0.00	49.20	7.68	7.08	0.00
46.60	7.68	7.08	0.00	49.25	7.68	7.08	0.00
46.65	7.68	7.08	0.00	49.30	7.68	7.08	0.00
46.70	7.68	7.08	0.00	49.35	7.68	7.08	0.00
46.75	7.68	7.08	0.00	49.40	7.68	7.08	0.00
46.80	7.68	7.08	0.00	49.45	7.68	7.08	0.00
46.85	7.68	7.08	0.00	49.50	7.68	7.08	0.00
46.90	7.68	7.08	0.00	49.55	7.68	7.08	0.00
46.95	7.68	7.08	0.00	49.60	7.68	7.08	0.00
47.00	7.68	7.08	0.00	49.65	7.68	7.08	0.00

Hydrograph for Subcatchment 5S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
49.70	7.68	7.08	0.00
49.75	7.68	7.08	0.00
49.80	7.68	7.08	0.00
49.85	7.68	7.08	0.00
49.90	7.68	7.08	0.00
49.95	7.68	7.08	0.00
50.00	7.68	7.08	0.00

POSTDEVELOPMENT STORMWATER ANALYSIS

BLACK & VEATCH
Building a world of difference.

CALCULATION RECORD

Client Name Seminole Electric Cooperative, Inc. Page 1 of 13

Project Name P2021 Combined Cycle Project No. 190285

Calculation Title Post-Development Storm Water Analysis

Calculation No./File No. 58.5406.1102

Verification Method: ☒ Check and Review ☐ Alternate Calculations

Objective: The objective of this calculation is to determine the post development – operation phase site storm water management system design for the Seminole Electric Cooperative, Inc. P2021 Combined Cycle Project. The purpose of this hydrologic model is to design a retention pond that will retain the design storm event of 25 year-24 hours and to recover the pond within 72 hours for the next storm event as stated in Reference 2.1.

Unverified Assumptions Requiring Subsequent Verification

No.	Assumption	Verified By	Date
N/A	N/A	N/A	N/A

Refer to Page _____ of this calculation for additional assumptions.

This Section Used for Software-Generated Calculations

Program Name/Number HydroCAD Version 10.00

Standard B&V Application Used? ☒ Yes ☐ No

If no, list approved deviation permit number below and attach approved deviation permit

JOHN C. BARRANCO, JR. LICENSE No 72091 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Barranco Jr., John
Date: 2017.11.21 11:39:03-05'00'

Review and Approval

Rev	Prepared By	Date	Verified By	Date	Approved By	Date
0	O Jankauskaite	12/2/2016	J C Barranco, Jr.	12/2/16	J C Barranco, Jr.	12/2/16
1	O Jankauskaite	12/20/2016	J C Barranco, Jr.	12/20/2016	J C Barranco, Jr.	12/20/2016
2	O Jankauskaite	1/24/2017	J C Barranco, Jr.	10/24/2017	J C Barranco, Jr.	10/24/2017
3	O Camacho	11/20/2017	J C Barranco, Jr.	10/24/2017	J C Barranco, Jr.	11/20/17
	Camacho	11/20/17		11/20/17		

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1.0 Purpose

The objective of this calculation is to design a retention pond that will retain the design storm event of 25 year-24 hours and to recover the pond within 72 hours for the next storm event as stated in Reference 2.1.

2.0 References

2.1 Environmental Resource Permit Applicant's Handbook, Volume II: For use within the Geographic Limits of the St. Johns River Water Management District.
2.2 Not Used
2.3 B&V Dwg Number 190285-DS-1102, "Proposed Stormwater Management Plan"
2.4 B&V Calculation, 190285.58.5406.1101 Seminole Electric Cooperative, Inc. "P2021 Combined Cycle Pre-Development Storm Water Analysis"
2.5 Ellis & Associates report titled "Geotechnical Exploration Seminole Electric - Combined Cycle Study Putnam County, FL", June 17, 2016
2.6 Urban Hydrology for Small watersheds, US Department of Agriculture, Soil Conservation Service, Technical Release 55, 1986
2.7 United States Department of Agriculture (USDA) Natural resources Conservation Service (NRCS), "National Engineering Handbook Part 630 Hydrology," May 2010
2.8 Google Earth
2.9 AutoCAD Civil 3D 2014
2.10 Trimble Terramodel Ver. 10.43
2.11 HydroCAD Ver. 10.0 Software Solutions, LLC

3.0 Conclusions

3.1 The pre-development flow rate for outfall 1S was calculated to be 63.28 cfs.(Ref 2.4) The post-development storm runoff will be retained in the retention pond and will not be discharging. Therefore, the retention pond was designed to meet the pre vs. post flow requirements from Reference 2.1.

3.2 The actual treatment volume provided in the retention pond is 10.69 acre-ft (Att 4, pg 2) and the required treatment volume is 5.11 ac-ft, therefore the actual treatment volume is greater than the required treatment volume for Pond P-1.

3.3 The treatment volume is drawn down by hour 50.50 which is within the required 72 hour limit. (Att 6, pg 61)

3.4 During the design event of 25 year - 24 hours, the peak elevation of the stormwater retention pond is 71.69 ft - NAVD 88 (Att 6, pg 57), leaving 1.81 feet of freeboard.

3.5 During the 100 year - 24 hr event, the peak elevation of the stormwater retention pond is 72.93 ft - NAVD 88 (Att 7, pg 57), leaving 0.57 feet of freeboard.

4.0 Procedure/Methodology of Design

4.1 25-year, 24-hour Model
Following the guidelines of Reference 2.1, the dry retention pond will be designed such that it will provide the capacity for the required treatment volume within 72 hours following the first storm event.

4.2 The required treatment volume for on-line retention has to satisfy both of the following: (Reference 2.1)

(a) Off-Line retention of the first one-half of runoff or 1.25 inches of runoff form the impervious area, whichever is greater.

(b) On-Line retention of an additional one-half inch of runoff from the drainage area over that volume specified for offline treatment.

4.3 100-year, 24-hour Model
The 100-year, 24-hour storm event was modeled to determine the elevation of the site, as a best practice for power plant design.

4.4 Mean Annual (2.3-year, 24-Model)
The 2.3-year, 24-hour storm event was modeled to determine the road crown elevations of the site.

5.0 Definitions of Units and Constants

Class III Water Body - Fish Consumption, Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife. All surface waters of the state of Florida are considered Class III unless described in rule 62-302.400, F.A.C. (Ref X)

TC - Time of Concentration

SJRWMD - Saint Johns River Water Management District

SWMS - Stormwater Management System

6.0 Analysis

General Drainage Design Criteria

Applicable Regulations:

The SCCF will be located in Putnam County, Florida. As such, the SCCF's stormwater management system (SWMS) must meet the Environmental Resource Permitting (ERP) criteria of Chapter 62-330, F.A.C., including the Environmental Resource Permit Applicant's Handbook Volume I (General and Environmental) and the Environmental Resource Permit Applicant's Handbook, Volume II: for Use within the Geographic Limits of the St. Johns River Water Management District. The SCCF SWMS meets all of the applicable criteria contained within these rules.

Rainfall Depth, Duration and Distribution:

The design rainfall depths for the Project Site have been obtained from the NOAA Atlas 14, Volume 9, Version 2 (Att 1).The rainfall depths are summarized in the Table 3 Below. Storm events were modeled using HydroCAD analysis software.

Rainfall depths are summarized in Table 1 below.

Rainfall Data		
Storm Event	**Design Purpose**	**RaInfall Depth (in)**
Mean Annual (2.3 yr-24hr)	Minimum Road Crown Elevation	4.45
25 year - 24 hr*	Design Storm Event to be retained in the pond	7.68
100 year - 24 hr	Min. Finished Floors/ Min. Perimeter Berm Elevation	10.30
* Design Storm Event		

**Mean Annual rainfall depth was interpolated between the 2 year- 24 hour rainfall depth and 5 year - 24 hour rainfall depth (Att 1)

2 year - 24 hr : 4.35 inches $X_{2yr} := 2$ $Y_{2yr} := 4.35$

5 year - 24 hr : 5.31 inches $X_{5yr} := 5$ $Y_{5yr} := 5.31$

Solve for Rainfall Depth at 2.3 years, using the linear interpolation equation:

$X_{2.3yr} := 2.3$ $Y_{2.3yr} := Y_{2yr} + \left(X_{2.3yr} - X_{2yr}\right) \cdot \frac{\left(Y_{5yr} - Y_{2yr}\right)}{\left(X_{5yr} - X_{2yr}\right)}$

$Y_{2.3yr} = 4.446$

Post- Development Site Conditions

Site Description:

The project limits encloses an area of 50.06 acres in Putnam County, FL. The existing area of the proposed project is currently a wooded area bordered by an existing plant to the north, north west and north east, by delineated wetlands to the south east and a wooded area to the south and southwest. (Att 2)

The existing site currently discharges storm water runoff via overland flow to the wetland areas via 3 separate outfalls, Outfall 1S, 2S and 3S (Ref 2.3).

The proposed site will be retaining all of the stormwater within the Retention Pond and will not be discharging off-site, for the 25year-24hr design storm event.

The proposed site is divided into 7 basins: OSB-1, SB-1, SB-2, SB-3, SB-4, SB-5 and SB-6. OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from pre-development condition.

A limits of the stormwater basins are provided in Attachment 2.

Basin Descriptions

OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from pre-development condition. OSB-1 contains and existing switch yard and a small patch of wooded area. OSB-1 covers 5.63 acres of which 0.28 acres are pervious and 5.35 acres are impervious. The weighted curve number (CN) of OSB-1 is 95. The stormwater runoff is conveyed via overland flow into the stormwater management ditch located between OSB-1 and SB-1. The stormwater management ditch connects to the onsite stormwater management system via a 48" culvert. The onsite stormwater management system discharges into stormwater management pond P-1.

SB-1 covers 18.31 acres and it includes a laydown area that will be partially aggregate surfaced and partially grassed surfaced and its associated loop roads. SB-1 also includes a stormwater management ditch. SB-1 contains 8.86 acres of pervious surface, 8.72 acres of impervious surface and 0.73 acres of impervious water surface. The weighted curve number (CN) of SB-1 is 69. The stormwater runoff is conveyed via overland flow into the stormwater management ditch located between OSB-1 and SB-1, which then connects to the onsite stormwater management system via a culvert, which eventually discharges into the stormwater management pond P-1.

SB-2 covers 6.53 acres and it includes the expansion to the existing switch yard as well as a grassed corridor. SB-2 has a total of 1.08 acres of pervious area and 5.45 of impervious area. The weighted curve number (CN) of SB-2 is 88. The stormwater runoff is conveyed via overland flow into a catch basin system which is then discharged into the stormwater management pond P-1.

SB-3 covers 6.46 acres and it includes the proposed combined cycle units and associated facilities. SB-3 is considered 100% impervious with a curve number (CN) of 98. The stormwater runoff is conveyed via overland flow into a catch basin system which is then discharged into the stormwater management pond P-1.

SB-4 covers 4.11 acres and it includes the service fire water storage tank, the demin water storage tank, potable demin water treatment area, a warehouse and some aggregate as well as grass surfacing. SB-4 has 0.94 acres of pervious grass area, 3.06 acres of impervious aggregate and paved area, and 0.10 acres of impervious roof surfacing.The weighted curve number (CN) of SB-4 is 84. The stormwater runoff is conveyed via overland flow into a catch basin system which is then discharged into the stormwater management pond P-1.

SB-5 covers 13.82 acres and it includes a stormwater management pond, admin/control/warehouse maintenance building, the cooling tower and its associate facilities, paved parking lot, and some gravel and grassed area. SB-5 contains 3.84 acres of impervious aggregate and paved roads, 0.47 acres of impervious roof area, 4.11 acres of impervious water surface and 5.41 acres of pervious grassed surfacing. The weighted curve number (CN) of SB-5 is 75, The stormwater runoff is conveyed via overland flow into the stormwater management pond P-1.

SB-6 covers 0.83 acres and it includes the fuel gas meter and regulation yard. SB-6 is considered 100% impervious with a curve number (CN) of 98. The stormwater runoff is conveyed via overland flow into a catch basin system which is then discharged into the stormwater management pond P-1.

The operation phase site acreage's and surfacing are summarized in Tables 2 and 3 below.

Table 2

Operation Phase Site Acreage & Surfacing

Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	18.31	52%	8.86	8.72	0.00	0.72
SB-2	6.53	83%	1.08	5.45	0.00	0.00
SB-3	6.46	100%	0.00	6.46	0.00	0.00
SB-4	4.11	77%	0.95	3.06	0.10	0.00
SB-5	13.82	61%	5.40	3.84	0.47	4.11
SB-6	0.83	100%	0.00	0.83	0.00	0.00
Total Site	50.06	67%	16.29	28.36	0.57	4.83
OSB-1**	5.63	95%	0.28	5.35	0.00	0.00
Total Basin	55.69	70%	16.58	33.71	0.57	4.83

*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.

**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from the pre-development condition.

Table 3

Basin Acreage & Surfacing

Sub Basin	Total Area		Pervious-Grass Surface		Impervious - Gravel Surface		Impervious - Paved Surface		Impervious - Building		Impervious - Water Surface	
	Acres	Weighted CN	Acres	CN	Acres	CN	Acres	CN	Acres	CN	(Acres)	CN
SB-1	18.31	69	8.86	39.00	8.23	98.00	0.49	98.00	0.00	98.00	0.72	98.00
SB-2	6.53	87	1.08	39.00	5.45	98.00	0.00	98.00	0.00	98.00	0.00	98.00
SB-3	6.46	96	0.00	39.00	4.95	98.00	1.51	98.00	0.00	98.00	0.00	98.00
SB-4	4.11	84	0.95	39.00	0.65	98.00	2.41	98.00	0.10	98.00	0.00	98.00
SB-5	13.82	75	5.41	39.00	2.20	98.00	1.64	98.00	0.47	98.00	4.11	98.00
SB-6	0.83	96	0.00	39.00	0.83	98.00	0.00	98.00	0.00	98.00	0.00	98.00
Total Site	50.06	79	16.30	39.00	22.31	98.00	6.05	98.00	0.57	98.00	4.83	98.00
OSB-1**	5.63	93	0.28	39.00	5.35	98.00	0.00	98.00	0.00	98.00	0.00	98.00
Total Basin	55.69	80	16.58	39.00	27.66	98.00	6.05	98.00	0.57	98.00	4.83	98.00

**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from pre-development condition.

Time of Concentration

Time of concentration (Tc) was calculated using HydroCAD software (Ref 2.11). HydroCAD uses the methodology for determining Tc as set forth in the NRCS National Engineering Handbook, Part 6330 Hydrology (Ref 2.7).

Data used to calculate the Tc of the sub basins in HydroCAD (Ref 2.11) is presented below in Tables 4a, 4b and 4c. Each table presents the travel data for one segment of a runoff travel path. A minimum Tc has been established as being equal to 5.0 minutes to prevent unreasonably short Tc durations for small or highly impervious areas. In cases where the calculated Tc values are less than 5.0 minutes, Tc will be set equal to 5.0 minutes. HydroCAD also requires the entry of the 2year-24hr storm event rainfall depth for determination of sheet flow Tc. The 2year - 24hr storm event rainfall depth has been determined to be equal to 4.50 inches. (Att 1).

Table 4a

Time of Concentration Data - Flow Segment 1							
Sub Basin	Max EL (ft-NAVD88)	Min EL (ft-NAVD88)	Length (ft)	Slope (ft/ft)	Surface Type	Flow Type	Travel Time
SB-1	81	80	300	0.003	Smooth	Sheet	95
SB-2	78.7	77.6	300	0.004	Smooth	Sheet	4.7
SB-3	74.75	74	289	0.003	Smooth	Sheet	5.1
SB-4	74.75	74	300	0.003	Short Grass	Sheet	5.3
SB-5	74.75	74	300	0.003	Short Grass	Sheet	45.7
SB-6	69.4	68.5	290	0.003	Smooth	Sheet	5.1
OSB-1	79.7	78.7	300	0.003	Smooth	Sheet	4.2

Table 4b

Time of Concentration Data - Flow Segment 2							
Sub Basin	Max EL (ft-NAVD88)	Min EL (ft-NAVD88)	Length (ft)	Slope (ft/ft)	Surface Type	Flow Type	Travel Time
SB-1	80	78	485	0.004	Short Grass	SCF	18.3
SB-2	77.6	77.2	122	0.003	Smooth	SCF	2.3
SB-3	74	73	351	0.003	Smooth	SCF	1
SB-4	74	73	290	0.003	Smooth	SCF	5.5
SB-5	74	73	65	0.015	Smooth	SCF	3.1
SB-6	-	-	-	-	-	-	
OSB-1	78.7	78.5	205	0.001	Smooth	SCF	2.2

Table 4c

Time of Concentration Data - Flow Segment 3							
Sub Basin	Max EL (ft-NAVD88)	Min EL (ft-NAVD88)	Length (ft)	Slope (ft/ft)	Surface Type	Flow Type	Travel Time
SB-1	78	74	631	0.006	Grassed Chanel	Channel	10.2

Treatment Volume Calculation

For discharges to Class III receiving water bodies, the retention system shall provide on-line retention of the first 1 inch of runoff over the entire site or 1.75 inches of runoff from the impervious area, whichever is greater. (Ref 2.1)

Treatment Volume Option A - 1 inch over the entire drainage area (excluding the pond)

TV = one inch of runoff over the drainage area

DA = Drainage Area excluding the pond

$DA := 55.69 - 4.10$ (Reference Table 2)

$DA := 51.59\,acre$

CF = Conversion Factor

$CF := 12\,\frac{in}{ft}$

RO = Runoff

$RO := 1\,in$

$TV := \left(RO \cdot \frac{DA}{CF}\right)$ $TV = 4.30\,ft \cdot acre$

Treatment Volume Option B - 1.75 inches over the impervious area (excluding the pond)

TV = 1.75 in * IA

$IA := 33.71 + 0.57 + 0.73$ (Reference Table 2)

IA = Impervious Area

$IA := 35.01\,acre$

RO1 = Impervious Runoff

$RO1 := 1.75\,in$

$TV := RO1 \cdot \frac{IA}{CF^*}$ $TV = 5.11\,ft \cdot acre$

Treatment Volume Option B governs, therefore the required treatment volume is 5.11 acre-ft

Actual Treatment Volume Provided is 10.69 acre-ft (Att 4).

Therefore, $TV_{actual} > TV_{required}$

Recovery Time Calculation

The retention system must provide the capacity for the appropriate treatment volume within 72 hours following the first storm event (Ref 2.1). The proposed retention pond will use natural soil infiltration to draw down the treatment volume. The Geotechnical Investigation Report (Ref 2.5) provides infiltration rates of 52.9 ft/day and 44.1 ft/day and recommends a factor of 2 applied to these values. To account for infiltration performance, a factor of 4 to the lowest field measured vertical infiltration rate will be used.

$$K_{measured} := 44.1\frac{ft}{day}$$

$$FS_K := 4$$

$$K_{designed} := \frac{K_{measured}}{FS_K} \qquad K_{designed} = 11.025\cdot\frac{ft}{day} \qquad K_{designed} = 5.513\cdot\frac{in}{hr}$$

The HydroCAD report shows that during a design storm event of 25 year - 24hr the pond is drawn down at hour 50.50 of the start of the event. Therefore the requirement for the pond to be drawn down within 72 hours is met.

Retention Pond Design

A dry retention pond with an emergency overflow weir is the mechanism by which the stormwater from onsite will be retained and treated without discharging offsite. The dry retention pond has been designed according to the requirements of the Environmental Resource Permit Applicant's Handbook Volume II: for use within the Geographic Lmits of the St. Johns River Water Management Distric. The dry retention pond will have a bottom elevation set approximately 3.5 feet above the estimated seasonal high groundwater level (SHGWT). The SHGWT elevation was calculated from data provided from the geotechnical exploration performed by Ellis & Associates (Ref 2.4). There were two borings performed in the area of the proposed stormwater pond, one of the borings estimated the SHGWT to be at EL 65 ft. and the second boring estimated the SHGWT to be at EL 63 ft- NAVD 88. The dry retention pond will have a bottom elevation set to 68.5 ft - NAVD 88, which is 3.5 feet above the highest estimated GWT elevation. For stormwater evaluation, the bottom was set to 69.5 ft-NAVD 88, to allow the bottom foot of the pond for sediment settlement.

The dry retention pond was designed using HydroCAD software (Ref 2.11). The previously described site basin data was inputted into HydroCAD to develop the runoff volume and rate information needed to size the ponds. The ponds were input as custom stage storage based on volumetric analysis of the pond grading using Trimble Terramodel (Ref 2.9).

The pond was set to a depth determined from proposed and existing grade elevations and SHGWT Elevation.The pond was set to a depth of 5 feet. The elevation of the Pond bottom is set at 68.5 feet-NAVD 88 and the top of bank of the pond is set at 73.5 feet-NAVD 88. The sides of the pond are sloped at 4:1 per SJRWMD requirements (Ref 2.1).

During the 25 year- 24hr design storm event, the retention pond peak stage elevation is 71.69 ft - NAVD 88, providing 1.81 feet of free board in the pond (Att 6).

The pond was also checked for containment of the 100yr-24hr event. This was to ensure that the during the 100 year event the storm runoff can be controlled and it does not flood equipment foundations and buildings. The peak stage elevation of the pond during the 100 year- 24hr event reached 72.93 ft - NAVD 88 which is still contained within the pond, leaving 0.57 feet of free board. (Att 7)

A summary of the pond design storm peak discharge rate, retention volume storage, and 24 hour retention volume discharge for the SWMS is presented in Table 7. More detailed information, including HydroCAD model reports are provided in Attachments 5-7.

Operation Phase Storm Water Pond Hydrology Summary

Basin	Pond Peak Stage Elevation			Treatment Volume Storage		*Treatment Volume Recovery Time	
	25yr-24hr	2.3yr-24hr	100 yr- 24hr	Required	Provided	Allowed	Provided
	(ft-NAVD88)	(ft-NAVD88)	(ft-NAVD88)	(ac-ft)	(ac-ft)	hours	hours
SB-5	70.21	71.69	72.93	5.11	10.69	72	50.5

*The appropriate treatment volume must be drawn down within 72 hours of the storm event.

Emergency Overflow Weir:

The dry retention pond contains a broad-crested rectangular emergency over-flow weir which is designed to be set 1 foot below the ponds top of bank at EL 72.50ft-NAVD88. The emergency overflow-weir has a crest length of 10 feet and a crest breadth of 11 feet. The emergency overflow-weir will not be discharging during the design storm event of 25 year- 24 hrs, and will only be used in small chance events such as a 100year-24hr event.The detail of the emergency overflow weir is provided in Attachment 3.

Attachments

Attachment 1

Rainfall Maps

NOAA Atlas 14, Volume 9, Version 2
Location name: Palatka, Florida, USA*
Latitude: 29.7446°, Longitude: -81.6425°
Elevation: 54.62 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

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	**0.527** (0.427-0.643)	**0.595** (0.482-0.726)	**0.702** (0.566-0.859)	**0.787** (0.631-0.966)	**0.898** (0.695-1.12)	**0.979** (0.743-1.24)	**1.06** (0.777-1.36)	**1.13** (0.800-1.50)	**1.23** (0.834-1.66)	**1.29** (0.861-1.78)
10-min	**0.772** (0.626-0.942)	**0.871** (0.705-1.06)	**1.03** (0.829-1.26)	**1.15** (0.925-1.41)	**1.31** (1.02-1.64)	**1.43** (1.09-1.81)	**1.55** (1.14-2.00)	**1.66** (1.17-2.19)	**1.79** (1.22-2.43)	**1.89** (1.26-2.60)
15-min	**0.941** (0.763-1.15)	**1.06** (0.860-1.30)	**1.25** (1.01-1.53)	**1.41** (1.13-1.73)	**1.60** (1.24-2.00)	**1.75** (1.33-2.21)	**1.89** (1.39-2.44)	**2.02** (1.43-2.67)	**2.19** (1.49-2.96)	**2.30** (1.54-3.18)
30-min	**1.42** (1.15-1.73)	**1.61** (1.30-1.97)	**1.91** (1.54-2.34)	**2.15** (1.72-2.64)	**2.45** (1.90-3.06)	**2.68** (2.03-3.39)	**2.89** (2.12-3.73)	**3.09** (2.19-4.08)	**3.34** (2.28-4.52)	**3.52** (2.35-4.85)
60-min	**1.82** (1.48-2.22)	**2.08** (1.69-2.54)	**2.51** (2.02-3.07)	**2.87** (2.30-3.52)	**3.36** (2.62-4.24)	**3.75** (2.86-4.78)	**4.14** (3.05-5.38)	**4.54** (3.22-6.04)	**5.08** (3.47-6.91)	**5.49** (3.66-7.56)
2-hr	**2.23** (1.82-2.69)	**2.55** (2.08-3.09)	**3.11** (2.53-3.77)	**3.59** (2.90-4.37)	**4.27** (3.36-5.37)	**4.82** (3.71-6.12)	**5.39** (4.01-6.99)	**5.99** (4.29-7.94)	**6.81** (4.69-9.23)	**7.45** (5.00-10.2)
3-hr	**2.42** (1.98-2.91)	**2.77** (2.28-3.35)	**3.41** (2.79-4.12)	**3.98** (3.24-4.83)	**4.83** (3.84-6.08)	**5.54** (4.29-7.04)	**6.29** (4.71-8.15)	**7.09** (5.11-9.40)	**8.23** (5.71-11.2)	**9.15** (6.16-12.5)
6-hr	**2.80** (2.32-3.35)	**3.20** (2.65-3.82)	**3.94** (3.25-4.71)	**4.63** (3.80-5.57)	**5.71** (4.61-7.20)	**6.65** (5.21-8.44)	**7.67** (5.81-9.93)	**8.80** (6.40-11.6)	**10.4** (7.30-14.1)	**11.8** (7.97-15.9)
12-hr	**3.31** (2.77-3.92)	**3.72** (3.11-4.42)	**4.52** (3.76-5.37)	**5.30** (4.38-6.32)	**6.54** (5.33-8.20)	**7.62** (6.04-9.62)	**8.83** (6.75-11.4)	**10.2** (7.47-13.4)	**12.1** (8.56-16.3)	**13.8** (9.39-18.5)
24-hr	**3.85** (3.25-4.52)	**4.35** (3.67-5.12)	**5.31** (4.46-6.25)	**6.22** (5.20-7.36)	**7.68** (6.30-9.55)	**8.95** (7.14-11.2)	**10.3** (7.97-13.2)	**11.9** (8.79-15.5)	**14.2** (10.1-18.9)	**16.0** (11.0-21.4)
2-day	**4.39** (3.74-5.11)	**5.09** (4.33-5.93)	**6.38** (5.40-7.45)	**7.58** (6.38-8.88)	**9.41** (7.76-11.6)	**11.0** (8.81-13.6)	**12.7** (9.82-16.0)	**14.5** (10.8-18.8)	**17.2** (12.3-22.8)	**19.4** (13.4-25.8)
3-day	**4.83** (4.13-5.59)	**5.63** (4.81-6.52)	**7.08** (6.03-8.22)	**8.42** (7.13-9.82)	**10.5** (8.67-12.8)	**12.2** (9.84-15.0)	**14.1** (11.0-17.7)	**16.1** (12.0-20.8)	**19.1** (13.7-25.1)	**21.5** (14.9-28.4)
4-day	**5.24** (4.50-6.05)	**6.06** (5.20-7.01)	**7.57** (6.47-8.77)	**8.97** (7.63-10.4)	**11.1** (9.24-13.5)	**12.9** (10.5-15.9)	**14.9** (11.6-18.7)	**17.1** (12.8-21.9)	**20.2** (14.5-26.5)	**22.7** (15.8-30.0)
7-day	**6.35** (5.50-7.28)	**7.15** (6.18-8.21)	**8.63** (7.43-9.93)	**10.0** (8.58-11.6)	**12.2** (10.2-14.7)	**14.0** (11.4-17.1)	**16.0** (12.6-20.0)	**18.2** (13.7-23.3)	**21.4** (15.5-28.0)	**24.0** (16.8-31.6)
10-day	**7.31** (6.36-8.35)	**8.13** (7.05-9.28)	**9.62** (8.32-11.0)	**11.0** (9.46-12.6)	**13.1** (11.0-15.8)	**14.9** (12.2-18.1)	**16.9** (13.3-20.9)	**19.1** (14.4-24.2)	**22.1** (16.1-28.8)	**24.7** (17.3-32.3)
20-day	**9.93** (8.71-11.2)	**11.0** (9.65-12.5)	**12.8** (11.2-14.6)	**14.4** (12.5-16.4)	**16.6** (14.0-19.6)	**18.4** (15.1-21.9)	**20.3** (16.0-24.7)	**22.2** (16.8-27.7)	**24.8** (18.1-31.8)	**26.9** (19.0-34.9)
30-day	**12.1** (10.7-13.7)	**13.5** (11.9-15.2)	**15.7** (13.8-17.7)	**17.5** (15.2-19.8)	**19.9** (16.7-23.1)	**21.7** (17.8-25.6)	**23.5** (18.6-28.3)	**25.3** (19.2-31.3)	**27.6** (20.1-35.1)	**29.3** (20.8-38.0)
45-day	**15.0** (13.3-16.8)	**16.7** (14.8-18.7)	**19.3** (17.0-21.7)	**21.4** (18.7-24.1)	**24.0** (20.2-27.6)	**25.9** (21.4-30.3)	**27.7** (22.1-33.2)	**29.5** (22.4-36.2)	**31.5** (23.0-39.8)	**33.0** (23.5-42.5)
60-day	**17.6** (15.6-19.6)	**19.5** (17.3-21.7)	**22.4** (19.9-25.1)	**24.7** (21.7-27.7)	**27.6** (23.3-31.5)	**29.6** (24.5-34.4)	**31.5** (25.1-37.4)	**33.2** (25.3-40.5)	**35.2** (25.7-44.2)	**36.5** (26.1-46.9)

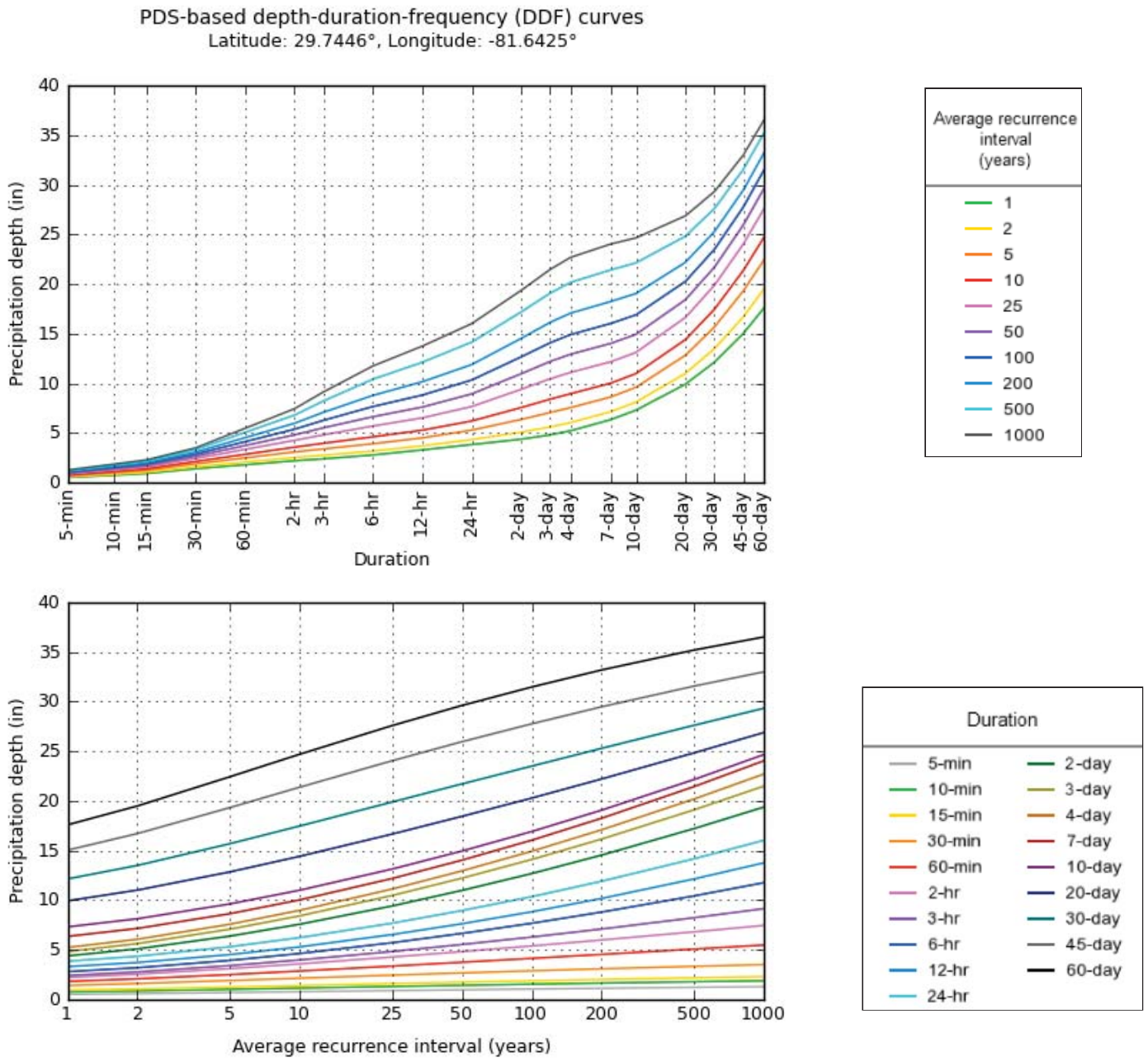
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



NOAA Atlas 14, Volume 9, Version 2

Created (GMT): Tue Oct 25 13:53:05 2016

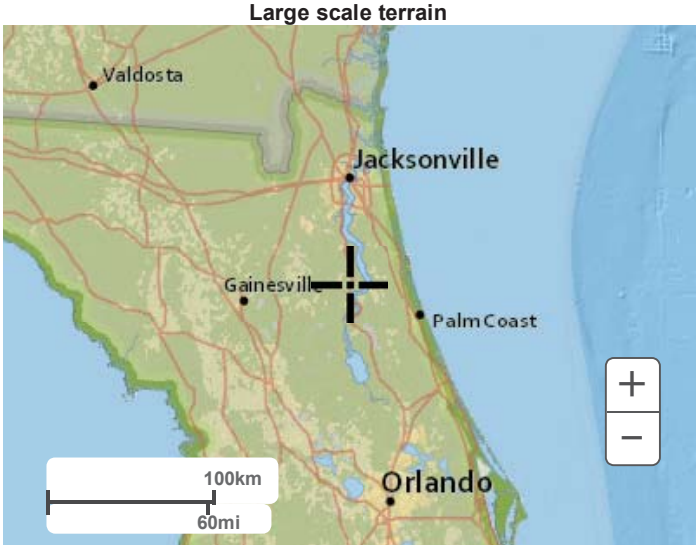
Back to Top

Maps & aerials

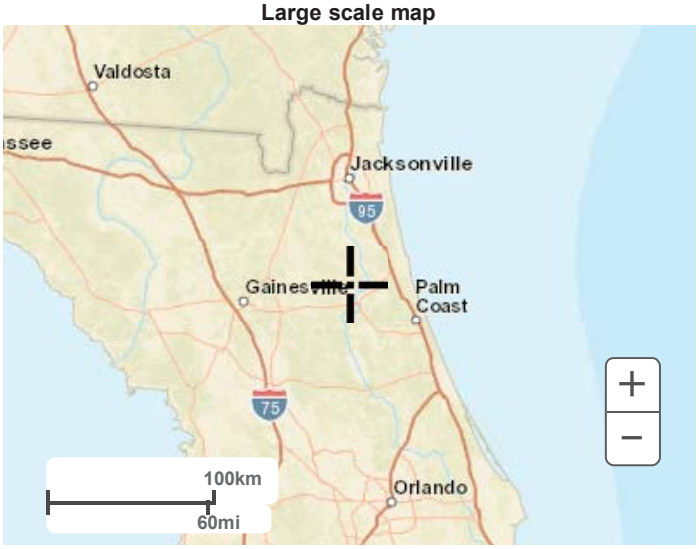
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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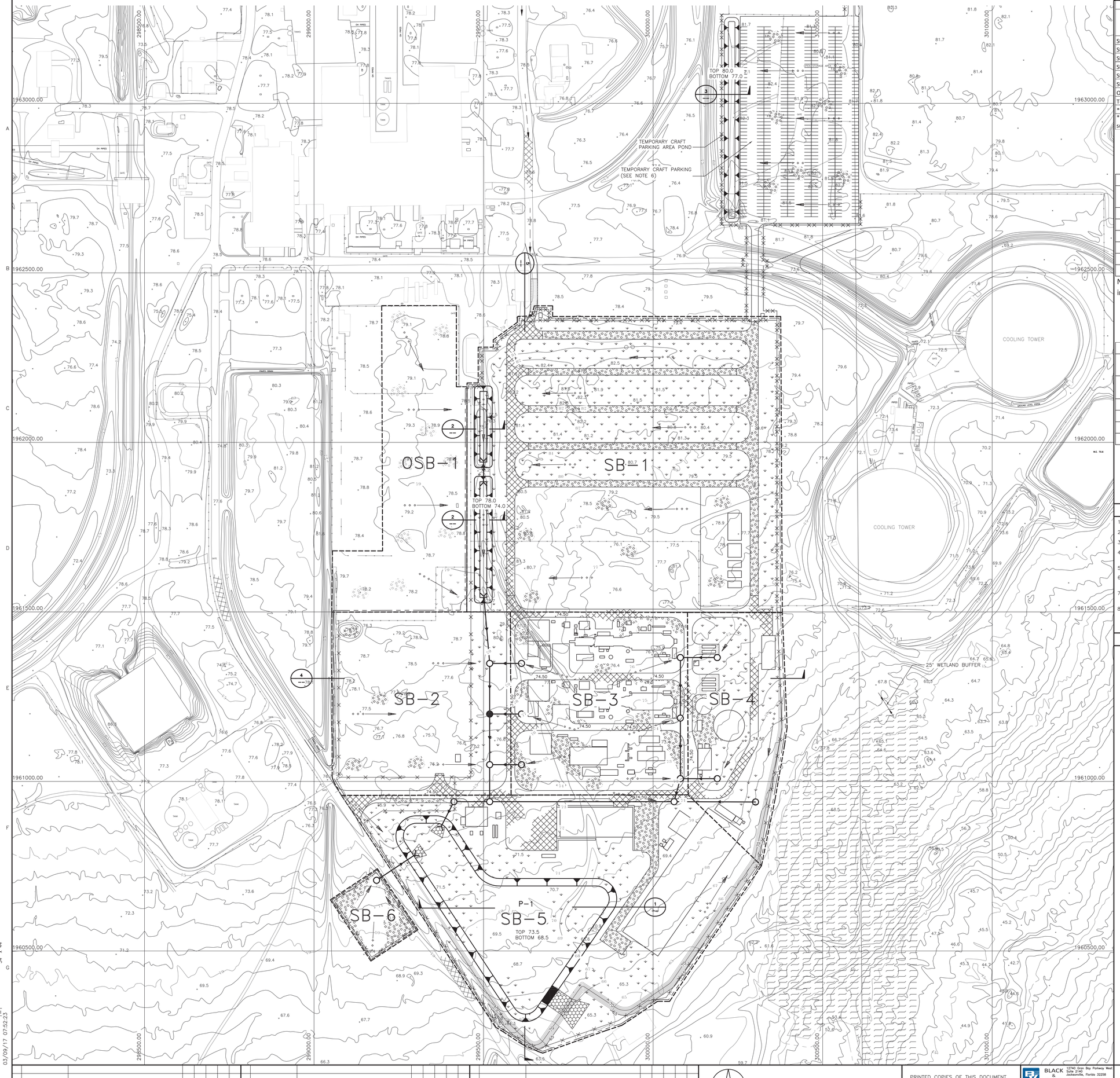
BLACK & VEATCH

Owner: Seminole Electric Cooperative, Inc.
Plant: P2021 Combined Cycle
Project No. 190285
File No. 58.5406.1102
Title: Post-Development Stormwater Analysis

Prepared by: Orinta Jankauskaite
Date: 1/23/2017
Verified by: John C. Barranco, Jr.
Date:
Page No.

Attachment 2

Basin Drawing



GENERAL NOTES

Operation Phase Site Acreage & Surfacing

Sub Basin	Total Area		Pervious	Impervious - other	Impervious - Building	Impervious - Water Surface
	(Acres)	(% Impervious)*	(Acres)	(Acres)	(Acres)	(Acres)
SB-1	18.31	52%	8.86	8.72	0.00	0.73
SB-2	6.53	83%	1.08	5.45	0.00	0.00
SB-3	6.46	100%	0.00	6.46	0.00	0.00
SB-4	4.11	77%	0.95	3.06	0.10	0.00
SB-5	13.82	61%	5.41	3.84	0.47	4.10
SB-6	0.83	100%	0.00	0.83	0.00	0.00
OSB-1**	5.63	95%	0.28	5.35	0.00	0.00
Total Site	55.69	70%	16.58	33.71	0.57	4.83

*% Impervious includes Impervious - Other, Impervious-Building, and Impervious-Water Surfaces.
**OSB-1 is an offsite basin that contributes to the onsite stormwater system. It is outside of the disturbed limits and the surfacing is unchanged from pre-development condition.

Dry Retention Pond (P-1) Stage Data

Elevation (ft-NAVD88)	Surface Area (acres)	Remarks
68.50	3.24	The bottom of retention pond
69.50	3.41	The bottom of affective storage (See Note 1)
70.50	3.58	
71.50	3.75	
72.50	3.93	Elevation of emergency overflow weir
73.50	4.11	Top of Bank

Note 1: The bottom 1 foot of the pond is reserved for sediment storage and is not considered in stormwater capacity evaluation.

Temporary Craft Parking Area Pond Stage Data

Elevation (ft-NAVD88)	Surface Area (acres)	Remarks
77.00	0.26	The bottom of temporary craft parking retention pond
78.00	0.37	
79.00	0.48	
79.50	0.54	Elevation of emergency overflow weir
80.00	0.60	Top of Bank

NOTES

1. ELEVATIONS ARE REPORTED AS NAVD88.
2. TOP OF CONCRETE/FINISHED FLOOR ELEVATION IS 75.00 NAVD 88. UNLESS NOTED OTHERWISE.
3. WETLANDS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY.
4. ALL AREAS WITHIN LOOP ROAD OF EQUIPMENT AND BUILDING AREAS TO BE AGGREGATE SURFACED. ALL OTHER AREAS NOT INDICATED WITH SURFACING SHALL BE SEEDED/SODDED WITH BAHIA.
5. ENERGY DISSIPATORS TO BE DESIGNED BY EPC CONTRACTOR TO NON-ERODIBLE DISCHARGE VELOCITIES.
6. TEMPORARY CRAFT PARKING WILL BE AGGREGATE SURFACED DURING CONSTRUCTION AND WILL BE RESTORED TO A PRE-DEVELOPMENT CONDITION (GRASS / AGGREGATE) AFTER CONSTRUCTION.
7. TEMPORARY VISUAL BARRIER SYSTEM SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR TO PROTECT THE FLORIDA OUTSTANDING WETLANDS AS REQUIRED BY THE SITE CERTIFICATION APPLICATION.
8. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE ALL SEDIMENT BUILDUP FROM THE STORMWATER RETENTION POND. IN ADDITION, THE CONTRACTOR SHALL TEST THE POND TO CONFIRM THE FINAL INFILTRATION RATE.

LEGEND

- SB-X — STORM WATER SUB BASIN AREA
- WETLAND BUFFER
- DISTURBED AREA LIMITS
- BASIN DIVIDE
- TEMPORARY CONSTRUCTION FENCE
- SECURITY FENCE
- CATCH BASIN
- MANHOLE
- OVERFLOW CONTROL STRUCTURE
- STORM SEWER SYSTEM
- SURFACE FLOW INDICATOR
- DITCH FLOW INDICATOR
- CULVERT
- CONTAINMENT AREA W/GEOMEMBRANE LINER (SEE NOTE 2)
- WETLANDS
- ASPHALT
- AGGREGATE
- GRASS
- RIP-RAP
- EXISTING VEGETATION
- SLOPE INDICATOR

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NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
0	09/MAR/2017	ISSUED FOR PERMIT	KED	OJ		JCB	LTN

N

100' 50' 0 100' 200'
1"=100'

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BLACK & VEATCH — 12740 Gran Bay Parkway West Suite 2140 Jacksonville, Florida 32258 CERTIFICATE OF AUTHORIZATION NO. 8132

ENGINEER: OJ | DRAWN: KED
CHECKED: | DATE:

SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
PROPOSED STORMWATER MANAGEMENT PLAN
PLAN

PROJECT NUMBER: 190285-DS-1102 | DRAWING NUMBER: | REV 0
CODE: | REFERENCE DWG NUMBER:
AREA:

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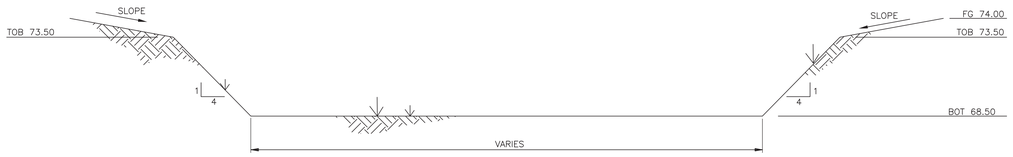
BLACK & VEATCH

Owner: Seminole Electric Cooperative, Inc.
Plant: P2021 Combined Cycle
Project No. 190285
File No. 58.5406.1102
Title: Post-Development Stormwater Analysis

Prepared by: Orinta Jankauskaite
Date: 1/23/2017
Verified by: John C. Barranco, Jr.
Date:
Page No.

Attachment 3

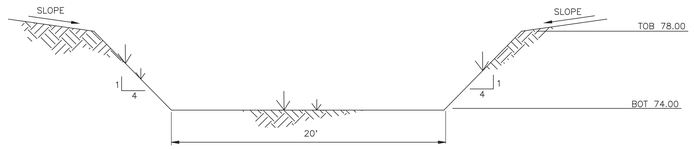
Detail Sketches



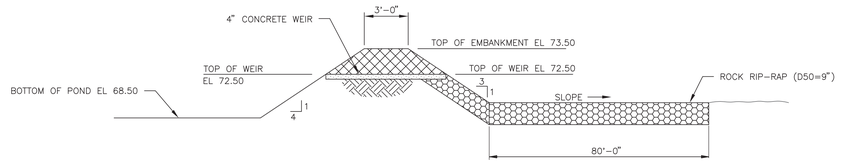
POND 1 – SECTION 1
NO SCALE



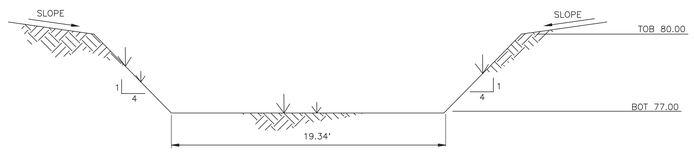
EMERGENCY OVERFLOW WEIR – PROFILE
NO SCALE



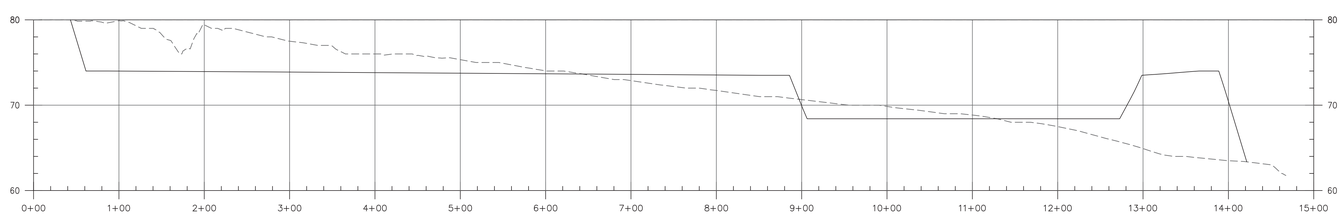
SB-1 STORMWATER MANAGEMENT DITCH – SECTION 2
NO SCALE



EMERGENCY OVERFLOW WEIR – CROSS SECTION
NO SCALE



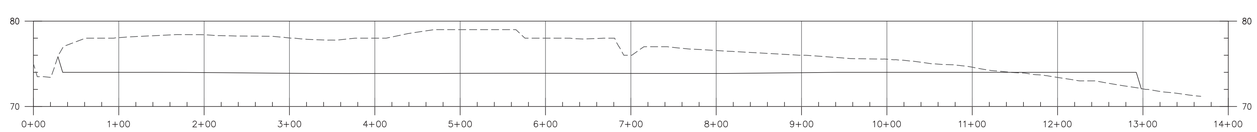
TEMPORARY CRAFT PARKING AREA POND – SECTION 3
NO SCALE



LINE	SURFACE	OFFSET
– –	Existing	
——	Nominal grade EL 74	

Scaled 10.0000 Times Ver.
Scaled 1.0000 Times Hor.

POND 1 – SECTION 4



LINE	SURFACE	OFFSET
– –	Existing	
——	Nominal grade EL 74	

Scaled 10.0000 Times Ver.
Scaled 1.0000 Times Hor.

POND 1 – SECTION 5

GENERAL NOTES

1. SEE DWG DS-1102 FOR PROPOSED STORM WATER MANAGEMENT PLAN.
2. SEE DWGS DS-1105 FOR EROSION CONTROL PLANS.

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NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
0	09/MAR/2017	ISSUED FOR PERMIT	KED	OJ		JCB	LTN

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BLACK & VEATCH
12740 Gran Bay Parkway West
Suite 2140
Jacksonville, Florida 32258
CERTIFICATE OF AUTHORIZATION NO. 8132

ENGINEER: OJ | DRAWN: KED
CHECKED: | DATE:

SEMINOLE ELECTRIC COOPERATIVE
COMBINED CYCLE STUDY
PROPOSED STORMWATER MANAGEMENT PLAN
SECTIONS & DETAILS

PROJECT NUMBER: 190285-DS-1104 | DRAWING NUMBER: | REV 0
CODE: | REFERENCE DWG NUMBER:
AREA:

DY#80885 01/24/17 ACAD 18.2s (LMS Tech) 13:14:31 24" x 36"

Attachment 4

Terramodel Volume Report

SURFACE TO DATUM VOLUME REPORT

Trimble
5475 Kellenburger Road
Dayton, Ohio 45424-1099, USA
1-937-233-8921

Project: M:\Jankauskaite\SECI\Stormwater Calculation\Post-Development\REV 2\
Stormwater Pond Ref 2.pro
Report Generated: Tuesday, January 24, 2017 10:28:52 AM

Where the DTM surface is above the datum the volume is reported as fill.
Where the DTM surface is below the datum the volume is reported as excavation.

Shrinkage/swell factors: Excavation 1.0000 Fill 1.0000

DTM Surface Layer Name	Number of Points	Datum Elevation
DTM_POND REV 2	90	73.50

Volume limited to that within the constraining boundary - Object 137
Area within boundary: 178,816.69 Sq. Ft. (4.1051 Acres)
Total triangulated area: 171,888.18 Sq. Ft. (3.9460 Acres)

The bottom 1 ft of the pond is reserved for sediment settlement.

Treatment Volume Provided = 10.69 acre-ft

Emergency Overflow Weir Elevation

Elev Range (ft)	Cut Volume (Cu. Yd.)	Cut Volume (ac-ft)
68.50 > 69.00	2,323.2	1.44
69.00 > 69.50	2,618.4	1.62
69.50 > 70.00	2,719.1	1.69
70.00 > 70.50	2,781.0	1.72
70.50 > 71.00	2,843.1	1.76
71.00 > 71.50	2,905.4	1.80
71.50 > 72.00	2,967.6	1.84
72.00 > 72.50	3,029.4	1.88
72.50 > 73.00	3,091.0	1.92
73.00 > 73.50	3,152.4	1.95

Excavation Volume Beneath Datum (Cu. Yd.)	Fill Volume Above Datum(Cu. Yd.)
28,430.8	0.0

Net Difference: 28,430.8 Cu. Yd. excess volume beneath datum

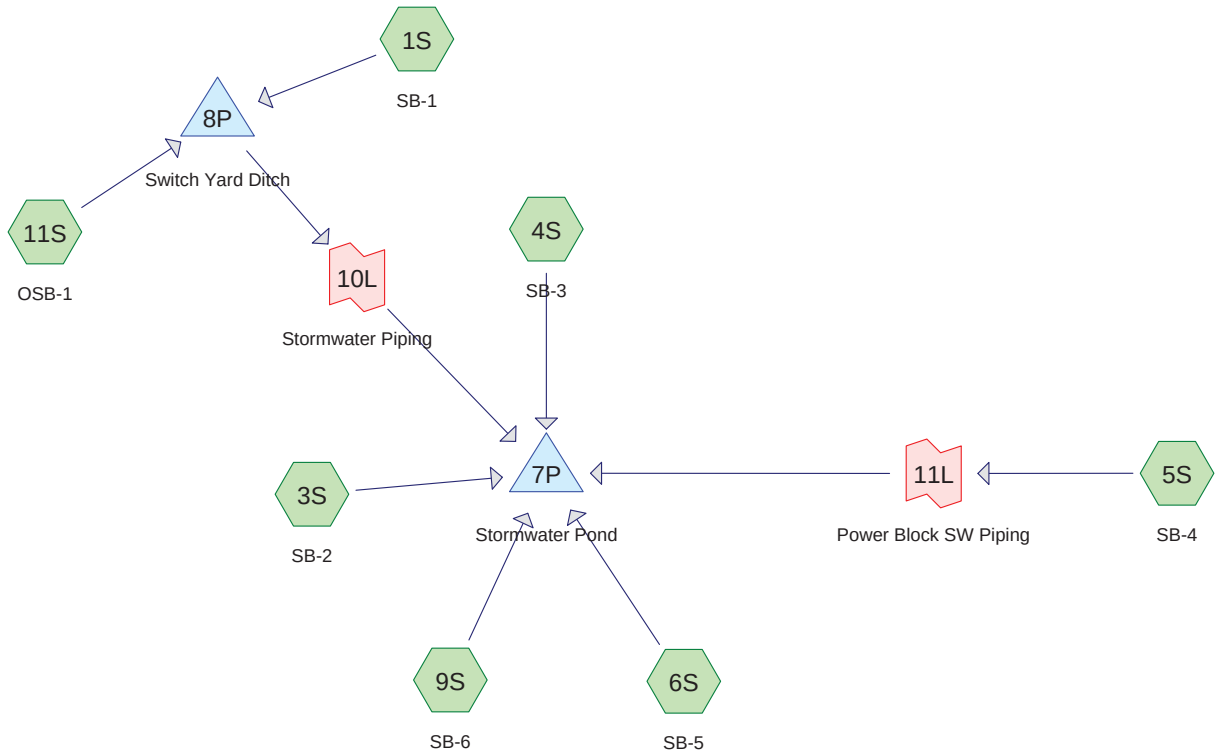
BLACK & VEATCH

Owner: Seminole Electric Cooperative, Inc.
Plant: P2021 Combined Cycle
Project No. 190285
File No. 58.5406.1102
Title: Post-Development Stormwater Analysis

Prepared by: Orinta Jankauskaite
Date: 1/23/2017
Verified by: John C. Barranco, Jr.
Date:
Page No.

Attachment 5

HydroCAD Report - 2.3yr-24hr



Subcat Reach Pond Link

Routing Diagram for 190285 Post-Development Stormwater Design REV 2
Prepared by Black & Veatch, Printed 1/23/2017
HydroCAD® 10.00-14 s/n 05108 © 2015 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
16.580	39	>75% Grass cover, Good, HSG A (1S, 3S, 5S, 6S, 11S)
27.664	98	Gravel surface, HSG A (1S, 3S, 4S, 5S, 6S, 9S, 11S)
6.050	98	Paved roads w/curbs & sewers, HSG A (1S, 4S, 5S, 6S)
0.570	98	Roofs, HSG A (5S, 6S)
4.830	98	Water Surface, HSG A (1S, 6S)
55.694	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
55.694	HSG A	1S, 3S, 4S, 5S, 6S, 9S, 11S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
55.694		**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
16.580	0.000	0.000	0.000	0.000	16.580	>75% Grass cover, Good	1S, 3S, 5S, 6S, 11S
27.664	0.000	0.000	0.000	0.000	27.664	Gravel surface	1S, 3S, 4S, 5S, 6S, 9S, 11S
6.050	0.000	0.000	0.000	0.000	6.050	Paved roads w/curbs & sewers	1S, 4S, 5S, 6S
0.570	0.000	0.000	0.000	0.000	0.570	Roofs	5S, 6S
4.830	0.000	0.000	0.000	0.000	4.830	Water Surface	1S, 6S
55.694	**0.000**	**0.000**	**0.000**	**0.000**	**55.694**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	4S	0.00	0.00	351.0	0.0030	0.009	24.0	0.0	0.0
2	8P	74.00	73.50	200.0	0.0025	0.009	48.0	0.0	0.0

Time span=0.50-150.00 hrs, dt=0.05 hrs, 2991 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SB-1 Runoff Area=18.310 ac 51.61% Impervious Runoff Depth=1.57"
Flow Length=1,416' Tc=123.5 min CN=69 Runoff=8.32 cfs 2.392 af

Subcatchment 3S: SB-2 Runoff Area=6.530 ac 83.46% Impervious Runoff Depth=3.15"
Flow Length=422' Tc=7.0 min CN=88 Runoff=33.33 cfs 1.714 af

Subcatchment 4S: SB-3 Runoff Area=6.460 ac 100.00% Impervious Runoff Depth=4.21"
Flow Length=640' Slope=0.0030 '/' Tc=6.1 min CN=98 Runoff=39.59 cfs 2.269 af

Subcatchment 5S: SB-4 Runoff Area=4.114 ac 76.91% Impervious Runoff Depth=2.77"
Flow Length=590' Slope=0.0030 '/' Tc=10.8 min CN=84 Runoff=16.59 cfs 0.950 af

Subcatchment 6S: SB-5 Runoff Area=13.820 ac 60.85% Impervious Runoff Depth=2.01"
Flow Length=365' Slope=0.0025 '/' Tc=48.8 min CN=75 Runoff=16.86 cfs 2.316 af

Subcatchment 9S: SB-6 Runoff Area=0.830 ac 100.00% Impervious Runoff Depth=4.21"
Flow Length=290' Slope=0.0030 '/' Tc=5.1 min CN=98 Runoff=5.29 cfs 0.291 af

Subcatchment 11S: OSB-1 Runoff Area=5.630 ac 95.03% Impervious Runoff Depth=3.88"
Flow Length=396' Slope=0.0040 '/' Tc=6.4 min CN=95 Runoff=33.09 cfs 1.818 af

Pond 7P: Stormwater Pond Peak Elev=70.21' Storage=2.488 af Inflow=101.88 cfs 11.751 af
Discarded=22.66 cfs 11.751 af Secondary=0.00 cfs 0.000 af Outflow=22.66 cfs 11.751 af

Pond 8P: Switch Yard Ditch Peak Elev=75.65' Storage=25,716 cf Inflow=33.28 cfs 4.211 af
48.0" Round Culvert n=0.009 L=200.0' S=0.0025 '/' Outflow=15.55 cfs 4.211 af

Link 10L: Stormwater Piping delayed by 3.0 min Inflow=15.55 cfs 4.211 af
Primary=15.55 cfs 4.211 af

Link 11L: Power Block SW Piping delayed by 3.0 min Inflow=16.59 cfs 0.950 af
Primary=16.59 cfs 0.950 af

Total Runoff Area = 55.694 ac Runoff Volume = 11.751 af Average Runoff Depth = 2.53"
29.77% Pervious = 16.580 ac 70.23% Impervious = 39.114 ac

Summary for Subcatchment 1S: SB-1

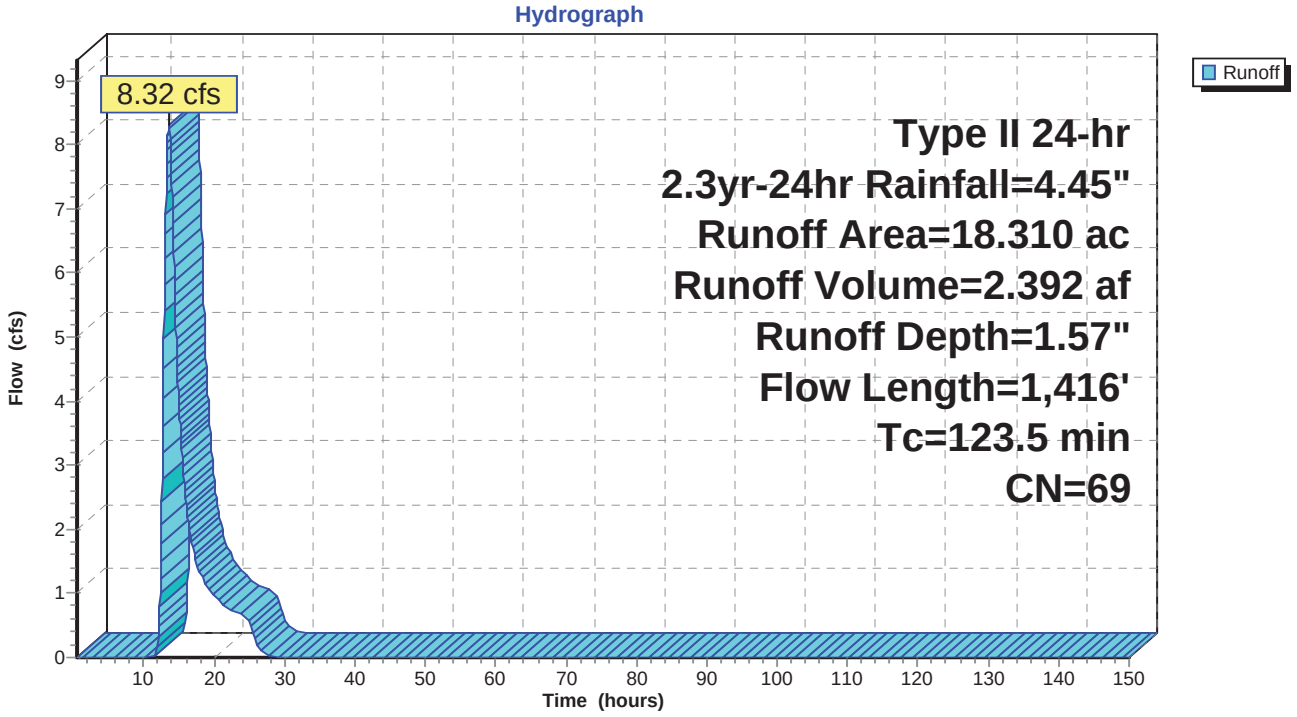
Runoff = 8.32 cfs @ 13.58 hrs, Volume= 2.392 af, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
	0.490	98	Paved roads w/curbs & sewers, HSG A
	0.730	98	Water Surface, HSG A
	8.860	39	>75% Grass cover, Good, HSG A
*	8.230	98	Gravel surface, HSG A
	18.310	69	Weighted Average
	8.860		48.39% Pervious Area
	9.450		51.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
95.0	300	0.0030	0.05		**Sheet Flow, Overland Flow - Open Area** Grass: Bermuda n= 0.410 P2= 4.50"
18.3	485	0.0040	0.44		**Shallow Concentrated Flow, Overland Flow - Open Area** Short Grass Pasture Kv= 7.0 fps
10.2	631	0.0060	1.03	149.67	**Channel Flow, Grassed Ditch** Area= 145.0 sf Perim= 1,366.0' r= 0.11' n= 0.025 Short grass
123.5	1,416	Total			

Subcatchment 1S: SB-1



Hydrograph for Subcatchment 1S: SB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	1.02	**8.09**
0.75	0.03	0.00	0.00	14.00	3.65	1.04	7.38
1.00	0.05	0.00	0.00	14.25	3.69	1.07	6.31
1.25	0.06	0.00	0.00	14.50	3.73	1.09	5.31
1.50	0.07	0.00	0.00	14.75	3.76	1.12	4.55
1.75	0.08	0.00	0.00	15.00	3.80	1.14	3.94
2.00	0.10	0.00	0.00	15.25	3.83	1.16	3.43
2.25	0.11	0.00	0.00	15.50	3.86	1.18	3.01
2.50	0.13	0.00	0.00	15.75	3.89	1.20	2.68
2.75	0.14	0.00	0.00	16.00	3.92	1.21	2.41
3.00	0.15	0.00	0.00	16.25	3.94	1.23	2.18
3.25	0.17	0.00	0.00	16.50	3.97	1.24	1.99
3.50	0.18	0.00	0.00	16.75	3.99	1.26	1.83
3.75	0.20	0.00	0.00	17.00	4.01	1.27	1.70
4.00	0.21	0.00	0.00	17.25	4.04	1.29	1.58
4.25	0.23	0.00	0.00	17.50	4.06	1.30	1.48
4.50	0.25	0.00	0.00	17.75	4.08	1.32	1.40
4.75	0.26	0.00	0.00	18.00	4.10	1.33	1.33
5.00	0.28	0.00	0.00	18.25	4.12	1.34	1.27
5.25	0.30	0.00	0.00	18.50	4.14	1.36	1.21
5.50	0.32	0.00	0.00	18.75	4.16	1.37	1.16
5.75	0.34	0.00	0.00	19.00	4.17	1.38	1.11
6.00	0.36	0.00	0.00	19.25	4.19	1.39	1.07
6.25	0.38	0.00	0.00	19.50	4.21	1.40	1.03
6.50	0.40	0.00	0.00	19.75	4.22	1.41	1.00
6.75	0.42	0.00	0.00	20.00	4.24	1.42	0.97
7.00	0.44	0.00	0.00	20.25	4.25	1.43	0.93
7.25	0.46	0.00	0.00	20.50	4.27	1.44	0.90
7.50	0.49	0.00	0.00	20.75	4.28	1.45	0.87
7.75	0.51	0.00	0.00	21.00	4.29	1.46	0.84
8.00	0.53	0.00	0.00	21.25	4.31	1.47	0.81
8.25	0.56	0.00	0.00	21.50	4.32	1.48	0.79
8.50	0.59	0.00	0.00	21.75	4.33	1.49	0.77
8.75	0.62	0.00	0.00	22.00	4.35	1.50	0.75
9.00	0.65	0.00	0.00	22.25	4.36	1.51	0.73
9.25	0.69	0.00	0.00	22.50	4.37	1.52	0.72
9.50	0.73	0.00	0.00	22.75	4.39	1.52	0.71
9.75	0.76	0.00	0.00	23.00	4.40	1.53	0.70
10.00	0.81	0.00	0.00	23.25	4.41	1.54	0.69
10.25	0.85	0.00	0.00	23.50	4.43	1.55	0.69
10.50	0.91	0.00	0.00	23.75	4.44	1.56	0.68
10.75	0.97	0.00	0.00	24.00	**4.45**	**1.57**	0.67
11.00	1.05	0.00	0.00	24.25	4.45	1.57	0.66
11.25	1.14	0.01	0.01	24.50	4.45	1.57	0.65
11.50	1.26	0.03	0.02	24.75	4.45	1.57	0.62
11.75	1.72	0.13	0.06	25.00	4.45	1.57	0.57
12.00	2.95	0.64	0.22	25.25	4.45	1.57	0.49
12.25	3.14	0.75	0.80	25.50	4.45	1.57	0.41
12.50	3.27	0.82	2.08	25.75	4.45	1.57	0.32
12.75	3.36	0.87	4.04	26.00	4.45	1.57	0.24
13.00	3.44	0.92	6.24	26.25	4.45	1.57	0.18
13.25	3.50	0.95	7.71	26.50	4.45	1.57	0.13
13.50	3.56	0.99	**8.27**	26.75	4.45	1.57	0.10

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	1.57	0.07	40.25	4.45	1.57	0.00
27.25	4.45	1.57	0.05	40.50	4.45	1.57	0.00
27.50	4.45	1.57	0.04	40.75	4.45	1.57	0.00
27.75	4.45	1.57	0.03	41.00	4.45	1.57	0.00
28.00	4.45	1.57	0.02	41.25	4.45	1.57	0.00
28.25	4.45	1.57	0.02	41.50	4.45	1.57	0.00
28.50	4.45	1.57	0.01	41.75	4.45	1.57	0.00
28.75	4.45	1.57	0.01	42.00	4.45	1.57	0.00
29.00	4.45	1.57	0.01	42.25	4.45	1.57	0.00
29.25	4.45	1.57	0.00	42.50	4.45	1.57	0.00
29.50	4.45	1.57	0.00	42.75	4.45	1.57	0.00
29.75	4.45	1.57	0.00	43.00	4.45	1.57	0.00
30.00	4.45	1.57	0.00	43.25	4.45	1.57	0.00
30.25	4.45	1.57	0.00	43.50	4.45	1.57	0.00
30.50	4.45	1.57	0.00	43.75	4.45	1.57	0.00
30.75	4.45	1.57	0.00	44.00	4.45	1.57	0.00
31.00	4.45	1.57	0.00	44.25	4.45	1.57	0.00
31.25	4.45	1.57	0.00	44.50	4.45	1.57	0.00
31.50	4.45	1.57	0.00	44.75	4.45	1.57	0.00
31.75	4.45	1.57	0.00	45.00	4.45	1.57	0.00
32.00	4.45	1.57	0.00	45.25	4.45	1.57	0.00
32.25	4.45	1.57	0.00	45.50	4.45	1.57	0.00
32.50	4.45	1.57	0.00	45.75	4.45	1.57	0.00
32.75	4.45	1.57	0.00	46.00	4.45	1.57	0.00
33.00	4.45	1.57	0.00	46.25	4.45	1.57	0.00
33.25	4.45	1.57	0.00	46.50	4.45	1.57	0.00
33.50	4.45	1.57	0.00	46.75	4.45	1.57	0.00
33.75	4.45	1.57	0.00	47.00	4.45	1.57	0.00
34.00	4.45	1.57	0.00	47.25	4.45	1.57	0.00
34.25	4.45	1.57	0.00	47.50	4.45	1.57	0.00
34.50	4.45	1.57	0.00	47.75	4.45	1.57	0.00
34.75	4.45	1.57	0.00	48.00	4.45	1.57	0.00
35.00	4.45	1.57	0.00	48.25	4.45	1.57	0.00
35.25	4.45	1.57	0.00	48.50	4.45	1.57	0.00
35.50	4.45	1.57	0.00	48.75	4.45	1.57	0.00
35.75	4.45	1.57	0.00	49.00	4.45	1.57	0.00
36.00	4.45	1.57	0.00	49.25	4.45	1.57	0.00
36.25	4.45	1.57	0.00	49.50	4.45	1.57	0.00
36.50	4.45	1.57	0.00	49.75	4.45	1.57	0.00
36.75	4.45	1.57	0.00	50.00	4.45	1.57	0.00
37.00	4.45	1.57	0.00	50.25	4.45	1.57	0.00
37.25	4.45	1.57	0.00	50.50	4.45	1.57	0.00
37.50	4.45	1.57	0.00	50.75	4.45	1.57	0.00
37.75	4.45	1.57	0.00	51.00	4.45	1.57	0.00
38.00	4.45	1.57	0.00	51.25	4.45	1.57	0.00
38.25	4.45	1.57	0.00	51.50	4.45	1.57	0.00
38.50	4.45	1.57	0.00	51.75	4.45	1.57	0.00
38.75	4.45	1.57	0.00	52.00	4.45	1.57	0.00
39.00	4.45	1.57	0.00	52.25	4.45	1.57	0.00
39.25	4.45	1.57	0.00	52.50	4.45	1.57	0.00
39.50	4.45	1.57	0.00	52.75	4.45	1.57	0.00
39.75	4.45	1.57	0.00	53.00	4.45	1.57	0.00
40.00	4.45	1.57	0.00	53.25	4.45	1.57	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	1.57	0.00	66.75	4.45	1.57	0.00
53.75	4.45	1.57	0.00	67.00	4.45	1.57	0.00
54.00	4.45	1.57	0.00	67.25	4.45	1.57	0.00
54.25	4.45	1.57	0.00	67.50	4.45	1.57	0.00
54.50	4.45	1.57	0.00	67.75	4.45	1.57	0.00
54.75	4.45	1.57	0.00	68.00	4.45	1.57	0.00
55.00	4.45	1.57	0.00	68.25	4.45	1.57	0.00
55.25	4.45	1.57	0.00	68.50	4.45	1.57	0.00
55.50	4.45	1.57	0.00	68.75	4.45	1.57	0.00
55.75	4.45	1.57	0.00	69.00	4.45	1.57	0.00
56.00	4.45	1.57	0.00	69.25	4.45	1.57	0.00
56.25	4.45	1.57	0.00	69.50	4.45	1.57	0.00
56.50	4.45	1.57	0.00	69.75	4.45	1.57	0.00
56.75	4.45	1.57	0.00	70.00	4.45	1.57	0.00
57.00	4.45	1.57	0.00	70.25	4.45	1.57	0.00
57.25	4.45	1.57	0.00	70.50	4.45	1.57	0.00
57.50	4.45	1.57	0.00	70.75	4.45	1.57	0.00
57.75	4.45	1.57	0.00	71.00	4.45	1.57	0.00
58.00	4.45	1.57	0.00	71.25	4.45	1.57	0.00
58.25	4.45	1.57	0.00	71.50	4.45	1.57	0.00
58.50	4.45	1.57	0.00	71.75	4.45	1.57	0.00
58.75	4.45	1.57	0.00	72.00	4.45	1.57	0.00
59.00	4.45	1.57	0.00	72.25	4.45	1.57	0.00
59.25	4.45	1.57	0.00	72.50	4.45	1.57	0.00
59.50	4.45	1.57	0.00	72.75	4.45	1.57	0.00
59.75	4.45	1.57	0.00	73.00	4.45	1.57	0.00
60.00	4.45	1.57	0.00	73.25	4.45	1.57	0.00
60.25	4.45	1.57	0.00	73.50	4.45	1.57	0.00
60.50	4.45	1.57	0.00	73.75	4.45	1.57	0.00
60.75	4.45	1.57	0.00	74.00	4.45	1.57	0.00
61.00	4.45	1.57	0.00	74.25	4.45	1.57	0.00
61.25	4.45	1.57	0.00	74.50	4.45	1.57	0.00
61.50	4.45	1.57	0.00	74.75	4.45	1.57	0.00
61.75	4.45	1.57	0.00	75.00	4.45	1.57	0.00
62.00	4.45	1.57	0.00	75.25	4.45	1.57	0.00
62.25	4.45	1.57	0.00	75.50	4.45	1.57	0.00
62.50	4.45	1.57	0.00	75.75	4.45	1.57	0.00
62.75	4.45	1.57	0.00	76.00	4.45	1.57	0.00
63.00	4.45	1.57	0.00	76.25	4.45	1.57	0.00
63.25	4.45	1.57	0.00	76.50	4.45	1.57	0.00
63.50	4.45	1.57	0.00	76.75	4.45	1.57	0.00
63.75	4.45	1.57	0.00	77.00	4.45	1.57	0.00
64.00	4.45	1.57	0.00	77.25	4.45	1.57	0.00
64.25	4.45	1.57	0.00	77.50	4.45	1.57	0.00
64.50	4.45	1.57	0.00	77.75	4.45	1.57	0.00
64.75	4.45	1.57	0.00	78.00	4.45	1.57	0.00
65.00	4.45	1.57	0.00	78.25	4.45	1.57	0.00
65.25	4.45	1.57	0.00	78.50	4.45	1.57	0.00
65.50	4.45	1.57	0.00	78.75	4.45	1.57	0.00
65.75	4.45	1.57	0.00	79.00	4.45	1.57	0.00
66.00	4.45	1.57	0.00	79.25	4.45	1.57	0.00
66.25	4.45	1.57	0.00	79.50	4.45	1.57	0.00
66.50	4.45	1.57	0.00	79.75	4.45	1.57	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	1.57	0.00	93.25	4.45	1.57	0.00
80.25	4.45	1.57	0.00	93.50	4.45	1.57	0.00
80.50	4.45	1.57	0.00	93.75	4.45	1.57	0.00
80.75	4.45	1.57	0.00	94.00	4.45	1.57	0.00
81.00	4.45	1.57	0.00	94.25	4.45	1.57	0.00
81.25	4.45	1.57	0.00	94.50	4.45	1.57	0.00
81.50	4.45	1.57	0.00	94.75	4.45	1.57	0.00
81.75	4.45	1.57	0.00	95.00	4.45	1.57	0.00
82.00	4.45	1.57	0.00	95.25	4.45	1.57	0.00
82.25	4.45	1.57	0.00	95.50	4.45	1.57	0.00
82.50	4.45	1.57	0.00	95.75	4.45	1.57	0.00
82.75	4.45	1.57	0.00	96.00	4.45	1.57	0.00
83.00	4.45	1.57	0.00	96.25	4.45	1.57	0.00
83.25	4.45	1.57	0.00	96.50	4.45	1.57	0.00
83.50	4.45	1.57	0.00	96.75	4.45	1.57	0.00
83.75	4.45	1.57	0.00	97.00	4.45	1.57	0.00
84.00	4.45	1.57	0.00	97.25	4.45	1.57	0.00
84.25	4.45	1.57	0.00	97.50	4.45	1.57	0.00
84.50	4.45	1.57	0.00	97.75	4.45	1.57	0.00
84.75	4.45	1.57	0.00	98.00	4.45	1.57	0.00
85.00	4.45	1.57	0.00	98.25	4.45	1.57	0.00
85.25	4.45	1.57	0.00	98.50	4.45	1.57	0.00
85.50	4.45	1.57	0.00	98.75	4.45	1.57	0.00
85.75	4.45	1.57	0.00	99.00	4.45	1.57	0.00
86.00	4.45	1.57	0.00	99.25	4.45	1.57	0.00
86.25	4.45	1.57	0.00	99.50	4.45	1.57	0.00
86.50	4.45	1.57	0.00	99.75	4.45	1.57	0.00
86.75	4.45	1.57	0.00	100.00	4.45	1.57	0.00
87.00	4.45	1.57	0.00	100.25	4.45	1.57	0.00
87.25	4.45	1.57	0.00	100.50	4.45	1.57	0.00
87.50	4.45	1.57	0.00	100.75	4.45	1.57	0.00
87.75	4.45	1.57	0.00	101.00	4.45	1.57	0.00
88.00	4.45	1.57	0.00	101.25	4.45	1.57	0.00
88.25	4.45	1.57	0.00	101.50	4.45	1.57	0.00
88.50	4.45	1.57	0.00	101.75	4.45	1.57	0.00
88.75	4.45	1.57	0.00	102.00	4.45	1.57	0.00
89.00	4.45	1.57	0.00	102.25	4.45	1.57	0.00
89.25	4.45	1.57	0.00	102.50	4.45	1.57	0.00
89.50	4.45	1.57	0.00	102.75	4.45	1.57	0.00
89.75	4.45	1.57	0.00	103.00	4.45	1.57	0.00
90.00	4.45	1.57	0.00	103.25	4.45	1.57	0.00
90.25	4.45	1.57	0.00	103.50	4.45	1.57	0.00
90.50	4.45	1.57	0.00	103.75	4.45	1.57	0.00
90.75	4.45	1.57	0.00	104.00	4.45	1.57	0.00
91.00	4.45	1.57	0.00	104.25	4.45	1.57	0.00
91.25	4.45	1.57	0.00	104.50	4.45	1.57	0.00
91.50	4.45	1.57	0.00	104.75	4.45	1.57	0.00
91.75	4.45	1.57	0.00	105.00	4.45	1.57	0.00
92.00	4.45	1.57	0.00	105.25	4.45	1.57	0.00
92.25	4.45	1.57	0.00	105.50	4.45	1.57	0.00
92.50	4.45	1.57	0.00	105.75	4.45	1.57	0.00
92.75	4.45	1.57	0.00	106.00	4.45	1.57	0.00
93.00	4.45	1.57	0.00	106.25	4.45	1.57	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	1.57	0.00	119.75	4.45	1.57	0.00
106.75	4.45	1.57	0.00	120.00	4.45	1.57	0.00
107.00	4.45	1.57	0.00	120.25	4.45	1.57	0.00
107.25	4.45	1.57	0.00	120.50	4.45	1.57	0.00
107.50	4.45	1.57	0.00	120.75	4.45	1.57	0.00
107.75	4.45	1.57	0.00	121.00	4.45	1.57	0.00
108.00	4.45	1.57	0.00	121.25	4.45	1.57	0.00
108.25	4.45	1.57	0.00	121.50	4.45	1.57	0.00
108.50	4.45	1.57	0.00	121.75	4.45	1.57	0.00
108.75	4.45	1.57	0.00	122.00	4.45	1.57	0.00
109.00	4.45	1.57	0.00	122.25	4.45	1.57	0.00
109.25	4.45	1.57	0.00	122.50	4.45	1.57	0.00
109.50	4.45	1.57	0.00	122.75	4.45	1.57	0.00
109.75	4.45	1.57	0.00	123.00	4.45	1.57	0.00
110.00	4.45	1.57	0.00	123.25	4.45	1.57	0.00
110.25	4.45	1.57	0.00	123.50	4.45	1.57	0.00
110.50	4.45	1.57	0.00	123.75	4.45	1.57	0.00
110.75	4.45	1.57	0.00	124.00	4.45	1.57	0.00
111.00	4.45	1.57	0.00	124.25	4.45	1.57	0.00
111.25	4.45	1.57	0.00	124.50	4.45	1.57	0.00
111.50	4.45	1.57	0.00	124.75	4.45	1.57	0.00
111.75	4.45	1.57	0.00	125.00	4.45	1.57	0.00
112.00	4.45	1.57	0.00	125.25	4.45	1.57	0.00
112.25	4.45	1.57	0.00	125.50	4.45	1.57	0.00
112.50	4.45	1.57	0.00	125.75	4.45	1.57	0.00
112.75	4.45	1.57	0.00	126.00	4.45	1.57	0.00
113.00	4.45	1.57	0.00	126.25	4.45	1.57	0.00
113.25	4.45	1.57	0.00	126.50	4.45	1.57	0.00
113.50	4.45	1.57	0.00	126.75	4.45	1.57	0.00
113.75	4.45	1.57	0.00	127.00	4.45	1.57	0.00
114.00	4.45	1.57	0.00	127.25	4.45	1.57	0.00
114.25	4.45	1.57	0.00	127.50	4.45	1.57	0.00
114.50	4.45	1.57	0.00	127.75	4.45	1.57	0.00
114.75	4.45	1.57	0.00	128.00	4.45	1.57	0.00
115.00	4.45	1.57	0.00	128.25	4.45	1.57	0.00
115.25	4.45	1.57	0.00	128.50	4.45	1.57	0.00
115.50	4.45	1.57	0.00	128.75	4.45	1.57	0.00
115.75	4.45	1.57	0.00	129.00	4.45	1.57	0.00
116.00	4.45	1.57	0.00	129.25	4.45	1.57	0.00
116.25	4.45	1.57	0.00	129.50	4.45	1.57	0.00
116.50	4.45	1.57	0.00	129.75	4.45	1.57	0.00
116.75	4.45	1.57	0.00	130.00	4.45	1.57	0.00
117.00	4.45	1.57	0.00	130.25	4.45	1.57	0.00
117.25	4.45	1.57	0.00	130.50	4.45	1.57	0.00
117.50	4.45	1.57	0.00	130.75	4.45	1.57	0.00
117.75	4.45	1.57	0.00	131.00	4.45	1.57	0.00
118.00	4.45	1.57	0.00	131.25	4.45	1.57	0.00
118.25	4.45	1.57	0.00	131.50	4.45	1.57	0.00
118.50	4.45	1.57	0.00	131.75	4.45	1.57	0.00
118.75	4.45	1.57	0.00	132.00	4.45	1.57	0.00
119.00	4.45	1.57	0.00	132.25	4.45	1.57	0.00
119.25	4.45	1.57	0.00	132.50	4.45	1.57	0.00
119.50	4.45	1.57	0.00	132.75	4.45	1.57	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	1.57	0.00
133.25	4.45	1.57	0.00
133.50	4.45	1.57	0.00
133.75	4.45	1.57	0.00
134.00	4.45	1.57	0.00
134.25	4.45	1.57	0.00
134.50	4.45	1.57	0.00
134.75	4.45	1.57	0.00
135.00	4.45	1.57	0.00
135.25	4.45	1.57	0.00
135.50	4.45	1.57	0.00
135.75	4.45	1.57	0.00
136.00	4.45	1.57	0.00
136.25	4.45	1.57	0.00
136.50	4.45	1.57	0.00
136.75	4.45	1.57	0.00
137.00	4.45	1.57	0.00
137.25	4.45	1.57	0.00
137.50	4.45	1.57	0.00
137.75	4.45	1.57	0.00
138.00	4.45	1.57	0.00
138.25	4.45	1.57	0.00
138.50	4.45	1.57	0.00
138.75	4.45	1.57	0.00
139.00	4.45	1.57	0.00
139.25	4.45	1.57	0.00
139.50	4.45	1.57	0.00
139.75	4.45	1.57	0.00
140.00	4.45	1.57	0.00
140.25	4.45	1.57	0.00
140.50	4.45	1.57	0.00
140.75	4.45	1.57	0.00
141.00	4.45	1.57	0.00
141.25	4.45	1.57	0.00
141.50	4.45	1.57	0.00
141.75	4.45	1.57	0.00
142.00	4.45	1.57	0.00
142.25	4.45	1.57	0.00
142.50	4.45	1.57	0.00
142.75	4.45	1.57	0.00
143.00	4.45	1.57	0.00
143.25	4.45	1.57	0.00
143.50	4.45	1.57	0.00
143.75	4.45	1.57	0.00
144.00	4.45	1.57	0.00
144.25	4.45	1.57	0.00
144.50	4.45	1.57	0.00
144.75	4.45	1.57	0.00
145.00	4.45	1.57	0.00
145.25	4.45	1.57	0.00
145.50	4.45	1.57	0.00
145.75	4.45	1.57	0.00
146.00	4.45	1.57	0.00
146.25	4.45	1.57	0.00
146.50	4.45	1.57	0.00
146.75	4.45	1.57	0.00
147.00	4.45	1.57	0.00
147.25	4.45	1.57	0.00
147.50	4.45	1.57	0.00
147.75	4.45	1.57	0.00
148.00	4.45	1.57	0.00
148.25	4.45	1.57	0.00
148.50	4.45	1.57	0.00
148.75	4.45	1.57	0.00
149.00	4.45	1.57	0.00
149.25	4.45	1.57	0.00
149.50	4.45	1.57	0.00
149.75	4.45	1.57	0.00
150.00	4.45	1.57	0.00

Summary for Subcatchment 3S: SB-2

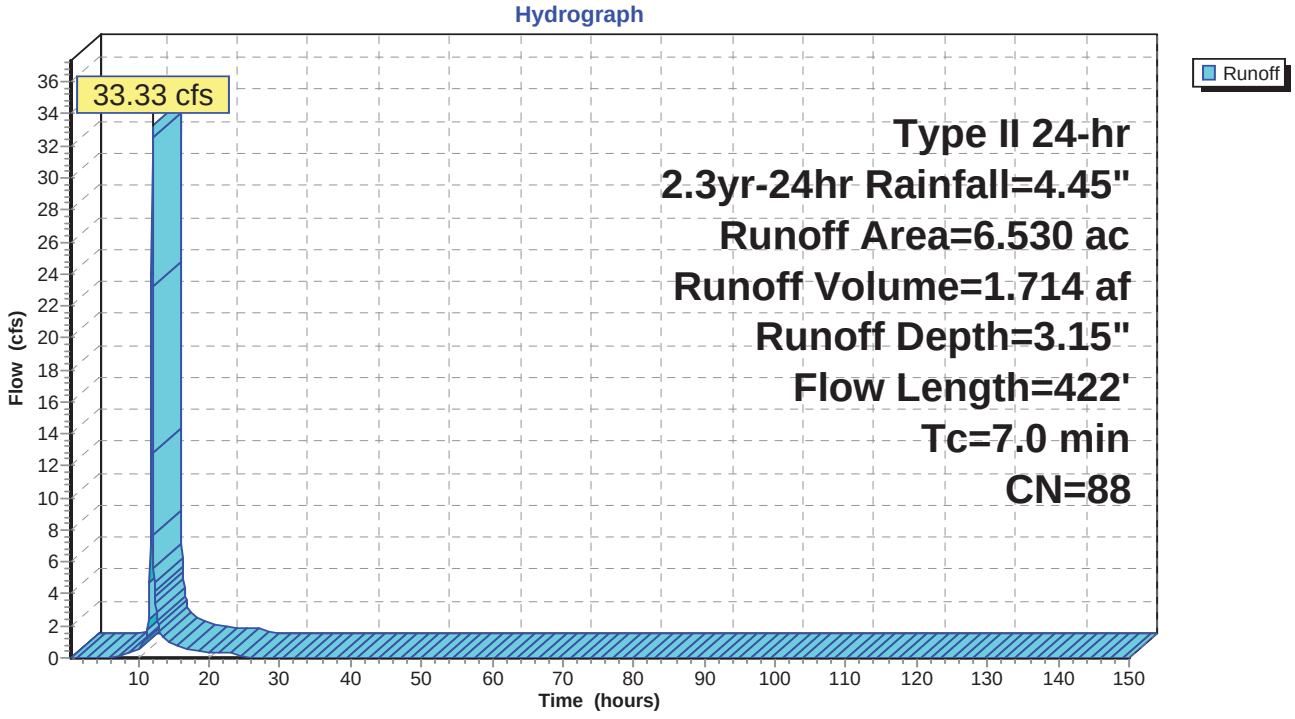
Runoff = 33.33 cfs @ 11.98 hrs, Volume= 1.714 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
*	5.450	98	Gravel surface, HSG A
	1.080	39	>75% Grass cover, Good, HSG A
	6.530	88	Weighted Average
	1.080		16.54% Pervious Area
	5.450		83.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	300	0.0040	1.07		**Sheet Flow, Overland Flow to Storm Inlet** Smooth surfaces n= 0.011 P2= 4.50"
2.3	122	0.0030	0.88		**Shallow Concentrated Flow, Overland Flow to Storm Inlet** Unpaved Kv= 16.1 fps
7.0	422	Total			

Subcatchment 3S: SB-2



Hydrograph for Subcatchment 3S: SB-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	2.36	1.18
0.75	0.03	0.00	0.00	14.00	3.65	2.40	1.05
1.00	0.05	0.00	0.00	14.25	3.69	2.44	0.97
1.25	0.06	0.00	0.00	14.50	3.73	2.48	0.92
1.50	0.07	0.00	0.00	14.75	3.76	2.51	0.88
1.75	0.08	0.00	0.00	15.00	3.80	2.54	0.83
2.00	0.10	0.00	0.00	15.25	3.83	2.57	0.78
2.25	0.11	0.00	0.00	15.50	3.86	2.60	0.74
2.50	0.13	0.00	0.00	15.75	3.89	2.63	0.69
2.75	0.14	0.00	0.00	16.00	3.92	2.65	0.64
3.00	0.15	0.00	0.00	16.25	3.94	2.67	0.61
3.25	0.17	0.00	0.00	16.50	3.97	2.70	0.60
3.50	0.18	0.00	0.00	16.75	3.99	2.72	0.58
3.75	0.20	0.00	0.00	17.00	4.01	2.74	0.56
4.00	0.21	0.00	0.00	17.25	4.04	2.76	0.55
4.25	0.23	0.00	0.00	17.50	4.06	2.78	0.53
4.50	0.25	0.00	0.00	17.75	4.08	2.80	0.52
4.75	0.26	0.00	0.00	18.00	4.10	2.82	0.50
5.00	0.28	0.00	0.00	18.25	4.12	2.84	0.48
5.25	0.30	0.00	0.01	18.50	4.14	2.86	0.46
5.50	0.32	0.00	0.03	18.75	4.16	2.87	0.45
5.75	0.34	0.00	0.04	19.00	4.17	2.89	0.43
6.00	0.36	0.00	0.05	19.25	4.19	2.91	0.41
6.25	0.38	0.01	0.07	19.50	4.21	2.92	0.40
6.50	0.40	0.01	0.08	19.75	4.22	2.94	0.38
6.75	0.42	0.01	0.10	20.00	4.24	2.95	0.36
7.00	0.44	0.02	0.11	20.25	4.25	2.96	0.35
7.25	0.46	0.02	0.13	20.50	4.27	2.98	0.35
7.50	0.49	0.03	0.15	20.75	4.28	2.99	0.35
7.75	0.51	0.04	0.17	21.00	4.29	3.00	0.34
8.00	0.53	0.04	0.18	21.25	4.31	3.02	0.34
8.25	0.56	0.05	0.21	21.50	4.32	3.03	0.34
8.50	0.59	0.06	0.25	21.75	4.33	3.04	0.33
8.75	0.62	0.07	0.30	22.00	4.35	3.05	0.33
9.00	0.65	0.08	0.34	22.25	4.36	3.07	0.33
9.25	0.69	0.10	0.38	22.50	4.37	3.08	0.32
9.50	0.73	0.11	0.40	22.75	4.39	3.09	0.32
9.75	0.76	0.13	0.45	23.00	4.40	3.10	0.32
10.00	0.81	0.15	0.53	23.25	4.41	3.11	0.31
10.25	0.85	0.17	0.63	23.50	4.43	3.13	0.31
10.50	0.91	0.20	0.76	23.75	4.44	3.14	0.31
10.75	0.97	0.24	0.93	24.00	**4.45**	**3.15**	0.30
11.00	1.05	0.28	1.15	24.25	4.45	3.15	0.01
11.25	1.14	0.34	1.53	24.50	4.45	3.15	0.00
11.50	1.26	0.41	2.08	24.75	4.45	3.15	0.00
11.75	1.72	0.75	9.63	25.00	4.45	3.15	0.00
12.00	2.95	1.77	**32.52**	25.25	4.45	3.15	0.00
12.25	3.14	1.95	4.71	25.50	4.45	3.15	0.00
12.50	3.27	2.06	2.94	25.75	4.45	3.15	0.00
12.75	3.36	2.14	2.11	26.00	4.45	3.15	0.00
13.00	3.44	2.21	1.77	26.25	4.45	3.15	0.00
13.25	3.50	2.27	1.52	26.50	4.45	3.15	0.00
13.50	3.56	2.32	1.34	26.75	4.45	3.15	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	3.15	0.00	40.25	4.45	3.15	0.00
27.25	4.45	3.15	0.00	40.50	4.45	3.15	0.00
27.50	4.45	3.15	0.00	40.75	4.45	3.15	0.00
27.75	4.45	3.15	0.00	41.00	4.45	3.15	0.00
28.00	4.45	3.15	0.00	41.25	4.45	3.15	0.00
28.25	4.45	3.15	0.00	41.50	4.45	3.15	0.00
28.50	4.45	3.15	0.00	41.75	4.45	3.15	0.00
28.75	4.45	3.15	0.00	42.00	4.45	3.15	0.00
29.00	4.45	3.15	0.00	42.25	4.45	3.15	0.00
29.25	4.45	3.15	0.00	42.50	4.45	3.15	0.00
29.50	4.45	3.15	0.00	42.75	4.45	3.15	0.00
29.75	4.45	3.15	0.00	43.00	4.45	3.15	0.00
30.00	4.45	3.15	0.00	43.25	4.45	3.15	0.00
30.25	4.45	3.15	0.00	43.50	4.45	3.15	0.00
30.50	4.45	3.15	0.00	43.75	4.45	3.15	0.00
30.75	4.45	3.15	0.00	44.00	4.45	3.15	0.00
31.00	4.45	3.15	0.00	44.25	4.45	3.15	0.00
31.25	4.45	3.15	0.00	44.50	4.45	3.15	0.00
31.50	4.45	3.15	0.00	44.75	4.45	3.15	0.00
31.75	4.45	3.15	0.00	45.00	4.45	3.15	0.00
32.00	4.45	3.15	0.00	45.25	4.45	3.15	0.00
32.25	4.45	3.15	0.00	45.50	4.45	3.15	0.00
32.50	4.45	3.15	0.00	45.75	4.45	3.15	0.00
32.75	4.45	3.15	0.00	46.00	4.45	3.15	0.00
33.00	4.45	3.15	0.00	46.25	4.45	3.15	0.00
33.25	4.45	3.15	0.00	46.50	4.45	3.15	0.00
33.50	4.45	3.15	0.00	46.75	4.45	3.15	0.00
33.75	4.45	3.15	0.00	47.00	4.45	3.15	0.00
34.00	4.45	3.15	0.00	47.25	4.45	3.15	0.00
34.25	4.45	3.15	0.00	47.50	4.45	3.15	0.00
34.50	4.45	3.15	0.00	47.75	4.45	3.15	0.00
34.75	4.45	3.15	0.00	48.00	4.45	3.15	0.00
35.00	4.45	3.15	0.00	48.25	4.45	3.15	0.00
35.25	4.45	3.15	0.00	48.50	4.45	3.15	0.00
35.50	4.45	3.15	0.00	48.75	4.45	3.15	0.00
35.75	4.45	3.15	0.00	49.00	4.45	3.15	0.00
36.00	4.45	3.15	0.00	49.25	4.45	3.15	0.00
36.25	4.45	3.15	0.00	49.50	4.45	3.15	0.00
36.50	4.45	3.15	0.00	49.75	4.45	3.15	0.00
36.75	4.45	3.15	0.00	50.00	4.45	3.15	0.00
37.00	4.45	3.15	0.00	50.25	4.45	3.15	0.00
37.25	4.45	3.15	0.00	50.50	4.45	3.15	0.00
37.50	4.45	3.15	0.00	50.75	4.45	3.15	0.00
37.75	4.45	3.15	0.00	51.00	4.45	3.15	0.00
38.00	4.45	3.15	0.00	51.25	4.45	3.15	0.00
38.25	4.45	3.15	0.00	51.50	4.45	3.15	0.00
38.50	4.45	3.15	0.00	51.75	4.45	3.15	0.00
38.75	4.45	3.15	0.00	52.00	4.45	3.15	0.00
39.00	4.45	3.15	0.00	52.25	4.45	3.15	0.00
39.25	4.45	3.15	0.00	52.50	4.45	3.15	0.00
39.50	4.45	3.15	0.00	52.75	4.45	3.15	0.00
39.75	4.45	3.15	0.00	53.00	4.45	3.15	0.00
40.00	4.45	3.15	0.00	53.25	4.45	3.15	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	3.15	0.00	66.75	4.45	3.15	0.00
53.75	4.45	3.15	0.00	67.00	4.45	3.15	0.00
54.00	4.45	3.15	0.00	67.25	4.45	3.15	0.00
54.25	4.45	3.15	0.00	67.50	4.45	3.15	0.00
54.50	4.45	3.15	0.00	67.75	4.45	3.15	0.00
54.75	4.45	3.15	0.00	68.00	4.45	3.15	0.00
55.00	4.45	3.15	0.00	68.25	4.45	3.15	0.00
55.25	4.45	3.15	0.00	68.50	4.45	3.15	0.00
55.50	4.45	3.15	0.00	68.75	4.45	3.15	0.00
55.75	4.45	3.15	0.00	69.00	4.45	3.15	0.00
56.00	4.45	3.15	0.00	69.25	4.45	3.15	0.00
56.25	4.45	3.15	0.00	69.50	4.45	3.15	0.00
56.50	4.45	3.15	0.00	69.75	4.45	3.15	0.00
56.75	4.45	3.15	0.00	70.00	4.45	3.15	0.00
57.00	4.45	3.15	0.00	70.25	4.45	3.15	0.00
57.25	4.45	3.15	0.00	70.50	4.45	3.15	0.00
57.50	4.45	3.15	0.00	70.75	4.45	3.15	0.00
57.75	4.45	3.15	0.00	71.00	4.45	3.15	0.00
58.00	4.45	3.15	0.00	71.25	4.45	3.15	0.00
58.25	4.45	3.15	0.00	71.50	4.45	3.15	0.00
58.50	4.45	3.15	0.00	71.75	4.45	3.15	0.00
58.75	4.45	3.15	0.00	72.00	4.45	3.15	0.00
59.00	4.45	3.15	0.00	72.25	4.45	3.15	0.00
59.25	4.45	3.15	0.00	72.50	4.45	3.15	0.00
59.50	4.45	3.15	0.00	72.75	4.45	3.15	0.00
59.75	4.45	3.15	0.00	73.00	4.45	3.15	0.00
60.00	4.45	3.15	0.00	73.25	4.45	3.15	0.00
60.25	4.45	3.15	0.00	73.50	4.45	3.15	0.00
60.50	4.45	3.15	0.00	73.75	4.45	3.15	0.00
60.75	4.45	3.15	0.00	74.00	4.45	3.15	0.00
61.00	4.45	3.15	0.00	74.25	4.45	3.15	0.00
61.25	4.45	3.15	0.00	74.50	4.45	3.15	0.00
61.50	4.45	3.15	0.00	74.75	4.45	3.15	0.00
61.75	4.45	3.15	0.00	75.00	4.45	3.15	0.00
62.00	4.45	3.15	0.00	75.25	4.45	3.15	0.00
62.25	4.45	3.15	0.00	75.50	4.45	3.15	0.00
62.50	4.45	3.15	0.00	75.75	4.45	3.15	0.00
62.75	4.45	3.15	0.00	76.00	4.45	3.15	0.00
63.00	4.45	3.15	0.00	76.25	4.45	3.15	0.00
63.25	4.45	3.15	0.00	76.50	4.45	3.15	0.00
63.50	4.45	3.15	0.00	76.75	4.45	3.15	0.00
63.75	4.45	3.15	0.00	77.00	4.45	3.15	0.00
64.00	4.45	3.15	0.00	77.25	4.45	3.15	0.00
64.25	4.45	3.15	0.00	77.50	4.45	3.15	0.00
64.50	4.45	3.15	0.00	77.75	4.45	3.15	0.00
64.75	4.45	3.15	0.00	78.00	4.45	3.15	0.00
65.00	4.45	3.15	0.00	78.25	4.45	3.15	0.00
65.25	4.45	3.15	0.00	78.50	4.45	3.15	0.00
65.50	4.45	3.15	0.00	78.75	4.45	3.15	0.00
65.75	4.45	3.15	0.00	79.00	4.45	3.15	0.00
66.00	4.45	3.15	0.00	79.25	4.45	3.15	0.00
66.25	4.45	3.15	0.00	79.50	4.45	3.15	0.00
66.50	4.45	3.15	0.00	79.75	4.45	3.15	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	3.15	0.00	93.25	4.45	3.15	0.00
80.25	4.45	3.15	0.00	93.50	4.45	3.15	0.00
80.50	4.45	3.15	0.00	93.75	4.45	3.15	0.00
80.75	4.45	3.15	0.00	94.00	4.45	3.15	0.00
81.00	4.45	3.15	0.00	94.25	4.45	3.15	0.00
81.25	4.45	3.15	0.00	94.50	4.45	3.15	0.00
81.50	4.45	3.15	0.00	94.75	4.45	3.15	0.00
81.75	4.45	3.15	0.00	95.00	4.45	3.15	0.00
82.00	4.45	3.15	0.00	95.25	4.45	3.15	0.00
82.25	4.45	3.15	0.00	95.50	4.45	3.15	0.00
82.50	4.45	3.15	0.00	95.75	4.45	3.15	0.00
82.75	4.45	3.15	0.00	96.00	4.45	3.15	0.00
83.00	4.45	3.15	0.00	96.25	4.45	3.15	0.00
83.25	4.45	3.15	0.00	96.50	4.45	3.15	0.00
83.50	4.45	3.15	0.00	96.75	4.45	3.15	0.00
83.75	4.45	3.15	0.00	97.00	4.45	3.15	0.00
84.00	4.45	3.15	0.00	97.25	4.45	3.15	0.00
84.25	4.45	3.15	0.00	97.50	4.45	3.15	0.00
84.50	4.45	3.15	0.00	97.75	4.45	3.15	0.00
84.75	4.45	3.15	0.00	98.00	4.45	3.15	0.00
85.00	4.45	3.15	0.00	98.25	4.45	3.15	0.00
85.25	4.45	3.15	0.00	98.50	4.45	3.15	0.00
85.50	4.45	3.15	0.00	98.75	4.45	3.15	0.00
85.75	4.45	3.15	0.00	99.00	4.45	3.15	0.00
86.00	4.45	3.15	0.00	99.25	4.45	3.15	0.00
86.25	4.45	3.15	0.00	99.50	4.45	3.15	0.00
86.50	4.45	3.15	0.00	99.75	4.45	3.15	0.00
86.75	4.45	3.15	0.00	100.00	4.45	3.15	0.00
87.00	4.45	3.15	0.00	100.25	4.45	3.15	0.00
87.25	4.45	3.15	0.00	100.50	4.45	3.15	0.00
87.50	4.45	3.15	0.00	100.75	4.45	3.15	0.00
87.75	4.45	3.15	0.00	101.00	4.45	3.15	0.00
88.00	4.45	3.15	0.00	101.25	4.45	3.15	0.00
88.25	4.45	3.15	0.00	101.50	4.45	3.15	0.00
88.50	4.45	3.15	0.00	101.75	4.45	3.15	0.00
88.75	4.45	3.15	0.00	102.00	4.45	3.15	0.00
89.00	4.45	3.15	0.00	102.25	4.45	3.15	0.00
89.25	4.45	3.15	0.00	102.50	4.45	3.15	0.00
89.50	4.45	3.15	0.00	102.75	4.45	3.15	0.00
89.75	4.45	3.15	0.00	103.00	4.45	3.15	0.00
90.00	4.45	3.15	0.00	103.25	4.45	3.15	0.00
90.25	4.45	3.15	0.00	103.50	4.45	3.15	0.00
90.50	4.45	3.15	0.00	103.75	4.45	3.15	0.00
90.75	4.45	3.15	0.00	104.00	4.45	3.15	0.00
91.00	4.45	3.15	0.00	104.25	4.45	3.15	0.00
91.25	4.45	3.15	0.00	104.50	4.45	3.15	0.00
91.50	4.45	3.15	0.00	104.75	4.45	3.15	0.00
91.75	4.45	3.15	0.00	105.00	4.45	3.15	0.00
92.00	4.45	3.15	0.00	105.25	4.45	3.15	0.00
92.25	4.45	3.15	0.00	105.50	4.45	3.15	0.00
92.50	4.45	3.15	0.00	105.75	4.45	3.15	0.00
92.75	4.45	3.15	0.00	106.00	4.45	3.15	0.00
93.00	4.45	3.15	0.00	106.25	4.45	3.15	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	3.15	0.00	119.75	4.45	3.15	0.00
106.75	4.45	3.15	0.00	120.00	4.45	3.15	0.00
107.00	4.45	3.15	0.00	120.25	4.45	3.15	0.00
107.25	4.45	3.15	0.00	120.50	4.45	3.15	0.00
107.50	4.45	3.15	0.00	120.75	4.45	3.15	0.00
107.75	4.45	3.15	0.00	121.00	4.45	3.15	0.00
108.00	4.45	3.15	0.00	121.25	4.45	3.15	0.00
108.25	4.45	3.15	0.00	121.50	4.45	3.15	0.00
108.50	4.45	3.15	0.00	121.75	4.45	3.15	0.00
108.75	4.45	3.15	0.00	122.00	4.45	3.15	0.00
109.00	4.45	3.15	0.00	122.25	4.45	3.15	0.00
109.25	4.45	3.15	0.00	122.50	4.45	3.15	0.00
109.50	4.45	3.15	0.00	122.75	4.45	3.15	0.00
109.75	4.45	3.15	0.00	123.00	4.45	3.15	0.00
110.00	4.45	3.15	0.00	123.25	4.45	3.15	0.00
110.25	4.45	3.15	0.00	123.50	4.45	3.15	0.00
110.50	4.45	3.15	0.00	123.75	4.45	3.15	0.00
110.75	4.45	3.15	0.00	124.00	4.45	3.15	0.00
111.00	4.45	3.15	0.00	124.25	4.45	3.15	0.00
111.25	4.45	3.15	0.00	124.50	4.45	3.15	0.00
111.50	4.45	3.15	0.00	124.75	4.45	3.15	0.00
111.75	4.45	3.15	0.00	125.00	4.45	3.15	0.00
112.00	4.45	3.15	0.00	125.25	4.45	3.15	0.00
112.25	4.45	3.15	0.00	125.50	4.45	3.15	0.00
112.50	4.45	3.15	0.00	125.75	4.45	3.15	0.00
112.75	4.45	3.15	0.00	126.00	4.45	3.15	0.00
113.00	4.45	3.15	0.00	126.25	4.45	3.15	0.00
113.25	4.45	3.15	0.00	126.50	4.45	3.15	0.00
113.50	4.45	3.15	0.00	126.75	4.45	3.15	0.00
113.75	4.45	3.15	0.00	127.00	4.45	3.15	0.00
114.00	4.45	3.15	0.00	127.25	4.45	3.15	0.00
114.25	4.45	3.15	0.00	127.50	4.45	3.15	0.00
114.50	4.45	3.15	0.00	127.75	4.45	3.15	0.00
114.75	4.45	3.15	0.00	128.00	4.45	3.15	0.00
115.00	4.45	3.15	0.00	128.25	4.45	3.15	0.00
115.25	4.45	3.15	0.00	128.50	4.45	3.15	0.00
115.50	4.45	3.15	0.00	128.75	4.45	3.15	0.00
115.75	4.45	3.15	0.00	129.00	4.45	3.15	0.00
116.00	4.45	3.15	0.00	129.25	4.45	3.15	0.00
116.25	4.45	3.15	0.00	129.50	4.45	3.15	0.00
116.50	4.45	3.15	0.00	129.75	4.45	3.15	0.00
116.75	4.45	3.15	0.00	130.00	4.45	3.15	0.00
117.00	4.45	3.15	0.00	130.25	4.45	3.15	0.00
117.25	4.45	3.15	0.00	130.50	4.45	3.15	0.00
117.50	4.45	3.15	0.00	130.75	4.45	3.15	0.00
117.75	4.45	3.15	0.00	131.00	4.45	3.15	0.00
118.00	4.45	3.15	0.00	131.25	4.45	3.15	0.00
118.25	4.45	3.15	0.00	131.50	4.45	3.15	0.00
118.50	4.45	3.15	0.00	131.75	4.45	3.15	0.00
118.75	4.45	3.15	0.00	132.00	4.45	3.15	0.00
119.00	4.45	3.15	0.00	132.25	4.45	3.15	0.00
119.25	4.45	3.15	0.00	132.50	4.45	3.15	0.00
119.50	4.45	3.15	0.00	132.75	4.45	3.15	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	3.15	0.00
133.25	4.45	3.15	0.00
133.50	4.45	3.15	0.00
133.75	4.45	3.15	0.00
134.00	4.45	3.15	0.00
134.25	4.45	3.15	0.00
134.50	4.45	3.15	0.00
134.75	4.45	3.15	0.00
135.00	4.45	3.15	0.00
135.25	4.45	3.15	0.00
135.50	4.45	3.15	0.00
135.75	4.45	3.15	0.00
136.00	4.45	3.15	0.00
136.25	4.45	3.15	0.00
136.50	4.45	3.15	0.00
136.75	4.45	3.15	0.00
137.00	4.45	3.15	0.00
137.25	4.45	3.15	0.00
137.50	4.45	3.15	0.00
137.75	4.45	3.15	0.00
138.00	4.45	3.15	0.00
138.25	4.45	3.15	0.00
138.50	4.45	3.15	0.00
138.75	4.45	3.15	0.00
139.00	4.45	3.15	0.00
139.25	4.45	3.15	0.00
139.50	4.45	3.15	0.00
139.75	4.45	3.15	0.00
140.00	4.45	3.15	0.00
140.25	4.45	3.15	0.00
140.50	4.45	3.15	0.00
140.75	4.45	3.15	0.00
141.00	4.45	3.15	0.00
141.25	4.45	3.15	0.00
141.50	4.45	3.15	0.00
141.75	4.45	3.15	0.00
142.00	4.45	3.15	0.00
142.25	4.45	3.15	0.00
142.50	4.45	3.15	0.00
142.75	4.45	3.15	0.00
143.00	4.45	3.15	0.00
143.25	4.45	3.15	0.00
143.50	4.45	3.15	0.00
143.75	4.45	3.15	0.00
144.00	4.45	3.15	0.00
144.25	4.45	3.15	0.00
144.50	4.45	3.15	0.00
144.75	4.45	3.15	0.00
145.00	4.45	3.15	0.00
145.25	4.45	3.15	0.00
145.50	4.45	3.15	0.00
145.75	4.45	3.15	0.00
146.00	4.45	3.15	0.00
146.25	4.45	3.15	0.00
146.50	4.45	3.15	0.00
146.75	4.45	3.15	0.00
147.00	4.45	3.15	0.00
147.25	4.45	3.15	0.00
147.50	4.45	3.15	0.00
147.75	4.45	3.15	0.00
148.00	4.45	3.15	0.00
148.25	4.45	3.15	0.00
148.50	4.45	3.15	0.00
148.75	4.45	3.15	0.00
149.00	4.45	3.15	0.00
149.25	4.45	3.15	0.00
149.50	4.45	3.15	0.00
149.75	4.45	3.15	0.00
150.00	4.45	3.15	0.00

Summary for Subcatchment 4S: SB-3

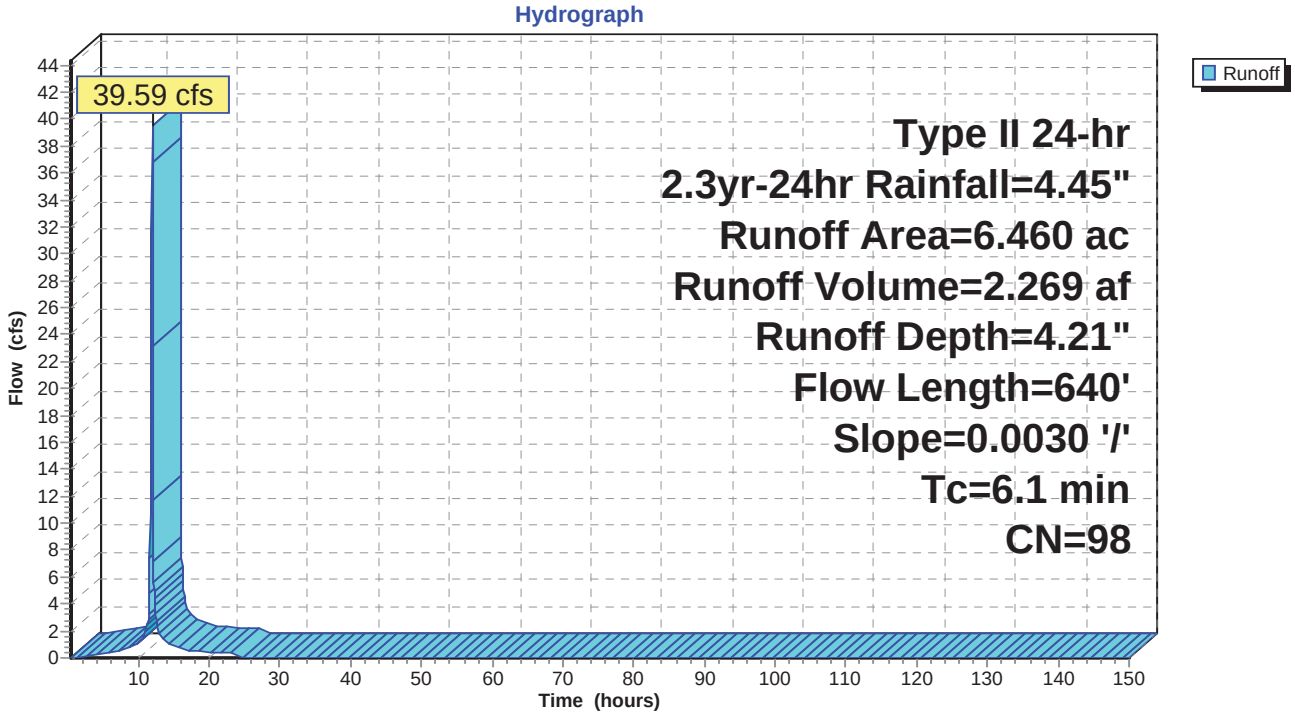
Runoff = 39.59 cfs @ 11.96 hrs, Volume= 2.269 af, Depth= 4.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
	1.510	98	Paved roads w/curbs & sewers, HSG A
*	4.950	98	Gravel surface, HSG A
	6.460	98	Weighted Average
	6.460		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	289	0.0030	0.94		**Sheet Flow, Overland Flow to Storm Inlet** Smooth surfaces n= 0.011 P2= 4.50"
1.0	351	0.0030	5.70	17.90	**Pipe Channel, Storm System to Pond** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.009 Corrugated PE, smooth interior
6.1	640	Total			

Subcatchment 4S: SB-3



Hydrograph for Subcatchment 4S: SB-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	3.37	1.27
0.75	0.03	0.00	0.00	14.00	3.65	3.42	1.12
1.00	0.05	0.00	0.01	14.25	3.69	3.46	1.04
1.25	0.06	0.00	0.04	14.50	3.73	3.49	0.99
1.50	0.07	0.00	0.07	14.75	3.76	3.53	0.94
1.75	0.08	0.01	0.10	15.00	3.80	3.56	0.89
2.00	0.10	0.01	0.13	15.25	3.83	3.60	0.84
2.25	0.11	0.02	0.15	15.50	3.86	3.63	0.79
2.50	0.13	0.02	0.17	15.75	3.89	3.65	0.73
2.75	0.14	0.03	0.19	16.00	3.92	3.68	0.68
3.00	0.15	0.04	0.21	16.25	3.94	3.71	0.65
3.25	0.17	0.05	0.23	16.50	3.97	3.73	0.64
3.50	0.18	0.06	0.25	16.75	3.99	3.75	0.62
3.75	0.20	0.07	0.27	17.00	4.01	3.78	0.60
4.00	0.21	0.08	0.28	17.25	4.04	3.80	0.58
4.25	0.23	0.09	0.30	17.50	4.06	3.82	0.56
4.50	0.25	0.10	0.32	17.75	4.08	3.84	0.55
4.75	0.26	0.12	0.34	18.00	4.10	3.86	0.53
5.00	0.28	0.13	0.36	18.25	4.12	3.88	0.51
5.25	0.30	0.14	0.38	18.50	4.14	3.90	0.49
5.50	0.32	0.16	0.40	18.75	4.16	3.92	0.47
5.75	0.34	0.17	0.42	19.00	4.17	3.94	0.46
6.00	0.36	0.19	0.43	19.25	4.19	3.95	0.44
6.25	0.38	0.21	0.45	19.50	4.21	3.97	0.42
6.50	0.40	0.23	0.47	19.75	4.22	3.99	0.40
6.75	0.42	0.25	0.49	20.00	4.24	4.00	0.38
7.00	0.44	0.26	0.51	20.25	4.25	4.02	0.37
7.25	0.46	0.28	0.52	20.50	4.27	4.03	0.37
7.50	0.49	0.31	0.54	20.75	4.28	4.04	0.37
7.75	0.51	0.33	0.56	21.00	4.29	4.06	0.36
8.00	0.53	0.35	0.58	21.25	4.31	4.07	0.36
8.25	0.56	0.37	0.63	21.50	4.32	4.09	0.36
8.50	0.59	0.40	0.70	21.75	4.33	4.10	0.35
8.75	0.62	0.43	0.77	22.00	4.35	4.11	0.35
9.00	0.65	0.46	0.84	22.25	4.36	4.13	0.34
9.25	0.69	0.49	0.87	22.50	4.37	4.14	0.34
9.50	0.73	0.53	0.88	22.75	4.39	4.15	0.34
9.75	0.76	0.56	0.95	23.00	4.40	4.16	0.33
10.00	0.81	0.60	1.06	23.25	4.41	4.18	0.33
10.25	0.85	0.65	1.21	23.50	4.43	4.19	0.33
10.50	0.91	0.70	1.39	23.75	4.44	4.20	0.32
10.75	0.97	0.76	1.63	24.00	**4.45**	**4.21**	0.32
11.00	1.05	0.84	1.92	24.25	4.45	4.21	0.00
11.25	1.14	0.93	2.46	24.50	4.45	4.21	0.00
11.50	1.26	1.04	3.15	24.75	4.45	4.21	0.00
11.75	1.72	1.50	**13.97**	25.00	4.45	4.21	0.00
12.00	2.95	2.72	**36.81**	25.25	4.45	4.21	0.00
12.25	3.14	2.91	4.90	25.50	4.45	4.21	0.00
12.50	3.27	3.04	3.13	25.75	4.45	4.21	0.00
12.75	3.36	3.13	2.28	26.00	4.45	4.21	0.00
13.00	3.44	3.20	1.90	26.25	4.45	4.21	0.00
13.25	3.50	3.27	1.64	26.50	4.45	4.21	0.00
13.50	3.56	3.32	1.43	26.75	4.45	4.21	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	4.21	0.00	40.25	4.45	4.21	0.00
27.25	4.45	4.21	0.00	40.50	4.45	4.21	0.00
27.50	4.45	4.21	0.00	40.75	4.45	4.21	0.00
27.75	4.45	4.21	0.00	41.00	4.45	4.21	0.00
28.00	4.45	4.21	0.00	41.25	4.45	4.21	0.00
28.25	4.45	4.21	0.00	41.50	4.45	4.21	0.00
28.50	4.45	4.21	0.00	41.75	4.45	4.21	0.00
28.75	4.45	4.21	0.00	42.00	4.45	4.21	0.00
29.00	4.45	4.21	0.00	42.25	4.45	4.21	0.00
29.25	4.45	4.21	0.00	42.50	4.45	4.21	0.00
29.50	4.45	4.21	0.00	42.75	4.45	4.21	0.00
29.75	4.45	4.21	0.00	43.00	4.45	4.21	0.00
30.00	4.45	4.21	0.00	43.25	4.45	4.21	0.00
30.25	4.45	4.21	0.00	43.50	4.45	4.21	0.00
30.50	4.45	4.21	0.00	43.75	4.45	4.21	0.00
30.75	4.45	4.21	0.00	44.00	4.45	4.21	0.00
31.00	4.45	4.21	0.00	44.25	4.45	4.21	0.00
31.25	4.45	4.21	0.00	44.50	4.45	4.21	0.00
31.50	4.45	4.21	0.00	44.75	4.45	4.21	0.00
31.75	4.45	4.21	0.00	45.00	4.45	4.21	0.00
32.00	4.45	4.21	0.00	45.25	4.45	4.21	0.00
32.25	4.45	4.21	0.00	45.50	4.45	4.21	0.00
32.50	4.45	4.21	0.00	45.75	4.45	4.21	0.00
32.75	4.45	4.21	0.00	46.00	4.45	4.21	0.00
33.00	4.45	4.21	0.00	46.25	4.45	4.21	0.00
33.25	4.45	4.21	0.00	46.50	4.45	4.21	0.00
33.50	4.45	4.21	0.00	46.75	4.45	4.21	0.00
33.75	4.45	4.21	0.00	47.00	4.45	4.21	0.00
34.00	4.45	4.21	0.00	47.25	4.45	4.21	0.00
34.25	4.45	4.21	0.00	47.50	4.45	4.21	0.00
34.50	4.45	4.21	0.00	47.75	4.45	4.21	0.00
34.75	4.45	4.21	0.00	48.00	4.45	4.21	0.00
35.00	4.45	4.21	0.00	48.25	4.45	4.21	0.00
35.25	4.45	4.21	0.00	48.50	4.45	4.21	0.00
35.50	4.45	4.21	0.00	48.75	4.45	4.21	0.00
35.75	4.45	4.21	0.00	49.00	4.45	4.21	0.00
36.00	4.45	4.21	0.00	49.25	4.45	4.21	0.00
36.25	4.45	4.21	0.00	49.50	4.45	4.21	0.00
36.50	4.45	4.21	0.00	49.75	4.45	4.21	0.00
36.75	4.45	4.21	0.00	50.00	4.45	4.21	0.00
37.00	4.45	4.21	0.00	50.25	4.45	4.21	0.00
37.25	4.45	4.21	0.00	50.50	4.45	4.21	0.00
37.50	4.45	4.21	0.00	50.75	4.45	4.21	0.00
37.75	4.45	4.21	0.00	51.00	4.45	4.21	0.00
38.00	4.45	4.21	0.00	51.25	4.45	4.21	0.00
38.25	4.45	4.21	0.00	51.50	4.45	4.21	0.00
38.50	4.45	4.21	0.00	51.75	4.45	4.21	0.00
38.75	4.45	4.21	0.00	52.00	4.45	4.21	0.00
39.00	4.45	4.21	0.00	52.25	4.45	4.21	0.00
39.25	4.45	4.21	0.00	52.50	4.45	4.21	0.00
39.50	4.45	4.21	0.00	52.75	4.45	4.21	0.00
39.75	4.45	4.21	0.00	53.00	4.45	4.21	0.00
40.00	4.45	4.21	0.00	53.25	4.45	4.21	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	4.21	0.00	66.75	4.45	4.21	0.00
53.75	4.45	4.21	0.00	67.00	4.45	4.21	0.00
54.00	4.45	4.21	0.00	67.25	4.45	4.21	0.00
54.25	4.45	4.21	0.00	67.50	4.45	4.21	0.00
54.50	4.45	4.21	0.00	67.75	4.45	4.21	0.00
54.75	4.45	4.21	0.00	68.00	4.45	4.21	0.00
55.00	4.45	4.21	0.00	68.25	4.45	4.21	0.00
55.25	4.45	4.21	0.00	68.50	4.45	4.21	0.00
55.50	4.45	4.21	0.00	68.75	4.45	4.21	0.00
55.75	4.45	4.21	0.00	69.00	4.45	4.21	0.00
56.00	4.45	4.21	0.00	69.25	4.45	4.21	0.00
56.25	4.45	4.21	0.00	69.50	4.45	4.21	0.00
56.50	4.45	4.21	0.00	69.75	4.45	4.21	0.00
56.75	4.45	4.21	0.00	70.00	4.45	4.21	0.00
57.00	4.45	4.21	0.00	70.25	4.45	4.21	0.00
57.25	4.45	4.21	0.00	70.50	4.45	4.21	0.00
57.50	4.45	4.21	0.00	70.75	4.45	4.21	0.00
57.75	4.45	4.21	0.00	71.00	4.45	4.21	0.00
58.00	4.45	4.21	0.00	71.25	4.45	4.21	0.00
58.25	4.45	4.21	0.00	71.50	4.45	4.21	0.00
58.50	4.45	4.21	0.00	71.75	4.45	4.21	0.00
58.75	4.45	4.21	0.00	72.00	4.45	4.21	0.00
59.00	4.45	4.21	0.00	72.25	4.45	4.21	0.00
59.25	4.45	4.21	0.00	72.50	4.45	4.21	0.00
59.50	4.45	4.21	0.00	72.75	4.45	4.21	0.00
59.75	4.45	4.21	0.00	73.00	4.45	4.21	0.00
60.00	4.45	4.21	0.00	73.25	4.45	4.21	0.00
60.25	4.45	4.21	0.00	73.50	4.45	4.21	0.00
60.50	4.45	4.21	0.00	73.75	4.45	4.21	0.00
60.75	4.45	4.21	0.00	74.00	4.45	4.21	0.00
61.00	4.45	4.21	0.00	74.25	4.45	4.21	0.00
61.25	4.45	4.21	0.00	74.50	4.45	4.21	0.00
61.50	4.45	4.21	0.00	74.75	4.45	4.21	0.00
61.75	4.45	4.21	0.00	75.00	4.45	4.21	0.00
62.00	4.45	4.21	0.00	75.25	4.45	4.21	0.00
62.25	4.45	4.21	0.00	75.50	4.45	4.21	0.00
62.50	4.45	4.21	0.00	75.75	4.45	4.21	0.00
62.75	4.45	4.21	0.00	76.00	4.45	4.21	0.00
63.00	4.45	4.21	0.00	76.25	4.45	4.21	0.00
63.25	4.45	4.21	0.00	76.50	4.45	4.21	0.00
63.50	4.45	4.21	0.00	76.75	4.45	4.21	0.00
63.75	4.45	4.21	0.00	77.00	4.45	4.21	0.00
64.00	4.45	4.21	0.00	77.25	4.45	4.21	0.00
64.25	4.45	4.21	0.00	77.50	4.45	4.21	0.00
64.50	4.45	4.21	0.00	77.75	4.45	4.21	0.00
64.75	4.45	4.21	0.00	78.00	4.45	4.21	0.00
65.00	4.45	4.21	0.00	78.25	4.45	4.21	0.00
65.25	4.45	4.21	0.00	78.50	4.45	4.21	0.00
65.50	4.45	4.21	0.00	78.75	4.45	4.21	0.00
65.75	4.45	4.21	0.00	79.00	4.45	4.21	0.00
66.00	4.45	4.21	0.00	79.25	4.45	4.21	0.00
66.25	4.45	4.21	0.00	79.50	4.45	4.21	0.00
66.50	4.45	4.21	0.00	79.75	4.45	4.21	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	4.21	0.00	93.25	4.45	4.21	0.00
80.25	4.45	4.21	0.00	93.50	4.45	4.21	0.00
80.50	4.45	4.21	0.00	93.75	4.45	4.21	0.00
80.75	4.45	4.21	0.00	94.00	4.45	4.21	0.00
81.00	4.45	4.21	0.00	94.25	4.45	4.21	0.00
81.25	4.45	4.21	0.00	94.50	4.45	4.21	0.00
81.50	4.45	4.21	0.00	94.75	4.45	4.21	0.00
81.75	4.45	4.21	0.00	95.00	4.45	4.21	0.00
82.00	4.45	4.21	0.00	95.25	4.45	4.21	0.00
82.25	4.45	4.21	0.00	95.50	4.45	4.21	0.00
82.50	4.45	4.21	0.00	95.75	4.45	4.21	0.00
82.75	4.45	4.21	0.00	96.00	4.45	4.21	0.00
83.00	4.45	4.21	0.00	96.25	4.45	4.21	0.00
83.25	4.45	4.21	0.00	96.50	4.45	4.21	0.00
83.50	4.45	4.21	0.00	96.75	4.45	4.21	0.00
83.75	4.45	4.21	0.00	97.00	4.45	4.21	0.00
84.00	4.45	4.21	0.00	97.25	4.45	4.21	0.00
84.25	4.45	4.21	0.00	97.50	4.45	4.21	0.00
84.50	4.45	4.21	0.00	97.75	4.45	4.21	0.00
84.75	4.45	4.21	0.00	98.00	4.45	4.21	0.00
85.00	4.45	4.21	0.00	98.25	4.45	4.21	0.00
85.25	4.45	4.21	0.00	98.50	4.45	4.21	0.00
85.50	4.45	4.21	0.00	98.75	4.45	4.21	0.00
85.75	4.45	4.21	0.00	99.00	4.45	4.21	0.00
86.00	4.45	4.21	0.00	99.25	4.45	4.21	0.00
86.25	4.45	4.21	0.00	99.50	4.45	4.21	0.00
86.50	4.45	4.21	0.00	99.75	4.45	4.21	0.00
86.75	4.45	4.21	0.00	100.00	4.45	4.21	0.00
87.00	4.45	4.21	0.00	100.25	4.45	4.21	0.00
87.25	4.45	4.21	0.00	100.50	4.45	4.21	0.00
87.50	4.45	4.21	0.00	100.75	4.45	4.21	0.00
87.75	4.45	4.21	0.00	101.00	4.45	4.21	0.00
88.00	4.45	4.21	0.00	101.25	4.45	4.21	0.00
88.25	4.45	4.21	0.00	101.50	4.45	4.21	0.00
88.50	4.45	4.21	0.00	101.75	4.45	4.21	0.00
88.75	4.45	4.21	0.00	102.00	4.45	4.21	0.00
89.00	4.45	4.21	0.00	102.25	4.45	4.21	0.00
89.25	4.45	4.21	0.00	102.50	4.45	4.21	0.00
89.50	4.45	4.21	0.00	102.75	4.45	4.21	0.00
89.75	4.45	4.21	0.00	103.00	4.45	4.21	0.00
90.00	4.45	4.21	0.00	103.25	4.45	4.21	0.00
90.25	4.45	4.21	0.00	103.50	4.45	4.21	0.00
90.50	4.45	4.21	0.00	103.75	4.45	4.21	0.00
90.75	4.45	4.21	0.00	104.00	4.45	4.21	0.00
91.00	4.45	4.21	0.00	104.25	4.45	4.21	0.00
91.25	4.45	4.21	0.00	104.50	4.45	4.21	0.00
91.50	4.45	4.21	0.00	104.75	4.45	4.21	0.00
91.75	4.45	4.21	0.00	105.00	4.45	4.21	0.00
92.00	4.45	4.21	0.00	105.25	4.45	4.21	0.00
92.25	4.45	4.21	0.00	105.50	4.45	4.21	0.00
92.50	4.45	4.21	0.00	105.75	4.45	4.21	0.00
92.75	4.45	4.21	0.00	106.00	4.45	4.21	0.00
93.00	4.45	4.21	0.00	106.25	4.45	4.21	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	4.21	0.00	119.75	4.45	4.21	0.00
106.75	4.45	4.21	0.00	120.00	4.45	4.21	0.00
107.00	4.45	4.21	0.00	120.25	4.45	4.21	0.00
107.25	4.45	4.21	0.00	120.50	4.45	4.21	0.00
107.50	4.45	4.21	0.00	120.75	4.45	4.21	0.00
107.75	4.45	4.21	0.00	121.00	4.45	4.21	0.00
108.00	4.45	4.21	0.00	121.25	4.45	4.21	0.00
108.25	4.45	4.21	0.00	121.50	4.45	4.21	0.00
108.50	4.45	4.21	0.00	121.75	4.45	4.21	0.00
108.75	4.45	4.21	0.00	122.00	4.45	4.21	0.00
109.00	4.45	4.21	0.00	122.25	4.45	4.21	0.00
109.25	4.45	4.21	0.00	122.50	4.45	4.21	0.00
109.50	4.45	4.21	0.00	122.75	4.45	4.21	0.00
109.75	4.45	4.21	0.00	123.00	4.45	4.21	0.00
110.00	4.45	4.21	0.00	123.25	4.45	4.21	0.00
110.25	4.45	4.21	0.00	123.50	4.45	4.21	0.00
110.50	4.45	4.21	0.00	123.75	4.45	4.21	0.00
110.75	4.45	4.21	0.00	124.00	4.45	4.21	0.00
111.00	4.45	4.21	0.00	124.25	4.45	4.21	0.00
111.25	4.45	4.21	0.00	124.50	4.45	4.21	0.00
111.50	4.45	4.21	0.00	124.75	4.45	4.21	0.00
111.75	4.45	4.21	0.00	125.00	4.45	4.21	0.00
112.00	4.45	4.21	0.00	125.25	4.45	4.21	0.00
112.25	4.45	4.21	0.00	125.50	4.45	4.21	0.00
112.50	4.45	4.21	0.00	125.75	4.45	4.21	0.00
112.75	4.45	4.21	0.00	126.00	4.45	4.21	0.00
113.00	4.45	4.21	0.00	126.25	4.45	4.21	0.00
113.25	4.45	4.21	0.00	126.50	4.45	4.21	0.00
113.50	4.45	4.21	0.00	126.75	4.45	4.21	0.00
113.75	4.45	4.21	0.00	127.00	4.45	4.21	0.00
114.00	4.45	4.21	0.00	127.25	4.45	4.21	0.00
114.25	4.45	4.21	0.00	127.50	4.45	4.21	0.00
114.50	4.45	4.21	0.00	127.75	4.45	4.21	0.00
114.75	4.45	4.21	0.00	128.00	4.45	4.21	0.00
115.00	4.45	4.21	0.00	128.25	4.45	4.21	0.00
115.25	4.45	4.21	0.00	128.50	4.45	4.21	0.00
115.50	4.45	4.21	0.00	128.75	4.45	4.21	0.00
115.75	4.45	4.21	0.00	129.00	4.45	4.21	0.00
116.00	4.45	4.21	0.00	129.25	4.45	4.21	0.00
116.25	4.45	4.21	0.00	129.50	4.45	4.21	0.00
116.50	4.45	4.21	0.00	129.75	4.45	4.21	0.00
116.75	4.45	4.21	0.00	130.00	4.45	4.21	0.00
117.00	4.45	4.21	0.00	130.25	4.45	4.21	0.00
117.25	4.45	4.21	0.00	130.50	4.45	4.21	0.00
117.50	4.45	4.21	0.00	130.75	4.45	4.21	0.00
117.75	4.45	4.21	0.00	131.00	4.45	4.21	0.00
118.00	4.45	4.21	0.00	131.25	4.45	4.21	0.00
118.25	4.45	4.21	0.00	131.50	4.45	4.21	0.00
118.50	4.45	4.21	0.00	131.75	4.45	4.21	0.00
118.75	4.45	4.21	0.00	132.00	4.45	4.21	0.00
119.00	4.45	4.21	0.00	132.25	4.45	4.21	0.00
119.25	4.45	4.21	0.00	132.50	4.45	4.21	0.00
119.50	4.45	4.21	0.00	132.75	4.45	4.21	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	4.21	0.00
133.25	4.45	4.21	0.00
133.50	4.45	4.21	0.00
133.75	4.45	4.21	0.00
134.00	4.45	4.21	0.00
134.25	4.45	4.21	0.00
134.50	4.45	4.21	0.00
134.75	4.45	4.21	0.00
135.00	4.45	4.21	0.00
135.25	4.45	4.21	0.00
135.50	4.45	4.21	0.00
135.75	4.45	4.21	0.00
136.00	4.45	4.21	0.00
136.25	4.45	4.21	0.00
136.50	4.45	4.21	0.00
136.75	4.45	4.21	0.00
137.00	4.45	4.21	0.00
137.25	4.45	4.21	0.00
137.50	4.45	4.21	0.00
137.75	4.45	4.21	0.00
138.00	4.45	4.21	0.00
138.25	4.45	4.21	0.00
138.50	4.45	4.21	0.00
138.75	4.45	4.21	0.00
139.00	4.45	4.21	0.00
139.25	4.45	4.21	0.00
139.50	4.45	4.21	0.00
139.75	4.45	4.21	0.00
140.00	4.45	4.21	0.00
140.25	4.45	4.21	0.00
140.50	4.45	4.21	0.00
140.75	4.45	4.21	0.00
141.00	4.45	4.21	0.00
141.25	4.45	4.21	0.00
141.50	4.45	4.21	0.00
141.75	4.45	4.21	0.00
142.00	4.45	4.21	0.00
142.25	4.45	4.21	0.00
142.50	4.45	4.21	0.00
142.75	4.45	4.21	0.00
143.00	4.45	4.21	0.00
143.25	4.45	4.21	0.00
143.50	4.45	4.21	0.00
143.75	4.45	4.21	0.00
144.00	4.45	4.21	0.00
144.25	4.45	4.21	0.00
144.50	4.45	4.21	0.00
144.75	4.45	4.21	0.00
145.00	4.45	4.21	0.00
145.25	4.45	4.21	0.00
145.50	4.45	4.21	0.00
145.75	4.45	4.21	0.00
146.00	4.45	4.21	0.00
146.25	4.45	4.21	0.00
146.50	4.45	4.21	0.00
146.75	4.45	4.21	0.00
147.00	4.45	4.21	0.00
147.25	4.45	4.21	0.00
147.50	4.45	4.21	0.00
147.75	4.45	4.21	0.00
148.00	4.45	4.21	0.00
148.25	4.45	4.21	0.00
148.50	4.45	4.21	0.00
148.75	4.45	4.21	0.00
149.00	4.45	4.21	0.00
149.25	4.45	4.21	0.00
149.50	4.45	4.21	0.00
149.75	4.45	4.21	0.00
150.00	4.45	4.21	0.00

Summary for Subcatchment 5S: SB-4

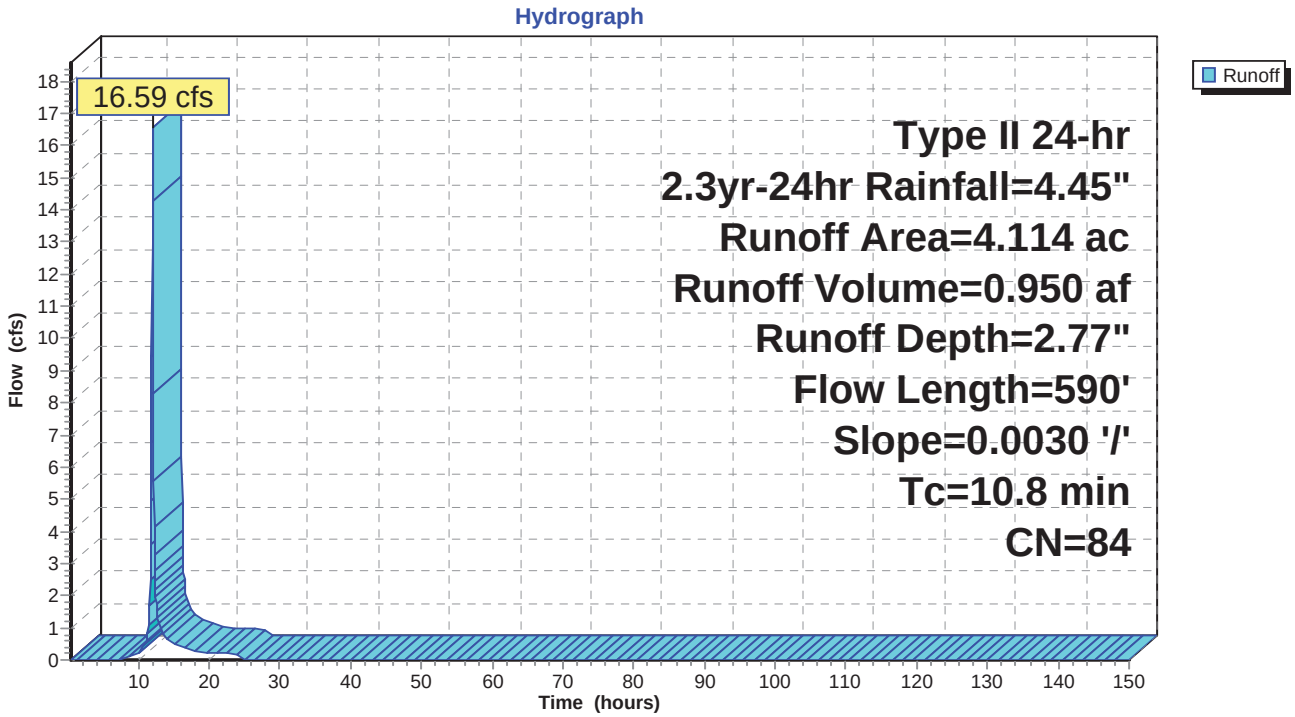
Runoff = 16.59 cfs @ 12.02 hrs, Volume= 0.950 af, Depth= 2.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
*	0.654	98	Gravel surface, HSG A
	0.100	98	Roofs, HSG A
	0.950	39	>75% Grass cover, Good, HSG A
	2.410	98	Paved roads w/curbs & sewers, HSG A
	4.114	84	Weighted Average
	0.950		23.09% Pervious Area
	3.164		76.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	300	0.0030	0.95		**Sheet Flow, Overland Flow to Storm System** Smooth surfaces n= 0.011 P2= 4.50"
5.5	290	0.0030	0.88		**Shallow Concentrated Flow, Overland Flow to Storm Inlet** Unpaved Kv= 16.1 fps
10.8	590	Total			

Subcatchment 5S: SB-4



Hydrograph for Subcatchment 5S: SB-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	2.03	0.72
0.75	0.03	0.00	0.00	14.00	3.65	2.06	0.64
1.00	0.05	0.00	0.00	14.25	3.69	2.10	0.58
1.25	0.06	0.00	0.00	14.50	3.73	2.13	0.55
1.50	0.07	0.00	0.00	14.75	3.76	2.16	0.53
1.75	0.08	0.00	0.00	15.00	3.80	2.19	0.50
2.00	0.10	0.00	0.00	15.25	3.83	2.22	0.47
2.25	0.11	0.00	0.00	15.50	3.86	2.25	0.45
2.50	0.13	0.00	0.00	15.75	3.89	2.27	0.42
2.75	0.14	0.00	0.00	16.00	3.92	2.30	0.39
3.00	0.15	0.00	0.00	16.25	3.94	2.32	0.37
3.25	0.17	0.00	0.00	16.50	3.97	2.34	0.36
3.50	0.18	0.00	0.00	16.75	3.99	2.36	0.35
3.75	0.20	0.00	0.00	17.00	4.01	2.38	0.34
4.00	0.21	0.00	0.00	17.25	4.04	2.40	0.33
4.25	0.23	0.00	0.00	17.50	4.06	2.42	0.32
4.50	0.25	0.00	0.00	17.75	4.08	2.44	0.31
4.75	0.26	0.00	0.00	18.00	4.10	2.46	0.30
5.00	0.28	0.00	0.00	18.25	4.12	2.48	0.29
5.25	0.30	0.00	0.00	18.50	4.14	2.49	0.28
5.50	0.32	0.00	0.00	18.75	4.16	2.51	0.27
5.75	0.34	0.00	0.00	19.00	4.17	2.52	0.26
6.00	0.36	0.00	0.00	19.25	4.19	2.54	0.25
6.25	0.38	0.00	0.00	19.50	4.21	2.55	0.24
6.50	0.40	0.00	0.00	19.75	4.22	2.57	0.23
6.75	0.42	0.00	0.01	20.00	4.24	2.58	0.22
7.00	0.44	0.00	0.02	20.25	4.25	2.59	0.21
7.25	0.46	0.00	0.02	20.50	4.27	2.61	0.21
7.50	0.49	0.01	0.03	20.75	4.28	2.62	0.21
7.75	0.51	0.01	0.04	21.00	4.29	2.63	0.21
8.00	0.53	0.01	0.05	21.25	4.31	2.64	0.21
8.25	0.56	0.02	0.06	21.50	4.32	2.66	0.20
8.50	0.59	0.02	0.08	21.75	4.33	2.67	0.20
8.75	0.62	0.03	0.10	22.00	4.35	2.68	0.20
9.00	0.65	0.03	0.12	22.25	4.36	2.69	0.20
9.25	0.69	0.04	0.14	22.50	4.37	2.70	0.20
9.50	0.73	0.05	0.16	22.75	4.39	2.72	0.19
9.75	0.76	0.06	0.18	23.00	4.40	2.73	0.19
10.00	0.81	0.08	0.22	23.25	4.41	2.74	0.19
10.25	0.85	0.09	0.26	23.50	4.43	2.75	0.19
10.50	0.91	0.11	0.33	23.75	4.44	2.76	0.19
10.75	0.97	0.14	0.41	24.00	**4.45**	**2.77**	0.18
11.00	1.05	0.17	0.52	24.25	4.45	2.77	0.02
11.25	1.14	0.22	0.69	24.50	4.45	2.77	0.00
11.50	1.26	0.28	0.97	24.75	4.45	2.77	0.00
11.75	1.72	0.55	3.61	25.00	4.45	2.77	0.00
12.00	2.95	1.48	**16.24**	25.25	4.45	2.77	0.00
12.25	3.14	1.63	4.11	25.50	4.45	2.77	0.00
12.50	3.27	1.74	1.96	25.75	4.45	2.77	0.00
12.75	3.36	1.82	1.31	26.00	4.45	2.77	0.00
13.00	3.44	1.88	1.09	26.25	4.45	2.77	0.00
13.25	3.50	1.94	0.93	26.50	4.45	2.77	0.00
13.50	3.56	1.98	0.82	26.75	4.45	2.77	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	2.77	0.00	40.25	4.45	2.77	0.00
27.25	4.45	2.77	0.00	40.50	4.45	2.77	0.00
27.50	4.45	2.77	0.00	40.75	4.45	2.77	0.00
27.75	4.45	2.77	0.00	41.00	4.45	2.77	0.00
28.00	4.45	2.77	0.00	41.25	4.45	2.77	0.00
28.25	4.45	2.77	0.00	41.50	4.45	2.77	0.00
28.50	4.45	2.77	0.00	41.75	4.45	2.77	0.00
28.75	4.45	2.77	0.00	42.00	4.45	2.77	0.00
29.00	4.45	2.77	0.00	42.25	4.45	2.77	0.00
29.25	4.45	2.77	0.00	42.50	4.45	2.77	0.00
29.50	4.45	2.77	0.00	42.75	4.45	2.77	0.00
29.75	4.45	2.77	0.00	43.00	4.45	2.77	0.00
30.00	4.45	2.77	0.00	43.25	4.45	2.77	0.00
30.25	4.45	2.77	0.00	43.50	4.45	2.77	0.00
30.50	4.45	2.77	0.00	43.75	4.45	2.77	0.00
30.75	4.45	2.77	0.00	44.00	4.45	2.77	0.00
31.00	4.45	2.77	0.00	44.25	4.45	2.77	0.00
31.25	4.45	2.77	0.00	44.50	4.45	2.77	0.00
31.50	4.45	2.77	0.00	44.75	4.45	2.77	0.00
31.75	4.45	2.77	0.00	45.00	4.45	2.77	0.00
32.00	4.45	2.77	0.00	45.25	4.45	2.77	0.00
32.25	4.45	2.77	0.00	45.50	4.45	2.77	0.00
32.50	4.45	2.77	0.00	45.75	4.45	2.77	0.00
32.75	4.45	2.77	0.00	46.00	4.45	2.77	0.00
33.00	4.45	2.77	0.00	46.25	4.45	2.77	0.00
33.25	4.45	2.77	0.00	46.50	4.45	2.77	0.00
33.50	4.45	2.77	0.00	46.75	4.45	2.77	0.00
33.75	4.45	2.77	0.00	47.00	4.45	2.77	0.00
34.00	4.45	2.77	0.00	47.25	4.45	2.77	0.00
34.25	4.45	2.77	0.00	47.50	4.45	2.77	0.00
34.50	4.45	2.77	0.00	47.75	4.45	2.77	0.00
34.75	4.45	2.77	0.00	48.00	4.45	2.77	0.00
35.00	4.45	2.77	0.00	48.25	4.45	2.77	0.00
35.25	4.45	2.77	0.00	48.50	4.45	2.77	0.00
35.50	4.45	2.77	0.00	48.75	4.45	2.77	0.00
35.75	4.45	2.77	0.00	49.00	4.45	2.77	0.00
36.00	4.45	2.77	0.00	49.25	4.45	2.77	0.00
36.25	4.45	2.77	0.00	49.50	4.45	2.77	0.00
36.50	4.45	2.77	0.00	49.75	4.45	2.77	0.00
36.75	4.45	2.77	0.00	50.00	4.45	2.77	0.00
37.00	4.45	2.77	0.00	50.25	4.45	2.77	0.00
37.25	4.45	2.77	0.00	50.50	4.45	2.77	0.00
37.50	4.45	2.77	0.00	50.75	4.45	2.77	0.00
37.75	4.45	2.77	0.00	51.00	4.45	2.77	0.00
38.00	4.45	2.77	0.00	51.25	4.45	2.77	0.00
38.25	4.45	2.77	0.00	51.50	4.45	2.77	0.00
38.50	4.45	2.77	0.00	51.75	4.45	2.77	0.00
38.75	4.45	2.77	0.00	52.00	4.45	2.77	0.00
39.00	4.45	2.77	0.00	52.25	4.45	2.77	0.00
39.25	4.45	2.77	0.00	52.50	4.45	2.77	0.00
39.50	4.45	2.77	0.00	52.75	4.45	2.77	0.00
39.75	4.45	2.77	0.00	53.00	4.45	2.77	0.00
40.00	4.45	2.77	0.00	53.25	4.45	2.77	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	2.77	0.00	66.75	4.45	2.77	0.00
53.75	4.45	2.77	0.00	67.00	4.45	2.77	0.00
54.00	4.45	2.77	0.00	67.25	4.45	2.77	0.00
54.25	4.45	2.77	0.00	67.50	4.45	2.77	0.00
54.50	4.45	2.77	0.00	67.75	4.45	2.77	0.00
54.75	4.45	2.77	0.00	68.00	4.45	2.77	0.00
55.00	4.45	2.77	0.00	68.25	4.45	2.77	0.00
55.25	4.45	2.77	0.00	68.50	4.45	2.77	0.00
55.50	4.45	2.77	0.00	68.75	4.45	2.77	0.00
55.75	4.45	2.77	0.00	69.00	4.45	2.77	0.00
56.00	4.45	2.77	0.00	69.25	4.45	2.77	0.00
56.25	4.45	2.77	0.00	69.50	4.45	2.77	0.00
56.50	4.45	2.77	0.00	69.75	4.45	2.77	0.00
56.75	4.45	2.77	0.00	70.00	4.45	2.77	0.00
57.00	4.45	2.77	0.00	70.25	4.45	2.77	0.00
57.25	4.45	2.77	0.00	70.50	4.45	2.77	0.00
57.50	4.45	2.77	0.00	70.75	4.45	2.77	0.00
57.75	4.45	2.77	0.00	71.00	4.45	2.77	0.00
58.00	4.45	2.77	0.00	71.25	4.45	2.77	0.00
58.25	4.45	2.77	0.00	71.50	4.45	2.77	0.00
58.50	4.45	2.77	0.00	71.75	4.45	2.77	0.00
58.75	4.45	2.77	0.00	72.00	4.45	2.77	0.00
59.00	4.45	2.77	0.00	72.25	4.45	2.77	0.00
59.25	4.45	2.77	0.00	72.50	4.45	2.77	0.00
59.50	4.45	2.77	0.00	72.75	4.45	2.77	0.00
59.75	4.45	2.77	0.00	73.00	4.45	2.77	0.00
60.00	4.45	2.77	0.00	73.25	4.45	2.77	0.00
60.25	4.45	2.77	0.00	73.50	4.45	2.77	0.00
60.50	4.45	2.77	0.00	73.75	4.45	2.77	0.00
60.75	4.45	2.77	0.00	74.00	4.45	2.77	0.00
61.00	4.45	2.77	0.00	74.25	4.45	2.77	0.00
61.25	4.45	2.77	0.00	74.50	4.45	2.77	0.00
61.50	4.45	2.77	0.00	74.75	4.45	2.77	0.00
61.75	4.45	2.77	0.00	75.00	4.45	2.77	0.00
62.00	4.45	2.77	0.00	75.25	4.45	2.77	0.00
62.25	4.45	2.77	0.00	75.50	4.45	2.77	0.00
62.50	4.45	2.77	0.00	75.75	4.45	2.77	0.00
62.75	4.45	2.77	0.00	76.00	4.45	2.77	0.00
63.00	4.45	2.77	0.00	76.25	4.45	2.77	0.00
63.25	4.45	2.77	0.00	76.50	4.45	2.77	0.00
63.50	4.45	2.77	0.00	76.75	4.45	2.77	0.00
63.75	4.45	2.77	0.00	77.00	4.45	2.77	0.00
64.00	4.45	2.77	0.00	77.25	4.45	2.77	0.00
64.25	4.45	2.77	0.00	77.50	4.45	2.77	0.00
64.50	4.45	2.77	0.00	77.75	4.45	2.77	0.00
64.75	4.45	2.77	0.00	78.00	4.45	2.77	0.00
65.00	4.45	2.77	0.00	78.25	4.45	2.77	0.00
65.25	4.45	2.77	0.00	78.50	4.45	2.77	0.00
65.50	4.45	2.77	0.00	78.75	4.45	2.77	0.00
65.75	4.45	2.77	0.00	79.00	4.45	2.77	0.00
66.00	4.45	2.77	0.00	79.25	4.45	2.77	0.00
66.25	4.45	2.77	0.00	79.50	4.45	2.77	0.00
66.50	4.45	2.77	0.00	79.75	4.45	2.77	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	2.77	0.00	93.25	4.45	2.77	0.00
80.25	4.45	2.77	0.00	93.50	4.45	2.77	0.00
80.50	4.45	2.77	0.00	93.75	4.45	2.77	0.00
80.75	4.45	2.77	0.00	94.00	4.45	2.77	0.00
81.00	4.45	2.77	0.00	94.25	4.45	2.77	0.00
81.25	4.45	2.77	0.00	94.50	4.45	2.77	0.00
81.50	4.45	2.77	0.00	94.75	4.45	2.77	0.00
81.75	4.45	2.77	0.00	95.00	4.45	2.77	0.00
82.00	4.45	2.77	0.00	95.25	4.45	2.77	0.00
82.25	4.45	2.77	0.00	95.50	4.45	2.77	0.00
82.50	4.45	2.77	0.00	95.75	4.45	2.77	0.00
82.75	4.45	2.77	0.00	96.00	4.45	2.77	0.00
83.00	4.45	2.77	0.00	96.25	4.45	2.77	0.00
83.25	4.45	2.77	0.00	96.50	4.45	2.77	0.00
83.50	4.45	2.77	0.00	96.75	4.45	2.77	0.00
83.75	4.45	2.77	0.00	97.00	4.45	2.77	0.00
84.00	4.45	2.77	0.00	97.25	4.45	2.77	0.00
84.25	4.45	2.77	0.00	97.50	4.45	2.77	0.00
84.50	4.45	2.77	0.00	97.75	4.45	2.77	0.00
84.75	4.45	2.77	0.00	98.00	4.45	2.77	0.00
85.00	4.45	2.77	0.00	98.25	4.45	2.77	0.00
85.25	4.45	2.77	0.00	98.50	4.45	2.77	0.00
85.50	4.45	2.77	0.00	98.75	4.45	2.77	0.00
85.75	4.45	2.77	0.00	99.00	4.45	2.77	0.00
86.00	4.45	2.77	0.00	99.25	4.45	2.77	0.00
86.25	4.45	2.77	0.00	99.50	4.45	2.77	0.00
86.50	4.45	2.77	0.00	99.75	4.45	2.77	0.00
86.75	4.45	2.77	0.00	100.00	4.45	2.77	0.00
87.00	4.45	2.77	0.00	100.25	4.45	2.77	0.00
87.25	4.45	2.77	0.00	100.50	4.45	2.77	0.00
87.50	4.45	2.77	0.00	100.75	4.45	2.77	0.00
87.75	4.45	2.77	0.00	101.00	4.45	2.77	0.00
88.00	4.45	2.77	0.00	101.25	4.45	2.77	0.00
88.25	4.45	2.77	0.00	101.50	4.45	2.77	0.00
88.50	4.45	2.77	0.00	101.75	4.45	2.77	0.00
88.75	4.45	2.77	0.00	102.00	4.45	2.77	0.00
89.00	4.45	2.77	0.00	102.25	4.45	2.77	0.00
89.25	4.45	2.77	0.00	102.50	4.45	2.77	0.00
89.50	4.45	2.77	0.00	102.75	4.45	2.77	0.00
89.75	4.45	2.77	0.00	103.00	4.45	2.77	0.00
90.00	4.45	2.77	0.00	103.25	4.45	2.77	0.00
90.25	4.45	2.77	0.00	103.50	4.45	2.77	0.00
90.50	4.45	2.77	0.00	103.75	4.45	2.77	0.00
90.75	4.45	2.77	0.00	104.00	4.45	2.77	0.00
91.00	4.45	2.77	0.00	104.25	4.45	2.77	0.00
91.25	4.45	2.77	0.00	104.50	4.45	2.77	0.00
91.50	4.45	2.77	0.00	104.75	4.45	2.77	0.00
91.75	4.45	2.77	0.00	105.00	4.45	2.77	0.00
92.00	4.45	2.77	0.00	105.25	4.45	2.77	0.00
92.25	4.45	2.77	0.00	105.50	4.45	2.77	0.00
92.50	4.45	2.77	0.00	105.75	4.45	2.77	0.00
92.75	4.45	2.77	0.00	106.00	4.45	2.77	0.00
93.00	4.45	2.77	0.00	106.25	4.45	2.77	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	2.77	0.00	119.75	4.45	2.77	0.00
106.75	4.45	2.77	0.00	120.00	4.45	2.77	0.00
107.00	4.45	2.77	0.00	120.25	4.45	2.77	0.00
107.25	4.45	2.77	0.00	120.50	4.45	2.77	0.00
107.50	4.45	2.77	0.00	120.75	4.45	2.77	0.00
107.75	4.45	2.77	0.00	121.00	4.45	2.77	0.00
108.00	4.45	2.77	0.00	121.25	4.45	2.77	0.00
108.25	4.45	2.77	0.00	121.50	4.45	2.77	0.00
108.50	4.45	2.77	0.00	121.75	4.45	2.77	0.00
108.75	4.45	2.77	0.00	122.00	4.45	2.77	0.00
109.00	4.45	2.77	0.00	122.25	4.45	2.77	0.00
109.25	4.45	2.77	0.00	122.50	4.45	2.77	0.00
109.50	4.45	2.77	0.00	122.75	4.45	2.77	0.00
109.75	4.45	2.77	0.00	123.00	4.45	2.77	0.00
110.00	4.45	2.77	0.00	123.25	4.45	2.77	0.00
110.25	4.45	2.77	0.00	123.50	4.45	2.77	0.00
110.50	4.45	2.77	0.00	123.75	4.45	2.77	0.00
110.75	4.45	2.77	0.00	124.00	4.45	2.77	0.00
111.00	4.45	2.77	0.00	124.25	4.45	2.77	0.00
111.25	4.45	2.77	0.00	124.50	4.45	2.77	0.00
111.50	4.45	2.77	0.00	124.75	4.45	2.77	0.00
111.75	4.45	2.77	0.00	125.00	4.45	2.77	0.00
112.00	4.45	2.77	0.00	125.25	4.45	2.77	0.00
112.25	4.45	2.77	0.00	125.50	4.45	2.77	0.00
112.50	4.45	2.77	0.00	125.75	4.45	2.77	0.00
112.75	4.45	2.77	0.00	126.00	4.45	2.77	0.00
113.00	4.45	2.77	0.00	126.25	4.45	2.77	0.00
113.25	4.45	2.77	0.00	126.50	4.45	2.77	0.00
113.50	4.45	2.77	0.00	126.75	4.45	2.77	0.00
113.75	4.45	2.77	0.00	127.00	4.45	2.77	0.00
114.00	4.45	2.77	0.00	127.25	4.45	2.77	0.00
114.25	4.45	2.77	0.00	127.50	4.45	2.77	0.00
114.50	4.45	2.77	0.00	127.75	4.45	2.77	0.00
114.75	4.45	2.77	0.00	128.00	4.45	2.77	0.00
115.00	4.45	2.77	0.00	128.25	4.45	2.77	0.00
115.25	4.45	2.77	0.00	128.50	4.45	2.77	0.00
115.50	4.45	2.77	0.00	128.75	4.45	2.77	0.00
115.75	4.45	2.77	0.00	129.00	4.45	2.77	0.00
116.00	4.45	2.77	0.00	129.25	4.45	2.77	0.00
116.25	4.45	2.77	0.00	129.50	4.45	2.77	0.00
116.50	4.45	2.77	0.00	129.75	4.45	2.77	0.00
116.75	4.45	2.77	0.00	130.00	4.45	2.77	0.00
117.00	4.45	2.77	0.00	130.25	4.45	2.77	0.00
117.25	4.45	2.77	0.00	130.50	4.45	2.77	0.00
117.50	4.45	2.77	0.00	130.75	4.45	2.77	0.00
117.75	4.45	2.77	0.00	131.00	4.45	2.77	0.00
118.00	4.45	2.77	0.00	131.25	4.45	2.77	0.00
118.25	4.45	2.77	0.00	131.50	4.45	2.77	0.00
118.50	4.45	2.77	0.00	131.75	4.45	2.77	0.00
118.75	4.45	2.77	0.00	132.00	4.45	2.77	0.00
119.00	4.45	2.77	0.00	132.25	4.45	2.77	0.00
119.25	4.45	2.77	0.00	132.50	4.45	2.77	0.00
119.50	4.45	2.77	0.00	132.75	4.45	2.77	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	2.77	0.00
133.25	4.45	2.77	0.00
133.50	4.45	2.77	0.00
133.75	4.45	2.77	0.00
134.00	4.45	2.77	0.00
134.25	4.45	2.77	0.00
134.50	4.45	2.77	0.00
134.75	4.45	2.77	0.00
135.00	4.45	2.77	0.00
135.25	4.45	2.77	0.00
135.50	4.45	2.77	0.00
135.75	4.45	2.77	0.00
136.00	4.45	2.77	0.00
136.25	4.45	2.77	0.00
136.50	4.45	2.77	0.00
136.75	4.45	2.77	0.00
137.00	4.45	2.77	0.00
137.25	4.45	2.77	0.00
137.50	4.45	2.77	0.00
137.75	4.45	2.77	0.00
138.00	4.45	2.77	0.00
138.25	4.45	2.77	0.00
138.50	4.45	2.77	0.00
138.75	4.45	2.77	0.00
139.00	4.45	2.77	0.00
139.25	4.45	2.77	0.00
139.50	4.45	2.77	0.00
139.75	4.45	2.77	0.00
140.00	4.45	2.77	0.00
140.25	4.45	2.77	0.00
140.50	4.45	2.77	0.00
140.75	4.45	2.77	0.00
141.00	4.45	2.77	0.00
141.25	4.45	2.77	0.00
141.50	4.45	2.77	0.00
141.75	4.45	2.77	0.00
142.00	4.45	2.77	0.00
142.25	4.45	2.77	0.00
142.50	4.45	2.77	0.00
142.75	4.45	2.77	0.00
143.00	4.45	2.77	0.00
143.25	4.45	2.77	0.00
143.50	4.45	2.77	0.00
143.75	4.45	2.77	0.00
144.00	4.45	2.77	0.00
144.25	4.45	2.77	0.00
144.50	4.45	2.77	0.00
144.75	4.45	2.77	0.00
145.00	4.45	2.77	0.00
145.25	4.45	2.77	0.00
145.50	4.45	2.77	0.00
145.75	4.45	2.77	0.00
146.00	4.45	2.77	0.00
146.25	4.45	2.77	0.00
146.50	4.45	2.77	0.00
146.75	4.45	2.77	0.00
147.00	4.45	2.77	0.00
147.25	4.45	2.77	0.00
147.50	4.45	2.77	0.00
147.75	4.45	2.77	0.00
148.00	4.45	2.77	0.00
148.25	4.45	2.77	0.00
148.50	4.45	2.77	0.00
148.75	4.45	2.77	0.00
149.00	4.45	2.77	0.00
149.25	4.45	2.77	0.00
149.50	4.45	2.77	0.00
149.75	4.45	2.77	0.00
150.00	4.45	2.77	0.00

Summary for Subcatchment 6S: SB-5

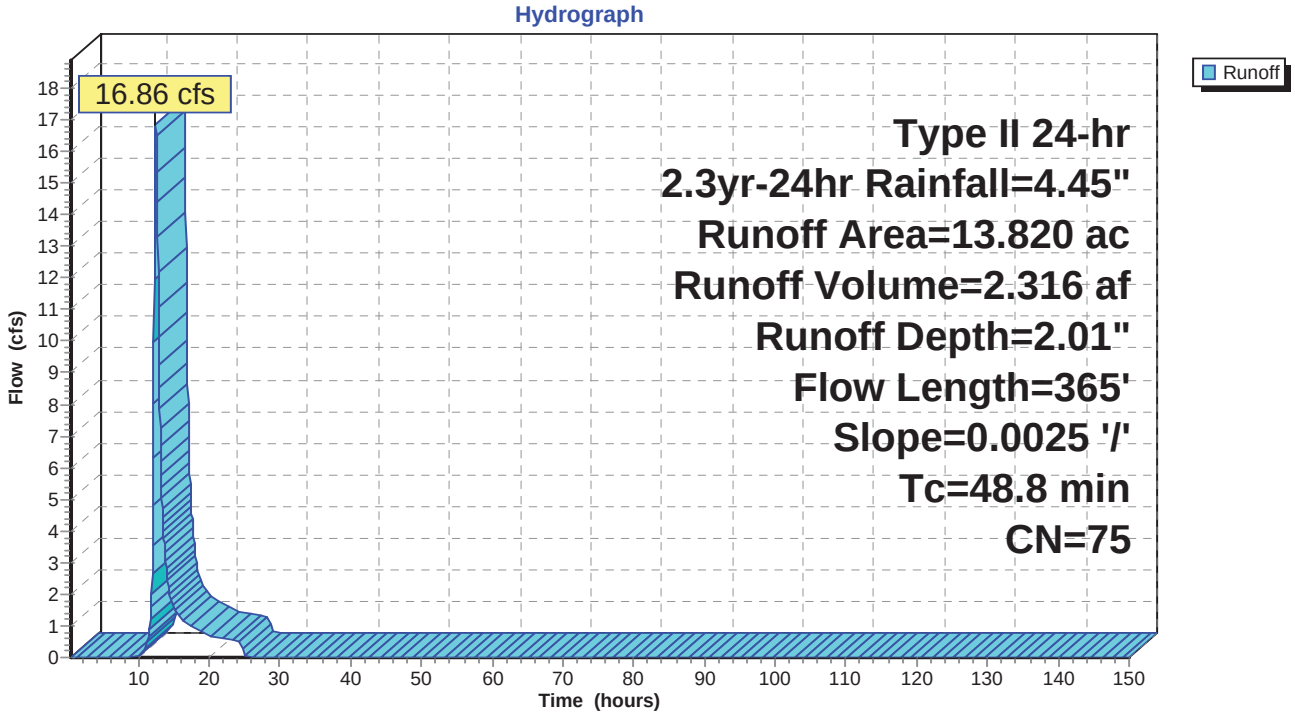
Runoff = 16.86 cfs @ 12.49 hrs, Volume= 2.316 af, Depth= 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
	4.100	98	Water Surface, HSG A
	0.470	98	Roofs, HSG A
	5.410	39	>75% Grass cover, Good, HSG A
*	2.200	98	Gravel surface, HSG A
	1.640	98	Paved roads w/curbs & sewers, HSG A
	13.820	75	Weighted Average
	5.410		39.15% Pervious Area
	8.410		60.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.7	300	0.0025	0.11		**Sheet Flow, Overland Flow to Pond** Grass: Short n= 0.150 P2= 4.50"
3.1	65	0.0025	0.35		**Shallow Concentrated Flow, Overland Flow to Pond** Short Grass Pasture Kv= 7.0 fps
48.8	365	Total			

Subcatchment 6S: SB-5



Hydrograph for Subcatchment 6S: SB-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	1.38	3.26
0.75	0.03	0.00	0.00	14.00	3.65	1.41	2.67
1.00	0.05	0.00	0.00	14.25	3.69	1.44	2.26
1.25	0.06	0.00	0.00	14.50	3.73	1.47	1.96
1.50	0.07	0.00	0.00	14.75	3.76	1.49	1.75
1.75	0.08	0.00	0.00	15.00	3.80	1.52	1.63
2.00	0.10	0.00	0.00	15.25	3.83	1.54	1.53
2.25	0.11	0.00	0.00	15.50	3.86	1.56	1.45
2.50	0.13	0.00	0.00	15.75	3.89	1.58	1.37
2.75	0.14	0.00	0.00	16.00	3.92	1.60	1.29
3.00	0.15	0.00	0.00	16.25	3.94	1.62	1.22
3.25	0.17	0.00	0.00	16.50	3.97	1.64	1.14
3.50	0.18	0.00	0.00	16.75	3.99	1.66	1.09
3.75	0.20	0.00	0.00	17.00	4.01	1.68	1.05
4.00	0.21	0.00	0.00	17.25	4.04	1.69	1.01
4.25	0.23	0.00	0.00	17.50	4.06	1.71	0.98
4.50	0.25	0.00	0.00	17.75	4.08	1.73	0.96
4.75	0.26	0.00	0.00	18.00	4.10	1.74	0.93
5.00	0.28	0.00	0.00	18.25	4.12	1.76	0.90
5.25	0.30	0.00	0.00	18.50	4.14	1.77	0.87
5.50	0.32	0.00	0.00	18.75	4.16	1.78	0.85
5.75	0.34	0.00	0.00	19.00	4.17	1.80	0.82
6.00	0.36	0.00	0.00	19.25	4.19	1.81	0.79
6.25	0.38	0.00	0.00	19.50	4.21	1.82	0.76
6.50	0.40	0.00	0.00	19.75	4.22	1.83	0.73
6.75	0.42	0.00	0.00	20.00	4.24	1.85	0.71
7.00	0.44	0.00	0.00	20.25	4.25	1.86	0.68
7.25	0.46	0.00	0.00	20.50	4.27	1.87	0.65
7.50	0.49	0.00	0.00	20.75	4.28	1.88	0.63
7.75	0.51	0.00	0.00	21.00	4.29	1.89	0.62
8.00	0.53	0.00	0.00	21.25	4.31	1.90	0.61
8.25	0.56	0.00	0.00	21.50	4.32	1.91	0.60
8.50	0.59	0.00	0.00	21.75	4.33	1.92	0.60
8.75	0.62	0.00	0.00	22.00	4.35	1.93	0.59
9.00	0.65	0.00	0.00	22.25	4.36	1.94	0.59
9.25	0.69	0.00	0.00	22.50	4.37	1.95	0.58
9.50	0.73	0.00	0.00	22.75	4.39	1.96	0.58
9.75	0.76	0.00	0.01	23.00	4.40	1.97	0.57
10.00	0.81	0.01	0.04	23.25	4.41	1.98	0.57
10.25	0.85	0.01	0.08	23.50	4.43	1.99	0.56
10.50	0.91	0.02	0.14	23.75	4.44	2.00	0.55
10.75	0.97	0.03	0.22	24.00	**4.45**	**2.01**	0.55
11.00	1.05	0.04	0.32	24.25	4.45	2.01	0.53
11.25	1.14	0.06	0.47	24.50	4.45	2.01	0.41
11.50	1.26	0.09	0.69	24.75	4.45	2.01	0.23
11.75	1.72	0.25	1.12	25.00	4.45	2.01	0.11
12.00	2.95	0.93	3.56	25.25	4.45	2.01	0.05
12.25	3.14	1.06	11.96	25.50	4.45	2.01	0.02
12.50	3.27	1.14	**16.85**	25.75	4.45	2.01	0.01
12.75	3.36	1.20	13.31	26.00	4.45	2.01	0.00
13.00	3.44	1.26	8.51	26.25	4.45	2.01	0.00
13.25	3.50	1.30	5.78	26.50	4.45	2.01	0.00
13.50	3.56	1.34	4.20	26.75	4.45	2.01	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	2.01	0.00	40.25	4.45	2.01	0.00
27.25	4.45	2.01	0.00	40.50	4.45	2.01	0.00
27.50	4.45	2.01	0.00	40.75	4.45	2.01	0.00
27.75	4.45	2.01	0.00	41.00	4.45	2.01	0.00
28.00	4.45	2.01	0.00	41.25	4.45	2.01	0.00
28.25	4.45	2.01	0.00	41.50	4.45	2.01	0.00
28.50	4.45	2.01	0.00	41.75	4.45	2.01	0.00
28.75	4.45	2.01	0.00	42.00	4.45	2.01	0.00
29.00	4.45	2.01	0.00	42.25	4.45	2.01	0.00
29.25	4.45	2.01	0.00	42.50	4.45	2.01	0.00
29.50	4.45	2.01	0.00	42.75	4.45	2.01	0.00
29.75	4.45	2.01	0.00	43.00	4.45	2.01	0.00
30.00	4.45	2.01	0.00	43.25	4.45	2.01	0.00
30.25	4.45	2.01	0.00	43.50	4.45	2.01	0.00
30.50	4.45	2.01	0.00	43.75	4.45	2.01	0.00
30.75	4.45	2.01	0.00	44.00	4.45	2.01	0.00
31.00	4.45	2.01	0.00	44.25	4.45	2.01	0.00
31.25	4.45	2.01	0.00	44.50	4.45	2.01	0.00
31.50	4.45	2.01	0.00	44.75	4.45	2.01	0.00
31.75	4.45	2.01	0.00	45.00	4.45	2.01	0.00
32.00	4.45	2.01	0.00	45.25	4.45	2.01	0.00
32.25	4.45	2.01	0.00	45.50	4.45	2.01	0.00
32.50	4.45	2.01	0.00	45.75	4.45	2.01	0.00
32.75	4.45	2.01	0.00	46.00	4.45	2.01	0.00
33.00	4.45	2.01	0.00	46.25	4.45	2.01	0.00
33.25	4.45	2.01	0.00	46.50	4.45	2.01	0.00
33.50	4.45	2.01	0.00	46.75	4.45	2.01	0.00
33.75	4.45	2.01	0.00	47.00	4.45	2.01	0.00
34.00	4.45	2.01	0.00	47.25	4.45	2.01	0.00
34.25	4.45	2.01	0.00	47.50	4.45	2.01	0.00
34.50	4.45	2.01	0.00	47.75	4.45	2.01	0.00
34.75	4.45	2.01	0.00	48.00	4.45	2.01	0.00
35.00	4.45	2.01	0.00	48.25	4.45	2.01	0.00
35.25	4.45	2.01	0.00	48.50	4.45	2.01	0.00
35.50	4.45	2.01	0.00	48.75	4.45	2.01	0.00
35.75	4.45	2.01	0.00	49.00	4.45	2.01	0.00
36.00	4.45	2.01	0.00	49.25	4.45	2.01	0.00
36.25	4.45	2.01	0.00	49.50	4.45	2.01	0.00
36.50	4.45	2.01	0.00	49.75	4.45	2.01	0.00
36.75	4.45	2.01	0.00	50.00	4.45	2.01	0.00
37.00	4.45	2.01	0.00	50.25	4.45	2.01	0.00
37.25	4.45	2.01	0.00	50.50	4.45	2.01	0.00
37.50	4.45	2.01	0.00	50.75	4.45	2.01	0.00
37.75	4.45	2.01	0.00	51.00	4.45	2.01	0.00
38.00	4.45	2.01	0.00	51.25	4.45	2.01	0.00
38.25	4.45	2.01	0.00	51.50	4.45	2.01	0.00
38.50	4.45	2.01	0.00	51.75	4.45	2.01	0.00
38.75	4.45	2.01	0.00	52.00	4.45	2.01	0.00
39.00	4.45	2.01	0.00	52.25	4.45	2.01	0.00
39.25	4.45	2.01	0.00	52.50	4.45	2.01	0.00
39.50	4.45	2.01	0.00	52.75	4.45	2.01	0.00
39.75	4.45	2.01	0.00	53.00	4.45	2.01	0.00
40.00	4.45	2.01	0.00	53.25	4.45	2.01	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	2.01	0.00	66.75	4.45	2.01	0.00
53.75	4.45	2.01	0.00	67.00	4.45	2.01	0.00
54.00	4.45	2.01	0.00	67.25	4.45	2.01	0.00
54.25	4.45	2.01	0.00	67.50	4.45	2.01	0.00
54.50	4.45	2.01	0.00	67.75	4.45	2.01	0.00
54.75	4.45	2.01	0.00	68.00	4.45	2.01	0.00
55.00	4.45	2.01	0.00	68.25	4.45	2.01	0.00
55.25	4.45	2.01	0.00	68.50	4.45	2.01	0.00
55.50	4.45	2.01	0.00	68.75	4.45	2.01	0.00
55.75	4.45	2.01	0.00	69.00	4.45	2.01	0.00
56.00	4.45	2.01	0.00	69.25	4.45	2.01	0.00
56.25	4.45	2.01	0.00	69.50	4.45	2.01	0.00
56.50	4.45	2.01	0.00	69.75	4.45	2.01	0.00
56.75	4.45	2.01	0.00	70.00	4.45	2.01	0.00
57.00	4.45	2.01	0.00	70.25	4.45	2.01	0.00
57.25	4.45	2.01	0.00	70.50	4.45	2.01	0.00
57.50	4.45	2.01	0.00	70.75	4.45	2.01	0.00
57.75	4.45	2.01	0.00	71.00	4.45	2.01	0.00
58.00	4.45	2.01	0.00	71.25	4.45	2.01	0.00
58.25	4.45	2.01	0.00	71.50	4.45	2.01	0.00
58.50	4.45	2.01	0.00	71.75	4.45	2.01	0.00
58.75	4.45	2.01	0.00	72.00	4.45	2.01	0.00
59.00	4.45	2.01	0.00	72.25	4.45	2.01	0.00
59.25	4.45	2.01	0.00	72.50	4.45	2.01	0.00
59.50	4.45	2.01	0.00	72.75	4.45	2.01	0.00
59.75	4.45	2.01	0.00	73.00	4.45	2.01	0.00
60.00	4.45	2.01	0.00	73.25	4.45	2.01	0.00
60.25	4.45	2.01	0.00	73.50	4.45	2.01	0.00
60.50	4.45	2.01	0.00	73.75	4.45	2.01	0.00
60.75	4.45	2.01	0.00	74.00	4.45	2.01	0.00
61.00	4.45	2.01	0.00	74.25	4.45	2.01	0.00
61.25	4.45	2.01	0.00	74.50	4.45	2.01	0.00
61.50	4.45	2.01	0.00	74.75	4.45	2.01	0.00
61.75	4.45	2.01	0.00	75.00	4.45	2.01	0.00
62.00	4.45	2.01	0.00	75.25	4.45	2.01	0.00
62.25	4.45	2.01	0.00	75.50	4.45	2.01	0.00
62.50	4.45	2.01	0.00	75.75	4.45	2.01	0.00
62.75	4.45	2.01	0.00	76.00	4.45	2.01	0.00
63.00	4.45	2.01	0.00	76.25	4.45	2.01	0.00
63.25	4.45	2.01	0.00	76.50	4.45	2.01	0.00
63.50	4.45	2.01	0.00	76.75	4.45	2.01	0.00
63.75	4.45	2.01	0.00	77.00	4.45	2.01	0.00
64.00	4.45	2.01	0.00	77.25	4.45	2.01	0.00
64.25	4.45	2.01	0.00	77.50	4.45	2.01	0.00
64.50	4.45	2.01	0.00	77.75	4.45	2.01	0.00
64.75	4.45	2.01	0.00	78.00	4.45	2.01	0.00
65.00	4.45	2.01	0.00	78.25	4.45	2.01	0.00
65.25	4.45	2.01	0.00	78.50	4.45	2.01	0.00
65.50	4.45	2.01	0.00	78.75	4.45	2.01	0.00
65.75	4.45	2.01	0.00	79.00	4.45	2.01	0.00
66.00	4.45	2.01	0.00	79.25	4.45	2.01	0.00
66.25	4.45	2.01	0.00	79.50	4.45	2.01	0.00
66.50	4.45	2.01	0.00	79.75	4.45	2.01	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	2.01	0.00	93.25	4.45	2.01	0.00
80.25	4.45	2.01	0.00	93.50	4.45	2.01	0.00
80.50	4.45	2.01	0.00	93.75	4.45	2.01	0.00
80.75	4.45	2.01	0.00	94.00	4.45	2.01	0.00
81.00	4.45	2.01	0.00	94.25	4.45	2.01	0.00
81.25	4.45	2.01	0.00	94.50	4.45	2.01	0.00
81.50	4.45	2.01	0.00	94.75	4.45	2.01	0.00
81.75	4.45	2.01	0.00	95.00	4.45	2.01	0.00
82.00	4.45	2.01	0.00	95.25	4.45	2.01	0.00
82.25	4.45	2.01	0.00	95.50	4.45	2.01	0.00
82.50	4.45	2.01	0.00	95.75	4.45	2.01	0.00
82.75	4.45	2.01	0.00	96.00	4.45	2.01	0.00
83.00	4.45	2.01	0.00	96.25	4.45	2.01	0.00
83.25	4.45	2.01	0.00	96.50	4.45	2.01	0.00
83.50	4.45	2.01	0.00	96.75	4.45	2.01	0.00
83.75	4.45	2.01	0.00	97.00	4.45	2.01	0.00
84.00	4.45	2.01	0.00	97.25	4.45	2.01	0.00
84.25	4.45	2.01	0.00	97.50	4.45	2.01	0.00
84.50	4.45	2.01	0.00	97.75	4.45	2.01	0.00
84.75	4.45	2.01	0.00	98.00	4.45	2.01	0.00
85.00	4.45	2.01	0.00	98.25	4.45	2.01	0.00
85.25	4.45	2.01	0.00	98.50	4.45	2.01	0.00
85.50	4.45	2.01	0.00	98.75	4.45	2.01	0.00
85.75	4.45	2.01	0.00	99.00	4.45	2.01	0.00
86.00	4.45	2.01	0.00	99.25	4.45	2.01	0.00
86.25	4.45	2.01	0.00	99.50	4.45	2.01	0.00
86.50	4.45	2.01	0.00	99.75	4.45	2.01	0.00
86.75	4.45	2.01	0.00	100.00	4.45	2.01	0.00
87.00	4.45	2.01	0.00	100.25	4.45	2.01	0.00
87.25	4.45	2.01	0.00	100.50	4.45	2.01	0.00
87.50	4.45	2.01	0.00	100.75	4.45	2.01	0.00
87.75	4.45	2.01	0.00	101.00	4.45	2.01	0.00
88.00	4.45	2.01	0.00	101.25	4.45	2.01	0.00
88.25	4.45	2.01	0.00	101.50	4.45	2.01	0.00
88.50	4.45	2.01	0.00	101.75	4.45	2.01	0.00
88.75	4.45	2.01	0.00	102.00	4.45	2.01	0.00
89.00	4.45	2.01	0.00	102.25	4.45	2.01	0.00
89.25	4.45	2.01	0.00	102.50	4.45	2.01	0.00
89.50	4.45	2.01	0.00	102.75	4.45	2.01	0.00
89.75	4.45	2.01	0.00	103.00	4.45	2.01	0.00
90.00	4.45	2.01	0.00	103.25	4.45	2.01	0.00
90.25	4.45	2.01	0.00	103.50	4.45	2.01	0.00
90.50	4.45	2.01	0.00	103.75	4.45	2.01	0.00
90.75	4.45	2.01	0.00	104.00	4.45	2.01	0.00
91.00	4.45	2.01	0.00	104.25	4.45	2.01	0.00
91.25	4.45	2.01	0.00	104.50	4.45	2.01	0.00
91.50	4.45	2.01	0.00	104.75	4.45	2.01	0.00
91.75	4.45	2.01	0.00	105.00	4.45	2.01	0.00
92.00	4.45	2.01	0.00	105.25	4.45	2.01	0.00
92.25	4.45	2.01	0.00	105.50	4.45	2.01	0.00
92.50	4.45	2.01	0.00	105.75	4.45	2.01	0.00
92.75	4.45	2.01	0.00	106.00	4.45	2.01	0.00
93.00	4.45	2.01	0.00	106.25	4.45	2.01	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	2.01	0.00	119.75	4.45	2.01	0.00
106.75	4.45	2.01	0.00	120.00	4.45	2.01	0.00
107.00	4.45	2.01	0.00	120.25	4.45	2.01	0.00
107.25	4.45	2.01	0.00	120.50	4.45	2.01	0.00
107.50	4.45	2.01	0.00	120.75	4.45	2.01	0.00
107.75	4.45	2.01	0.00	121.00	4.45	2.01	0.00
108.00	4.45	2.01	0.00	121.25	4.45	2.01	0.00
108.25	4.45	2.01	0.00	121.50	4.45	2.01	0.00
108.50	4.45	2.01	0.00	121.75	4.45	2.01	0.00
108.75	4.45	2.01	0.00	122.00	4.45	2.01	0.00
109.00	4.45	2.01	0.00	122.25	4.45	2.01	0.00
109.25	4.45	2.01	0.00	122.50	4.45	2.01	0.00
109.50	4.45	2.01	0.00	122.75	4.45	2.01	0.00
109.75	4.45	2.01	0.00	123.00	4.45	2.01	0.00
110.00	4.45	2.01	0.00	123.25	4.45	2.01	0.00
110.25	4.45	2.01	0.00	123.50	4.45	2.01	0.00
110.50	4.45	2.01	0.00	123.75	4.45	2.01	0.00
110.75	4.45	2.01	0.00	124.00	4.45	2.01	0.00
111.00	4.45	2.01	0.00	124.25	4.45	2.01	0.00
111.25	4.45	2.01	0.00	124.50	4.45	2.01	0.00
111.50	4.45	2.01	0.00	124.75	4.45	2.01	0.00
111.75	4.45	2.01	0.00	125.00	4.45	2.01	0.00
112.00	4.45	2.01	0.00	125.25	4.45	2.01	0.00
112.25	4.45	2.01	0.00	125.50	4.45	2.01	0.00
112.50	4.45	2.01	0.00	125.75	4.45	2.01	0.00
112.75	4.45	2.01	0.00	126.00	4.45	2.01	0.00
113.00	4.45	2.01	0.00	126.25	4.45	2.01	0.00
113.25	4.45	2.01	0.00	126.50	4.45	2.01	0.00
113.50	4.45	2.01	0.00	126.75	4.45	2.01	0.00
113.75	4.45	2.01	0.00	127.00	4.45	2.01	0.00
114.00	4.45	2.01	0.00	127.25	4.45	2.01	0.00
114.25	4.45	2.01	0.00	127.50	4.45	2.01	0.00
114.50	4.45	2.01	0.00	127.75	4.45	2.01	0.00
114.75	4.45	2.01	0.00	128.00	4.45	2.01	0.00
115.00	4.45	2.01	0.00	128.25	4.45	2.01	0.00
115.25	4.45	2.01	0.00	128.50	4.45	2.01	0.00
115.50	4.45	2.01	0.00	128.75	4.45	2.01	0.00
115.75	4.45	2.01	0.00	129.00	4.45	2.01	0.00
116.00	4.45	2.01	0.00	129.25	4.45	2.01	0.00
116.25	4.45	2.01	0.00	129.50	4.45	2.01	0.00
116.50	4.45	2.01	0.00	129.75	4.45	2.01	0.00
116.75	4.45	2.01	0.00	130.00	4.45	2.01	0.00
117.00	4.45	2.01	0.00	130.25	4.45	2.01	0.00
117.25	4.45	2.01	0.00	130.50	4.45	2.01	0.00
117.50	4.45	2.01	0.00	130.75	4.45	2.01	0.00
117.75	4.45	2.01	0.00	131.00	4.45	2.01	0.00
118.00	4.45	2.01	0.00	131.25	4.45	2.01	0.00
118.25	4.45	2.01	0.00	131.50	4.45	2.01	0.00
118.50	4.45	2.01	0.00	131.75	4.45	2.01	0.00
118.75	4.45	2.01	0.00	132.00	4.45	2.01	0.00
119.00	4.45	2.01	0.00	132.25	4.45	2.01	0.00
119.25	4.45	2.01	0.00	132.50	4.45	2.01	0.00
119.50	4.45	2.01	0.00	132.75	4.45	2.01	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	2.01	0.00
133.25	4.45	2.01	0.00
133.50	4.45	2.01	0.00
133.75	4.45	2.01	0.00
134.00	4.45	2.01	0.00
134.25	4.45	2.01	0.00
134.50	4.45	2.01	0.00
134.75	4.45	2.01	0.00
135.00	4.45	2.01	0.00
135.25	4.45	2.01	0.00
135.50	4.45	2.01	0.00
135.75	4.45	2.01	0.00
136.00	4.45	2.01	0.00
136.25	4.45	2.01	0.00
136.50	4.45	2.01	0.00
136.75	4.45	2.01	0.00
137.00	4.45	2.01	0.00
137.25	4.45	2.01	0.00
137.50	4.45	2.01	0.00
137.75	4.45	2.01	0.00
138.00	4.45	2.01	0.00
138.25	4.45	2.01	0.00
138.50	4.45	2.01	0.00
138.75	4.45	2.01	0.00
139.00	4.45	2.01	0.00
139.25	4.45	2.01	0.00
139.50	4.45	2.01	0.00
139.75	4.45	2.01	0.00
140.00	4.45	2.01	0.00
140.25	4.45	2.01	0.00
140.50	4.45	2.01	0.00
140.75	4.45	2.01	0.00
141.00	4.45	2.01	0.00
141.25	4.45	2.01	0.00
141.50	4.45	2.01	0.00
141.75	4.45	2.01	0.00
142.00	4.45	2.01	0.00
142.25	4.45	2.01	0.00
142.50	4.45	2.01	0.00
142.75	4.45	2.01	0.00
143.00	4.45	2.01	0.00
143.25	4.45	2.01	0.00
143.50	4.45	2.01	0.00
143.75	4.45	2.01	0.00
144.00	4.45	2.01	0.00
144.25	4.45	2.01	0.00
144.50	4.45	2.01	0.00
144.75	4.45	2.01	0.00
145.00	4.45	2.01	0.00
145.25	4.45	2.01	0.00
145.50	4.45	2.01	0.00
145.75	4.45	2.01	0.00
146.00	4.45	2.01	0.00
146.25	4.45	2.01	0.00
146.50	4.45	2.01	0.00
146.75	4.45	2.01	0.00
147.00	4.45	2.01	0.00
147.25	4.45	2.01	0.00
147.50	4.45	2.01	0.00
147.75	4.45	2.01	0.00
148.00	4.45	2.01	0.00
148.25	4.45	2.01	0.00
148.50	4.45	2.01	0.00
148.75	4.45	2.01	0.00
149.00	4.45	2.01	0.00
149.25	4.45	2.01	0.00
149.50	4.45	2.01	0.00
149.75	4.45	2.01	0.00
150.00	4.45	2.01	0.00

Summary for Subcatchment 9S: SB-6

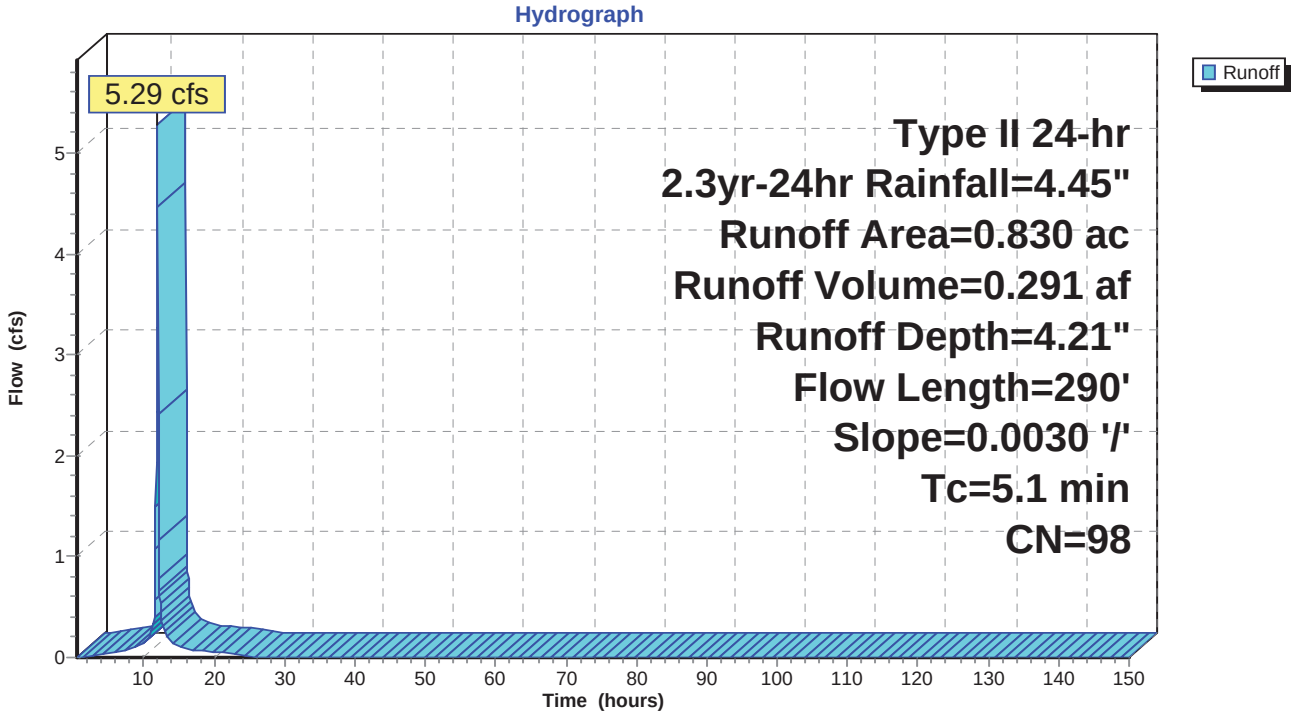
Runoff = 5.29 cfs @ 11.95 hrs, Volume= 0.291 af, Depth= 4.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
*	0.830	98	Gravel surface, HSG A
	0.830		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	290	0.0030	0.94		**Sheet Flow, Overland Flow** Smooth surfaces n= 0.011 P2= 4.50"

Subcatchment 9S: SB-6



Hydrograph for Subcatchment 9S: SB-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	3.37	0.16
0.75	0.03	0.00	0.00	14.00	3.65	3.42	0.14
1.00	0.05	0.00	0.00	14.25	3.69	3.46	0.13
1.25	0.06	0.00	0.01	14.50	3.73	3.49	0.13
1.50	0.07	0.00	0.01	14.75	3.76	3.53	0.12
1.75	0.08	0.01	0.01	15.00	3.80	3.56	0.11
2.00	0.10	0.01	0.02	15.25	3.83	3.60	0.11
2.25	0.11	0.02	0.02	15.50	3.86	3.63	0.10
2.50	0.13	0.02	0.02	15.75	3.89	3.65	0.09
2.75	0.14	0.03	0.03	16.00	3.92	3.68	0.09
3.00	0.15	0.04	0.03	16.25	3.94	3.71	0.08
3.25	0.17	0.05	0.03	16.50	3.97	3.73	0.08
3.50	0.18	0.06	0.03	16.75	3.99	3.75	0.08
3.75	0.20	0.07	0.03	17.00	4.01	3.78	0.08
4.00	0.21	0.08	0.04	17.25	4.04	3.80	0.07
4.25	0.23	0.09	0.04	17.50	4.06	3.82	0.07
4.50	0.25	0.10	0.04	17.75	4.08	3.84	0.07
4.75	0.26	0.12	0.04	18.00	4.10	3.86	0.07
5.00	0.28	0.13	0.05	18.25	4.12	3.88	0.07
5.25	0.30	0.14	0.05	18.50	4.14	3.90	0.06
5.50	0.32	0.16	0.05	18.75	4.16	3.92	0.06
5.75	0.34	0.17	0.05	19.00	4.17	3.94	0.06
6.00	0.36	0.19	0.06	19.25	4.19	3.95	0.06
6.25	0.38	0.21	0.06	19.50	4.21	3.97	0.05
6.50	0.40	0.23	0.06	19.75	4.22	3.99	0.05
6.75	0.42	0.25	0.06	20.00	4.24	4.00	0.05
7.00	0.44	0.26	0.07	20.25	4.25	4.02	0.05
7.25	0.46	0.28	0.07	20.50	4.27	4.03	0.05
7.50	0.49	0.31	0.07	20.75	4.28	4.04	0.05
7.75	0.51	0.33	0.07	21.00	4.29	4.06	0.05
8.00	0.53	0.35	0.07	21.25	4.31	4.07	0.05
8.25	0.56	0.37	0.08	21.50	4.32	4.09	0.05
8.50	0.59	0.40	0.09	21.75	4.33	4.10	0.05
8.75	0.62	0.43	0.10	22.00	4.35	4.11	0.04
9.00	0.65	0.46	0.11	22.25	4.36	4.13	0.04
9.25	0.69	0.49	0.11	22.50	4.37	4.14	0.04
9.50	0.73	0.53	0.11	22.75	4.39	4.15	0.04
9.75	0.76	0.56	0.12	23.00	4.40	4.16	0.04
10.00	0.81	0.60	0.14	23.25	4.41	4.18	0.04
10.25	0.85	0.65	0.16	23.50	4.43	4.19	0.04
10.50	0.91	0.70	0.18	23.75	4.44	4.20	0.04
10.75	0.97	0.76	0.21	24.00	**4.45**	**4.21**	0.04
11.00	1.05	0.84	0.25	24.25	4.45	4.21	0.00
11.25	1.14	0.93	0.32	24.50	4.45	4.21	0.00
11.50	1.26	1.04	0.41	24.75	4.45	4.21	0.00
11.75	1.72	1.50	**1.93**	25.00	4.45	4.21	0.00
12.00	2.95	2.72	**4.46**	25.25	4.45	4.21	0.00
12.25	3.14	2.91	0.60	25.50	4.45	4.21	0.00
12.50	3.27	3.04	0.39	25.75	4.45	4.21	0.00
12.75	3.36	3.13	0.29	26.00	4.45	4.21	0.00
13.00	3.44	3.20	0.24	26.25	4.45	4.21	0.00
13.25	3.50	3.27	0.21	26.50	4.45	4.21	0.00
13.50	3.56	3.32	0.18	26.75	4.45	4.21	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	4.21	0.00	40.25	4.45	4.21	0.00
27.25	4.45	4.21	0.00	40.50	4.45	4.21	0.00
27.50	4.45	4.21	0.00	40.75	4.45	4.21	0.00
27.75	4.45	4.21	0.00	41.00	4.45	4.21	0.00
28.00	4.45	4.21	0.00	41.25	4.45	4.21	0.00
28.25	4.45	4.21	0.00	41.50	4.45	4.21	0.00
28.50	4.45	4.21	0.00	41.75	4.45	4.21	0.00
28.75	4.45	4.21	0.00	42.00	4.45	4.21	0.00
29.00	4.45	4.21	0.00	42.25	4.45	4.21	0.00
29.25	4.45	4.21	0.00	42.50	4.45	4.21	0.00
29.50	4.45	4.21	0.00	42.75	4.45	4.21	0.00
29.75	4.45	4.21	0.00	43.00	4.45	4.21	0.00
30.00	4.45	4.21	0.00	43.25	4.45	4.21	0.00
30.25	4.45	4.21	0.00	43.50	4.45	4.21	0.00
30.50	4.45	4.21	0.00	43.75	4.45	4.21	0.00
30.75	4.45	4.21	0.00	44.00	4.45	4.21	0.00
31.00	4.45	4.21	0.00	44.25	4.45	4.21	0.00
31.25	4.45	4.21	0.00	44.50	4.45	4.21	0.00
31.50	4.45	4.21	0.00	44.75	4.45	4.21	0.00
31.75	4.45	4.21	0.00	45.00	4.45	4.21	0.00
32.00	4.45	4.21	0.00	45.25	4.45	4.21	0.00
32.25	4.45	4.21	0.00	45.50	4.45	4.21	0.00
32.50	4.45	4.21	0.00	45.75	4.45	4.21	0.00
32.75	4.45	4.21	0.00	46.00	4.45	4.21	0.00
33.00	4.45	4.21	0.00	46.25	4.45	4.21	0.00
33.25	4.45	4.21	0.00	46.50	4.45	4.21	0.00
33.50	4.45	4.21	0.00	46.75	4.45	4.21	0.00
33.75	4.45	4.21	0.00	47.00	4.45	4.21	0.00
34.00	4.45	4.21	0.00	47.25	4.45	4.21	0.00
34.25	4.45	4.21	0.00	47.50	4.45	4.21	0.00
34.50	4.45	4.21	0.00	47.75	4.45	4.21	0.00
34.75	4.45	4.21	0.00	48.00	4.45	4.21	0.00
35.00	4.45	4.21	0.00	48.25	4.45	4.21	0.00
35.25	4.45	4.21	0.00	48.50	4.45	4.21	0.00
35.50	4.45	4.21	0.00	48.75	4.45	4.21	0.00
35.75	4.45	4.21	0.00	49.00	4.45	4.21	0.00
36.00	4.45	4.21	0.00	49.25	4.45	4.21	0.00
36.25	4.45	4.21	0.00	49.50	4.45	4.21	0.00
36.50	4.45	4.21	0.00	49.75	4.45	4.21	0.00
36.75	4.45	4.21	0.00	50.00	4.45	4.21	0.00
37.00	4.45	4.21	0.00	50.25	4.45	4.21	0.00
37.25	4.45	4.21	0.00	50.50	4.45	4.21	0.00
37.50	4.45	4.21	0.00	50.75	4.45	4.21	0.00
37.75	4.45	4.21	0.00	51.00	4.45	4.21	0.00
38.00	4.45	4.21	0.00	51.25	4.45	4.21	0.00
38.25	4.45	4.21	0.00	51.50	4.45	4.21	0.00
38.50	4.45	4.21	0.00	51.75	4.45	4.21	0.00
38.75	4.45	4.21	0.00	52.00	4.45	4.21	0.00
39.00	4.45	4.21	0.00	52.25	4.45	4.21	0.00
39.25	4.45	4.21	0.00	52.50	4.45	4.21	0.00
39.50	4.45	4.21	0.00	52.75	4.45	4.21	0.00
39.75	4.45	4.21	0.00	53.00	4.45	4.21	0.00
40.00	4.45	4.21	0.00	53.25	4.45	4.21	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	4.21	0.00	66.75	4.45	4.21	0.00
53.75	4.45	4.21	0.00	67.00	4.45	4.21	0.00
54.00	4.45	4.21	0.00	67.25	4.45	4.21	0.00
54.25	4.45	4.21	0.00	67.50	4.45	4.21	0.00
54.50	4.45	4.21	0.00	67.75	4.45	4.21	0.00
54.75	4.45	4.21	0.00	68.00	4.45	4.21	0.00
55.00	4.45	4.21	0.00	68.25	4.45	4.21	0.00
55.25	4.45	4.21	0.00	68.50	4.45	4.21	0.00
55.50	4.45	4.21	0.00	68.75	4.45	4.21	0.00
55.75	4.45	4.21	0.00	69.00	4.45	4.21	0.00
56.00	4.45	4.21	0.00	69.25	4.45	4.21	0.00
56.25	4.45	4.21	0.00	69.50	4.45	4.21	0.00
56.50	4.45	4.21	0.00	69.75	4.45	4.21	0.00
56.75	4.45	4.21	0.00	70.00	4.45	4.21	0.00
57.00	4.45	4.21	0.00	70.25	4.45	4.21	0.00
57.25	4.45	4.21	0.00	70.50	4.45	4.21	0.00
57.50	4.45	4.21	0.00	70.75	4.45	4.21	0.00
57.75	4.45	4.21	0.00	71.00	4.45	4.21	0.00
58.00	4.45	4.21	0.00	71.25	4.45	4.21	0.00
58.25	4.45	4.21	0.00	71.50	4.45	4.21	0.00
58.50	4.45	4.21	0.00	71.75	4.45	4.21	0.00
58.75	4.45	4.21	0.00	72.00	4.45	4.21	0.00
59.00	4.45	4.21	0.00	72.25	4.45	4.21	0.00
59.25	4.45	4.21	0.00	72.50	4.45	4.21	0.00
59.50	4.45	4.21	0.00	72.75	4.45	4.21	0.00
59.75	4.45	4.21	0.00	73.00	4.45	4.21	0.00
60.00	4.45	4.21	0.00	73.25	4.45	4.21	0.00
60.25	4.45	4.21	0.00	73.50	4.45	4.21	0.00
60.50	4.45	4.21	0.00	73.75	4.45	4.21	0.00
60.75	4.45	4.21	0.00	74.00	4.45	4.21	0.00
61.00	4.45	4.21	0.00	74.25	4.45	4.21	0.00
61.25	4.45	4.21	0.00	74.50	4.45	4.21	0.00
61.50	4.45	4.21	0.00	74.75	4.45	4.21	0.00
61.75	4.45	4.21	0.00	75.00	4.45	4.21	0.00
62.00	4.45	4.21	0.00	75.25	4.45	4.21	0.00
62.25	4.45	4.21	0.00	75.50	4.45	4.21	0.00
62.50	4.45	4.21	0.00	75.75	4.45	4.21	0.00
62.75	4.45	4.21	0.00	76.00	4.45	4.21	0.00
63.00	4.45	4.21	0.00	76.25	4.45	4.21	0.00
63.25	4.45	4.21	0.00	76.50	4.45	4.21	0.00
63.50	4.45	4.21	0.00	76.75	4.45	4.21	0.00
63.75	4.45	4.21	0.00	77.00	4.45	4.21	0.00
64.00	4.45	4.21	0.00	77.25	4.45	4.21	0.00
64.25	4.45	4.21	0.00	77.50	4.45	4.21	0.00
64.50	4.45	4.21	0.00	77.75	4.45	4.21	0.00
64.75	4.45	4.21	0.00	78.00	4.45	4.21	0.00
65.00	4.45	4.21	0.00	78.25	4.45	4.21	0.00
65.25	4.45	4.21	0.00	78.50	4.45	4.21	0.00
65.50	4.45	4.21	0.00	78.75	4.45	4.21	0.00
65.75	4.45	4.21	0.00	79.00	4.45	4.21	0.00
66.00	4.45	4.21	0.00	79.25	4.45	4.21	0.00
66.25	4.45	4.21	0.00	79.50	4.45	4.21	0.00
66.50	4.45	4.21	0.00	79.75	4.45	4.21	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	4.21	0.00	93.25	4.45	4.21	0.00
80.25	4.45	4.21	0.00	93.50	4.45	4.21	0.00
80.50	4.45	4.21	0.00	93.75	4.45	4.21	0.00
80.75	4.45	4.21	0.00	94.00	4.45	4.21	0.00
81.00	4.45	4.21	0.00	94.25	4.45	4.21	0.00
81.25	4.45	4.21	0.00	94.50	4.45	4.21	0.00
81.50	4.45	4.21	0.00	94.75	4.45	4.21	0.00
81.75	4.45	4.21	0.00	95.00	4.45	4.21	0.00
82.00	4.45	4.21	0.00	95.25	4.45	4.21	0.00
82.25	4.45	4.21	0.00	95.50	4.45	4.21	0.00
82.50	4.45	4.21	0.00	95.75	4.45	4.21	0.00
82.75	4.45	4.21	0.00	96.00	4.45	4.21	0.00
83.00	4.45	4.21	0.00	96.25	4.45	4.21	0.00
83.25	4.45	4.21	0.00	96.50	4.45	4.21	0.00
83.50	4.45	4.21	0.00	96.75	4.45	4.21	0.00
83.75	4.45	4.21	0.00	97.00	4.45	4.21	0.00
84.00	4.45	4.21	0.00	97.25	4.45	4.21	0.00
84.25	4.45	4.21	0.00	97.50	4.45	4.21	0.00
84.50	4.45	4.21	0.00	97.75	4.45	4.21	0.00
84.75	4.45	4.21	0.00	98.00	4.45	4.21	0.00
85.00	4.45	4.21	0.00	98.25	4.45	4.21	0.00
85.25	4.45	4.21	0.00	98.50	4.45	4.21	0.00
85.50	4.45	4.21	0.00	98.75	4.45	4.21	0.00
85.75	4.45	4.21	0.00	99.00	4.45	4.21	0.00
86.00	4.45	4.21	0.00	99.25	4.45	4.21	0.00
86.25	4.45	4.21	0.00	99.50	4.45	4.21	0.00
86.50	4.45	4.21	0.00	99.75	4.45	4.21	0.00
86.75	4.45	4.21	0.00	100.00	4.45	4.21	0.00
87.00	4.45	4.21	0.00	100.25	4.45	4.21	0.00
87.25	4.45	4.21	0.00	100.50	4.45	4.21	0.00
87.50	4.45	4.21	0.00	100.75	4.45	4.21	0.00
87.75	4.45	4.21	0.00	101.00	4.45	4.21	0.00
88.00	4.45	4.21	0.00	101.25	4.45	4.21	0.00
88.25	4.45	4.21	0.00	101.50	4.45	4.21	0.00
88.50	4.45	4.21	0.00	101.75	4.45	4.21	0.00
88.75	4.45	4.21	0.00	102.00	4.45	4.21	0.00
89.00	4.45	4.21	0.00	102.25	4.45	4.21	0.00
89.25	4.45	4.21	0.00	102.50	4.45	4.21	0.00
89.50	4.45	4.21	0.00	102.75	4.45	4.21	0.00
89.75	4.45	4.21	0.00	103.00	4.45	4.21	0.00
90.00	4.45	4.21	0.00	103.25	4.45	4.21	0.00
90.25	4.45	4.21	0.00	103.50	4.45	4.21	0.00
90.50	4.45	4.21	0.00	103.75	4.45	4.21	0.00
90.75	4.45	4.21	0.00	104.00	4.45	4.21	0.00
91.00	4.45	4.21	0.00	104.25	4.45	4.21	0.00
91.25	4.45	4.21	0.00	104.50	4.45	4.21	0.00
91.50	4.45	4.21	0.00	104.75	4.45	4.21	0.00
91.75	4.45	4.21	0.00	105.00	4.45	4.21	0.00
92.00	4.45	4.21	0.00	105.25	4.45	4.21	0.00
92.25	4.45	4.21	0.00	105.50	4.45	4.21	0.00
92.50	4.45	4.21	0.00	105.75	4.45	4.21	0.00
92.75	4.45	4.21	0.00	106.00	4.45	4.21	0.00
93.00	4.45	4.21	0.00	106.25	4.45	4.21	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	4.21	0.00	119.75	4.45	4.21	0.00
106.75	4.45	4.21	0.00	120.00	4.45	4.21	0.00
107.00	4.45	4.21	0.00	120.25	4.45	4.21	0.00
107.25	4.45	4.21	0.00	120.50	4.45	4.21	0.00
107.50	4.45	4.21	0.00	120.75	4.45	4.21	0.00
107.75	4.45	4.21	0.00	121.00	4.45	4.21	0.00
108.00	4.45	4.21	0.00	121.25	4.45	4.21	0.00
108.25	4.45	4.21	0.00	121.50	4.45	4.21	0.00
108.50	4.45	4.21	0.00	121.75	4.45	4.21	0.00
108.75	4.45	4.21	0.00	122.00	4.45	4.21	0.00
109.00	4.45	4.21	0.00	122.25	4.45	4.21	0.00
109.25	4.45	4.21	0.00	122.50	4.45	4.21	0.00
109.50	4.45	4.21	0.00	122.75	4.45	4.21	0.00
109.75	4.45	4.21	0.00	123.00	4.45	4.21	0.00
110.00	4.45	4.21	0.00	123.25	4.45	4.21	0.00
110.25	4.45	4.21	0.00	123.50	4.45	4.21	0.00
110.50	4.45	4.21	0.00	123.75	4.45	4.21	0.00
110.75	4.45	4.21	0.00	124.00	4.45	4.21	0.00
111.00	4.45	4.21	0.00	124.25	4.45	4.21	0.00
111.25	4.45	4.21	0.00	124.50	4.45	4.21	0.00
111.50	4.45	4.21	0.00	124.75	4.45	4.21	0.00
111.75	4.45	4.21	0.00	125.00	4.45	4.21	0.00
112.00	4.45	4.21	0.00	125.25	4.45	4.21	0.00
112.25	4.45	4.21	0.00	125.50	4.45	4.21	0.00
112.50	4.45	4.21	0.00	125.75	4.45	4.21	0.00
112.75	4.45	4.21	0.00	126.00	4.45	4.21	0.00
113.00	4.45	4.21	0.00	126.25	4.45	4.21	0.00
113.25	4.45	4.21	0.00	126.50	4.45	4.21	0.00
113.50	4.45	4.21	0.00	126.75	4.45	4.21	0.00
113.75	4.45	4.21	0.00	127.00	4.45	4.21	0.00
114.00	4.45	4.21	0.00	127.25	4.45	4.21	0.00
114.25	4.45	4.21	0.00	127.50	4.45	4.21	0.00
114.50	4.45	4.21	0.00	127.75	4.45	4.21	0.00
114.75	4.45	4.21	0.00	128.00	4.45	4.21	0.00
115.00	4.45	4.21	0.00	128.25	4.45	4.21	0.00
115.25	4.45	4.21	0.00	128.50	4.45	4.21	0.00
115.50	4.45	4.21	0.00	128.75	4.45	4.21	0.00
115.75	4.45	4.21	0.00	129.00	4.45	4.21	0.00
116.00	4.45	4.21	0.00	129.25	4.45	4.21	0.00
116.25	4.45	4.21	0.00	129.50	4.45	4.21	0.00
116.50	4.45	4.21	0.00	129.75	4.45	4.21	0.00
116.75	4.45	4.21	0.00	130.00	4.45	4.21	0.00
117.00	4.45	4.21	0.00	130.25	4.45	4.21	0.00
117.25	4.45	4.21	0.00	130.50	4.45	4.21	0.00
117.50	4.45	4.21	0.00	130.75	4.45	4.21	0.00
117.75	4.45	4.21	0.00	131.00	4.45	4.21	0.00
118.00	4.45	4.21	0.00	131.25	4.45	4.21	0.00
118.25	4.45	4.21	0.00	131.50	4.45	4.21	0.00
118.50	4.45	4.21	0.00	131.75	4.45	4.21	0.00
118.75	4.45	4.21	0.00	132.00	4.45	4.21	0.00
119.00	4.45	4.21	0.00	132.25	4.45	4.21	0.00
119.25	4.45	4.21	0.00	132.50	4.45	4.21	0.00
119.50	4.45	4.21	0.00	132.75	4.45	4.21	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	4.21	0.00
133.25	4.45	4.21	0.00
133.50	4.45	4.21	0.00
133.75	4.45	4.21	0.00
134.00	4.45	4.21	0.00
134.25	4.45	4.21	0.00
134.50	4.45	4.21	0.00
134.75	4.45	4.21	0.00
135.00	4.45	4.21	0.00
135.25	4.45	4.21	0.00
135.50	4.45	4.21	0.00
135.75	4.45	4.21	0.00
136.00	4.45	4.21	0.00
136.25	4.45	4.21	0.00
136.50	4.45	4.21	0.00
136.75	4.45	4.21	0.00
137.00	4.45	4.21	0.00
137.25	4.45	4.21	0.00
137.50	4.45	4.21	0.00
137.75	4.45	4.21	0.00
138.00	4.45	4.21	0.00
138.25	4.45	4.21	0.00
138.50	4.45	4.21	0.00
138.75	4.45	4.21	0.00
139.00	4.45	4.21	0.00
139.25	4.45	4.21	0.00
139.50	4.45	4.21	0.00
139.75	4.45	4.21	0.00
140.00	4.45	4.21	0.00
140.25	4.45	4.21	0.00
140.50	4.45	4.21	0.00
140.75	4.45	4.21	0.00
141.00	4.45	4.21	0.00
141.25	4.45	4.21	0.00
141.50	4.45	4.21	0.00
141.75	4.45	4.21	0.00
142.00	4.45	4.21	0.00
142.25	4.45	4.21	0.00
142.50	4.45	4.21	0.00
142.75	4.45	4.21	0.00
143.00	4.45	4.21	0.00
143.25	4.45	4.21	0.00
143.50	4.45	4.21	0.00
143.75	4.45	4.21	0.00
144.00	4.45	4.21	0.00
144.25	4.45	4.21	0.00
144.50	4.45	4.21	0.00
144.75	4.45	4.21	0.00
145.00	4.45	4.21	0.00
145.25	4.45	4.21	0.00
145.50	4.45	4.21	0.00
145.75	4.45	4.21	0.00
146.00	4.45	4.21	0.00
146.25	4.45	4.21	0.00
146.50	4.45	4.21	0.00
146.75	4.45	4.21	0.00
147.00	4.45	4.21	0.00
147.25	4.45	4.21	0.00
147.50	4.45	4.21	0.00
147.75	4.45	4.21	0.00
148.00	4.45	4.21	0.00
148.25	4.45	4.21	0.00
148.50	4.45	4.21	0.00
148.75	4.45	4.21	0.00
149.00	4.45	4.21	0.00
149.25	4.45	4.21	0.00
149.50	4.45	4.21	0.00
149.75	4.45	4.21	0.00
150.00	4.45	4.21	0.00

Summary for Subcatchment 11S: OSB-1

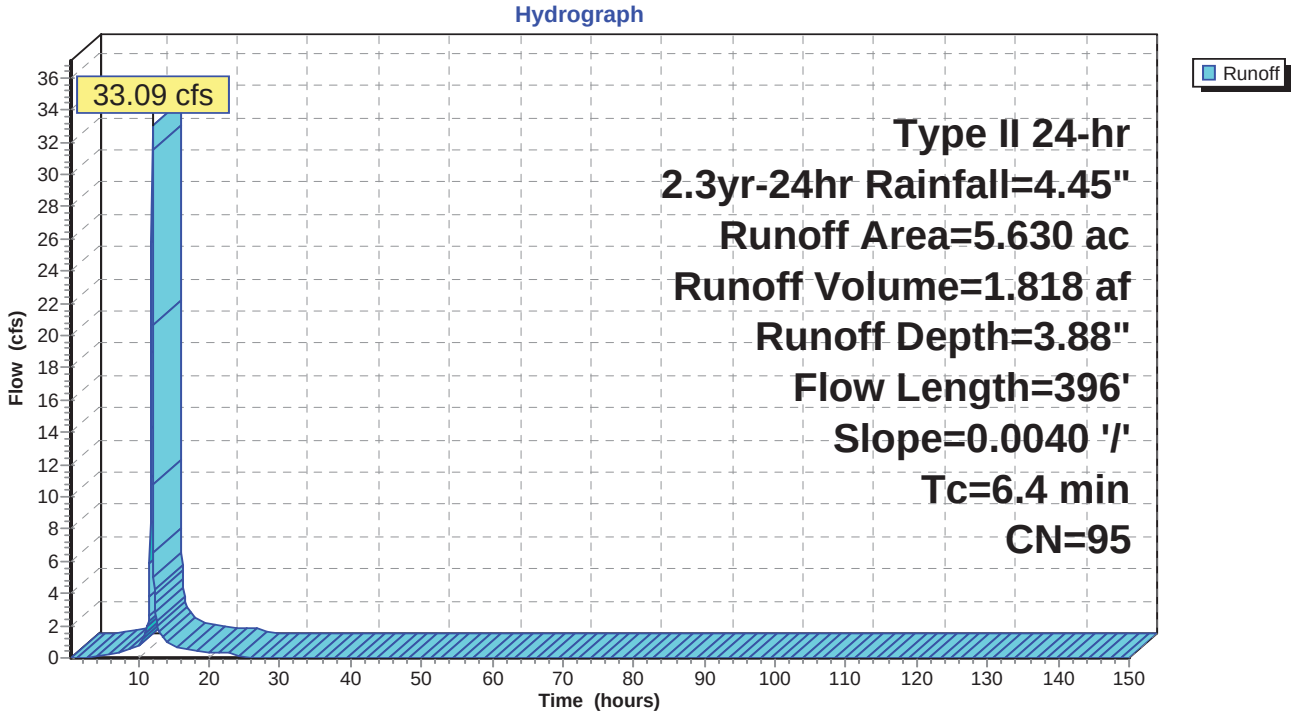
Runoff = 33.09 cfs @ 11.97 hrs, Volume= 1.818 af, Depth= 3.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 2.3yr-24hr Rainfall=4.45"

	Area (ac)	CN	Description
	0.280	39	>75% Grass cover, Good, HSG A
*	5.350	98	Gravel surface, HSG A
	5.630	95	Weighted Average
	0.280		4.97% Pervious Area
	5.350		95.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	264	0.0040	1.04		**Sheet Flow, Overland Flow** Smooth surfaces n= 0.011 P2= 4.50"
2.2	132	0.0040	1.02		**Shallow Concentrated Flow, Overland Flow** Unpaved Kv= 16.1 fps
6.4	396	Total			

Subcatchment 11S: OSB-1



Hydrograph for Subcatchment 11S: OSB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.02	0.00	0.00	13.75	3.61	3.04	1.09
0.75	0.03	0.00	0.00	14.00	3.65	3.09	0.97
1.00	0.05	0.00	0.00	14.25	3.69	3.13	0.89
1.25	0.06	0.00	0.00	14.50	3.73	3.16	0.85
1.50	0.07	0.00	0.00	14.75	3.76	3.20	0.81
1.75	0.08	0.00	0.00	15.00	3.80	3.23	0.76
2.00	0.10	0.00	0.00	15.25	3.83	3.26	0.72
2.25	0.11	0.00	0.00	15.50	3.86	3.29	0.68
2.50	0.13	0.00	0.02	15.75	3.89	3.32	0.63
2.75	0.14	0.00	0.03	16.00	3.92	3.35	0.59
3.00	0.15	0.00	0.05	16.25	3.94	3.37	0.56
3.25	0.17	0.01	0.06	16.50	3.97	3.40	0.55
3.50	0.18	0.01	0.08	16.75	3.99	3.42	0.53
3.75	0.20	0.01	0.09	17.00	4.01	3.44	0.52
4.00	0.21	0.02	0.10	17.25	4.04	3.47	0.50
4.25	0.23	0.02	0.12	17.50	4.06	3.49	0.49
4.50	0.25	0.03	0.14	17.75	4.08	3.51	0.47
4.75	0.26	0.04	0.15	18.00	4.10	3.53	0.45
5.00	0.28	0.04	0.17	18.25	4.12	3.55	0.44
5.25	0.30	0.05	0.19	18.50	4.14	3.57	0.42
5.50	0.32	0.06	0.20	18.75	4.16	3.58	0.41
5.75	0.34	0.07	0.22	19.00	4.17	3.60	0.39
6.00	0.36	0.08	0.24	19.25	4.19	3.62	0.38
6.25	0.38	0.09	0.26	19.50	4.21	3.63	0.36
6.50	0.40	0.10	0.27	19.75	4.22	3.65	0.35
6.75	0.42	0.12	0.29	20.00	4.24	3.66	0.33
7.00	0.44	0.13	0.31	20.25	4.25	3.68	0.32
7.25	0.46	0.14	0.33	20.50	4.27	3.69	0.32
7.50	0.49	0.16	0.34	20.75	4.28	3.71	0.32
7.75	0.51	0.18	0.36	21.00	4.29	3.72	0.31
8.00	0.53	0.19	0.38	21.25	4.31	3.73	0.31
8.25	0.56	0.21	0.42	21.50	4.32	3.75	0.31
8.50	0.59	0.23	0.47	21.75	4.33	3.76	0.30
8.75	0.62	0.25	0.53	22.00	4.35	3.77	0.30
9.00	0.65	0.28	0.59	22.25	4.36	3.79	0.30
9.25	0.69	0.31	0.62	22.50	4.37	3.80	0.29
9.50	0.73	0.34	0.63	22.75	4.39	3.81	0.29
9.75	0.76	0.37	0.69	23.00	4.40	3.83	0.29
10.00	0.81	0.40	0.79	23.25	4.41	3.84	0.29
10.25	0.85	0.44	0.91	23.50	4.43	3.85	0.28
10.50	0.91	0.48	1.05	23.75	4.44	3.86	0.28
10.75	0.97	0.54	1.25	24.00	**4.45**	**3.88**	0.28
11.00	1.05	0.60	1.49	24.25	4.45	3.88	0.00
11.25	1.14	0.69	1.92	24.50	4.45	3.88	0.00
11.50	1.26	0.79	2.50	24.75	4.45	3.88	0.00
11.75	1.72	1.22	**11.18**	25.00	4.45	3.88	0.00
12.00	2.95	2.40	**31.52**	25.25	4.45	3.88	0.00
12.25	3.14	2.59	4.26	25.50	4.45	3.88	0.00
12.50	3.27	2.71	2.71	25.75	4.45	3.88	0.00
12.75	3.36	2.80	1.96	26.00	4.45	3.88	0.00
13.00	3.44	2.88	1.64	26.25	4.45	3.88	0.00
13.25	3.50	2.94	1.41	26.50	4.45	3.88	0.00
13.50	3.56	2.99	1.24	26.75	4.45	3.88	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	4.45	3.88	0.00	40.25	4.45	3.88	0.00
27.25	4.45	3.88	0.00	40.50	4.45	3.88	0.00
27.50	4.45	3.88	0.00	40.75	4.45	3.88	0.00
27.75	4.45	3.88	0.00	41.00	4.45	3.88	0.00
28.00	4.45	3.88	0.00	41.25	4.45	3.88	0.00
28.25	4.45	3.88	0.00	41.50	4.45	3.88	0.00
28.50	4.45	3.88	0.00	41.75	4.45	3.88	0.00
28.75	4.45	3.88	0.00	42.00	4.45	3.88	0.00
29.00	4.45	3.88	0.00	42.25	4.45	3.88	0.00
29.25	4.45	3.88	0.00	42.50	4.45	3.88	0.00
29.50	4.45	3.88	0.00	42.75	4.45	3.88	0.00
29.75	4.45	3.88	0.00	43.00	4.45	3.88	0.00
30.00	4.45	3.88	0.00	43.25	4.45	3.88	0.00
30.25	4.45	3.88	0.00	43.50	4.45	3.88	0.00
30.50	4.45	3.88	0.00	43.75	4.45	3.88	0.00
30.75	4.45	3.88	0.00	44.00	4.45	3.88	0.00
31.00	4.45	3.88	0.00	44.25	4.45	3.88	0.00
31.25	4.45	3.88	0.00	44.50	4.45	3.88	0.00
31.50	4.45	3.88	0.00	44.75	4.45	3.88	0.00
31.75	4.45	3.88	0.00	45.00	4.45	3.88	0.00
32.00	4.45	3.88	0.00	45.25	4.45	3.88	0.00
32.25	4.45	3.88	0.00	45.50	4.45	3.88	0.00
32.50	4.45	3.88	0.00	45.75	4.45	3.88	0.00
32.75	4.45	3.88	0.00	46.00	4.45	3.88	0.00
33.00	4.45	3.88	0.00	46.25	4.45	3.88	0.00
33.25	4.45	3.88	0.00	46.50	4.45	3.88	0.00
33.50	4.45	3.88	0.00	46.75	4.45	3.88	0.00
33.75	4.45	3.88	0.00	47.00	4.45	3.88	0.00
34.00	4.45	3.88	0.00	47.25	4.45	3.88	0.00
34.25	4.45	3.88	0.00	47.50	4.45	3.88	0.00
34.50	4.45	3.88	0.00	47.75	4.45	3.88	0.00
34.75	4.45	3.88	0.00	48.00	4.45	3.88	0.00
35.00	4.45	3.88	0.00	48.25	4.45	3.88	0.00
35.25	4.45	3.88	0.00	48.50	4.45	3.88	0.00
35.50	4.45	3.88	0.00	48.75	4.45	3.88	0.00
35.75	4.45	3.88	0.00	49.00	4.45	3.88	0.00
36.00	4.45	3.88	0.00	49.25	4.45	3.88	0.00
36.25	4.45	3.88	0.00	49.50	4.45	3.88	0.00
36.50	4.45	3.88	0.00	49.75	4.45	3.88	0.00
36.75	4.45	3.88	0.00	50.00	4.45	3.88	0.00
37.00	4.45	3.88	0.00	50.25	4.45	3.88	0.00
37.25	4.45	3.88	0.00	50.50	4.45	3.88	0.00
37.50	4.45	3.88	0.00	50.75	4.45	3.88	0.00
37.75	4.45	3.88	0.00	51.00	4.45	3.88	0.00
38.00	4.45	3.88	0.00	51.25	4.45	3.88	0.00
38.25	4.45	3.88	0.00	51.50	4.45	3.88	0.00
38.50	4.45	3.88	0.00	51.75	4.45	3.88	0.00
38.75	4.45	3.88	0.00	52.00	4.45	3.88	0.00
39.00	4.45	3.88	0.00	52.25	4.45	3.88	0.00
39.25	4.45	3.88	0.00	52.50	4.45	3.88	0.00
39.50	4.45	3.88	0.00	52.75	4.45	3.88	0.00
39.75	4.45	3.88	0.00	53.00	4.45	3.88	0.00
40.00	4.45	3.88	0.00	53.25	4.45	3.88	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	4.45	3.88	0.00	66.75	4.45	3.88	0.00
53.75	4.45	3.88	0.00	67.00	4.45	3.88	0.00
54.00	4.45	3.88	0.00	67.25	4.45	3.88	0.00
54.25	4.45	3.88	0.00	67.50	4.45	3.88	0.00
54.50	4.45	3.88	0.00	67.75	4.45	3.88	0.00
54.75	4.45	3.88	0.00	68.00	4.45	3.88	0.00
55.00	4.45	3.88	0.00	68.25	4.45	3.88	0.00
55.25	4.45	3.88	0.00	68.50	4.45	3.88	0.00
55.50	4.45	3.88	0.00	68.75	4.45	3.88	0.00
55.75	4.45	3.88	0.00	69.00	4.45	3.88	0.00
56.00	4.45	3.88	0.00	69.25	4.45	3.88	0.00
56.25	4.45	3.88	0.00	69.50	4.45	3.88	0.00
56.50	4.45	3.88	0.00	69.75	4.45	3.88	0.00
56.75	4.45	3.88	0.00	70.00	4.45	3.88	0.00
57.00	4.45	3.88	0.00	70.25	4.45	3.88	0.00
57.25	4.45	3.88	0.00	70.50	4.45	3.88	0.00
57.50	4.45	3.88	0.00	70.75	4.45	3.88	0.00
57.75	4.45	3.88	0.00	71.00	4.45	3.88	0.00
58.00	4.45	3.88	0.00	71.25	4.45	3.88	0.00
58.25	4.45	3.88	0.00	71.50	4.45	3.88	0.00
58.50	4.45	3.88	0.00	71.75	4.45	3.88	0.00
58.75	4.45	3.88	0.00	72.00	4.45	3.88	0.00
59.00	4.45	3.88	0.00	72.25	4.45	3.88	0.00
59.25	4.45	3.88	0.00	72.50	4.45	3.88	0.00
59.50	4.45	3.88	0.00	72.75	4.45	3.88	0.00
59.75	4.45	3.88	0.00	73.00	4.45	3.88	0.00
60.00	4.45	3.88	0.00	73.25	4.45	3.88	0.00
60.25	4.45	3.88	0.00	73.50	4.45	3.88	0.00
60.50	4.45	3.88	0.00	73.75	4.45	3.88	0.00
60.75	4.45	3.88	0.00	74.00	4.45	3.88	0.00
61.00	4.45	3.88	0.00	74.25	4.45	3.88	0.00
61.25	4.45	3.88	0.00	74.50	4.45	3.88	0.00
61.50	4.45	3.88	0.00	74.75	4.45	3.88	0.00
61.75	4.45	3.88	0.00	75.00	4.45	3.88	0.00
62.00	4.45	3.88	0.00	75.25	4.45	3.88	0.00
62.25	4.45	3.88	0.00	75.50	4.45	3.88	0.00
62.50	4.45	3.88	0.00	75.75	4.45	3.88	0.00
62.75	4.45	3.88	0.00	76.00	4.45	3.88	0.00
63.00	4.45	3.88	0.00	76.25	4.45	3.88	0.00
63.25	4.45	3.88	0.00	76.50	4.45	3.88	0.00
63.50	4.45	3.88	0.00	76.75	4.45	3.88	0.00
63.75	4.45	3.88	0.00	77.00	4.45	3.88	0.00
64.00	4.45	3.88	0.00	77.25	4.45	3.88	0.00
64.25	4.45	3.88	0.00	77.50	4.45	3.88	0.00
64.50	4.45	3.88	0.00	77.75	4.45	3.88	0.00
64.75	4.45	3.88	0.00	78.00	4.45	3.88	0.00
65.00	4.45	3.88	0.00	78.25	4.45	3.88	0.00
65.25	4.45	3.88	0.00	78.50	4.45	3.88	0.00
65.50	4.45	3.88	0.00	78.75	4.45	3.88	0.00
65.75	4.45	3.88	0.00	79.00	4.45	3.88	0.00
66.00	4.45	3.88	0.00	79.25	4.45	3.88	0.00
66.25	4.45	3.88	0.00	79.50	4.45	3.88	0.00
66.50	4.45	3.88	0.00	79.75	4.45	3.88	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	4.45	3.88	0.00	93.25	4.45	3.88	0.00
80.25	4.45	3.88	0.00	93.50	4.45	3.88	0.00
80.50	4.45	3.88	0.00	93.75	4.45	3.88	0.00
80.75	4.45	3.88	0.00	94.00	4.45	3.88	0.00
81.00	4.45	3.88	0.00	94.25	4.45	3.88	0.00
81.25	4.45	3.88	0.00	94.50	4.45	3.88	0.00
81.50	4.45	3.88	0.00	94.75	4.45	3.88	0.00
81.75	4.45	3.88	0.00	95.00	4.45	3.88	0.00
82.00	4.45	3.88	0.00	95.25	4.45	3.88	0.00
82.25	4.45	3.88	0.00	95.50	4.45	3.88	0.00
82.50	4.45	3.88	0.00	95.75	4.45	3.88	0.00
82.75	4.45	3.88	0.00	96.00	4.45	3.88	0.00
83.00	4.45	3.88	0.00	96.25	4.45	3.88	0.00
83.25	4.45	3.88	0.00	96.50	4.45	3.88	0.00
83.50	4.45	3.88	0.00	96.75	4.45	3.88	0.00
83.75	4.45	3.88	0.00	97.00	4.45	3.88	0.00
84.00	4.45	3.88	0.00	97.25	4.45	3.88	0.00
84.25	4.45	3.88	0.00	97.50	4.45	3.88	0.00
84.50	4.45	3.88	0.00	97.75	4.45	3.88	0.00
84.75	4.45	3.88	0.00	98.00	4.45	3.88	0.00
85.00	4.45	3.88	0.00	98.25	4.45	3.88	0.00
85.25	4.45	3.88	0.00	98.50	4.45	3.88	0.00
85.50	4.45	3.88	0.00	98.75	4.45	3.88	0.00
85.75	4.45	3.88	0.00	99.00	4.45	3.88	0.00
86.00	4.45	3.88	0.00	99.25	4.45	3.88	0.00
86.25	4.45	3.88	0.00	99.50	4.45	3.88	0.00
86.50	4.45	3.88	0.00	99.75	4.45	3.88	0.00
86.75	4.45	3.88	0.00	100.00	4.45	3.88	0.00
87.00	4.45	3.88	0.00	100.25	4.45	3.88	0.00
87.25	4.45	3.88	0.00	100.50	4.45	3.88	0.00
87.50	4.45	3.88	0.00	100.75	4.45	3.88	0.00
87.75	4.45	3.88	0.00	101.00	4.45	3.88	0.00
88.00	4.45	3.88	0.00	101.25	4.45	3.88	0.00
88.25	4.45	3.88	0.00	101.50	4.45	3.88	0.00
88.50	4.45	3.88	0.00	101.75	4.45	3.88	0.00
88.75	4.45	3.88	0.00	102.00	4.45	3.88	0.00
89.00	4.45	3.88	0.00	102.25	4.45	3.88	0.00
89.25	4.45	3.88	0.00	102.50	4.45	3.88	0.00
89.50	4.45	3.88	0.00	102.75	4.45	3.88	0.00
89.75	4.45	3.88	0.00	103.00	4.45	3.88	0.00
90.00	4.45	3.88	0.00	103.25	4.45	3.88	0.00
90.25	4.45	3.88	0.00	103.50	4.45	3.88	0.00
90.50	4.45	3.88	0.00	103.75	4.45	3.88	0.00
90.75	4.45	3.88	0.00	104.00	4.45	3.88	0.00
91.00	4.45	3.88	0.00	104.25	4.45	3.88	0.00
91.25	4.45	3.88	0.00	104.50	4.45	3.88	0.00
91.50	4.45	3.88	0.00	104.75	4.45	3.88	0.00
91.75	4.45	3.88	0.00	105.00	4.45	3.88	0.00
92.00	4.45	3.88	0.00	105.25	4.45	3.88	0.00
92.25	4.45	3.88	0.00	105.50	4.45	3.88	0.00
92.50	4.45	3.88	0.00	105.75	4.45	3.88	0.00
92.75	4.45	3.88	0.00	106.00	4.45	3.88	0.00
93.00	4.45	3.88	0.00	106.25	4.45	3.88	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	4.45	3.88	0.00	119.75	4.45	3.88	0.00
106.75	4.45	3.88	0.00	120.00	4.45	3.88	0.00
107.00	4.45	3.88	0.00	120.25	4.45	3.88	0.00
107.25	4.45	3.88	0.00	120.50	4.45	3.88	0.00
107.50	4.45	3.88	0.00	120.75	4.45	3.88	0.00
107.75	4.45	3.88	0.00	121.00	4.45	3.88	0.00
108.00	4.45	3.88	0.00	121.25	4.45	3.88	0.00
108.25	4.45	3.88	0.00	121.50	4.45	3.88	0.00
108.50	4.45	3.88	0.00	121.75	4.45	3.88	0.00
108.75	4.45	3.88	0.00	122.00	4.45	3.88	0.00
109.00	4.45	3.88	0.00	122.25	4.45	3.88	0.00
109.25	4.45	3.88	0.00	122.50	4.45	3.88	0.00
109.50	4.45	3.88	0.00	122.75	4.45	3.88	0.00
109.75	4.45	3.88	0.00	123.00	4.45	3.88	0.00
110.00	4.45	3.88	0.00	123.25	4.45	3.88	0.00
110.25	4.45	3.88	0.00	123.50	4.45	3.88	0.00
110.50	4.45	3.88	0.00	123.75	4.45	3.88	0.00
110.75	4.45	3.88	0.00	124.00	4.45	3.88	0.00
111.00	4.45	3.88	0.00	124.25	4.45	3.88	0.00
111.25	4.45	3.88	0.00	124.50	4.45	3.88	0.00
111.50	4.45	3.88	0.00	124.75	4.45	3.88	0.00
111.75	4.45	3.88	0.00	125.00	4.45	3.88	0.00
112.00	4.45	3.88	0.00	125.25	4.45	3.88	0.00
112.25	4.45	3.88	0.00	125.50	4.45	3.88	0.00
112.50	4.45	3.88	0.00	125.75	4.45	3.88	0.00
112.75	4.45	3.88	0.00	126.00	4.45	3.88	0.00
113.00	4.45	3.88	0.00	126.25	4.45	3.88	0.00
113.25	4.45	3.88	0.00	126.50	4.45	3.88	0.00
113.50	4.45	3.88	0.00	126.75	4.45	3.88	0.00
113.75	4.45	3.88	0.00	127.00	4.45	3.88	0.00
114.00	4.45	3.88	0.00	127.25	4.45	3.88	0.00
114.25	4.45	3.88	0.00	127.50	4.45	3.88	0.00
114.50	4.45	3.88	0.00	127.75	4.45	3.88	0.00
114.75	4.45	3.88	0.00	128.00	4.45	3.88	0.00
115.00	4.45	3.88	0.00	128.25	4.45	3.88	0.00
115.25	4.45	3.88	0.00	128.50	4.45	3.88	0.00
115.50	4.45	3.88	0.00	128.75	4.45	3.88	0.00
115.75	4.45	3.88	0.00	129.00	4.45	3.88	0.00
116.00	4.45	3.88	0.00	129.25	4.45	3.88	0.00
116.25	4.45	3.88	0.00	129.50	4.45	3.88	0.00
116.50	4.45	3.88	0.00	129.75	4.45	3.88	0.00
116.75	4.45	3.88	0.00	130.00	4.45	3.88	0.00
117.00	4.45	3.88	0.00	130.25	4.45	3.88	0.00
117.25	4.45	3.88	0.00	130.50	4.45	3.88	0.00
117.50	4.45	3.88	0.00	130.75	4.45	3.88	0.00
117.75	4.45	3.88	0.00	131.00	4.45	3.88	0.00
118.00	4.45	3.88	0.00	131.25	4.45	3.88	0.00
118.25	4.45	3.88	0.00	131.50	4.45	3.88	0.00
118.50	4.45	3.88	0.00	131.75	4.45	3.88	0.00
118.75	4.45	3.88	0.00	132.00	4.45	3.88	0.00
119.00	4.45	3.88	0.00	132.25	4.45	3.88	0.00
119.25	4.45	3.88	0.00	132.50	4.45	3.88	0.00
119.50	4.45	3.88	0.00	132.75	4.45	3.88	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	4.45	3.88	0.00
133.25	4.45	3.88	0.00
133.50	4.45	3.88	0.00
133.75	4.45	3.88	0.00
134.00	4.45	3.88	0.00
134.25	4.45	3.88	0.00
134.50	4.45	3.88	0.00
134.75	4.45	3.88	0.00
135.00	4.45	3.88	0.00
135.25	4.45	3.88	0.00
135.50	4.45	3.88	0.00
135.75	4.45	3.88	0.00
136.00	4.45	3.88	0.00
136.25	4.45	3.88	0.00
136.50	4.45	3.88	0.00
136.75	4.45	3.88	0.00
137.00	4.45	3.88	0.00
137.25	4.45	3.88	0.00
137.50	4.45	3.88	0.00
137.75	4.45	3.88	0.00
138.00	4.45	3.88	0.00
138.25	4.45	3.88	0.00
138.50	4.45	3.88	0.00
138.75	4.45	3.88	0.00
139.00	4.45	3.88	0.00
139.25	4.45	3.88	0.00
139.50	4.45	3.88	0.00
139.75	4.45	3.88	0.00
140.00	4.45	3.88	0.00
140.25	4.45	3.88	0.00
140.50	4.45	3.88	0.00
140.75	4.45	3.88	0.00
141.00	4.45	3.88	0.00
141.25	4.45	3.88	0.00
141.50	4.45	3.88	0.00
141.75	4.45	3.88	0.00
142.00	4.45	3.88	0.00
142.25	4.45	3.88	0.00
142.50	4.45	3.88	0.00
142.75	4.45	3.88	0.00
143.00	4.45	3.88	0.00
143.25	4.45	3.88	0.00
143.50	4.45	3.88	0.00
143.75	4.45	3.88	0.00
144.00	4.45	3.88	0.00
144.25	4.45	3.88	0.00
144.50	4.45	3.88	0.00
144.75	4.45	3.88	0.00
145.00	4.45	3.88	0.00
145.25	4.45	3.88	0.00
145.50	4.45	3.88	0.00
145.75	4.45	3.88	0.00
146.00	4.45	3.88	0.00
146.25	4.45	3.88	0.00
146.50	4.45	3.88	0.00
146.75	4.45	3.88	0.00
147.00	4.45	3.88	0.00
147.25	4.45	3.88	0.00
147.50	4.45	3.88	0.00
147.75	4.45	3.88	0.00
148.00	4.45	3.88	0.00
148.25	4.45	3.88	0.00
148.50	4.45	3.88	0.00
148.75	4.45	3.88	0.00
149.00	4.45	3.88	0.00
149.25	4.45	3.88	0.00
149.50	4.45	3.88	0.00
149.75	4.45	3.88	0.00
150.00	4.45	3.88	0.00

Summary for Pond 7P: Stormwater Pond

Inflow Area = 55.694 ac, 70.23% Impervious, Inflow Depth = 2.53" for 2.3yr-24hr event
Inflow = 101.88 cfs @ 11.99 hrs, Volume= 11.751 af
Outflow = 22.66 cfs @ 12.89 hrs, Volume= 11.751 af, Atten= 78%, Lag= 54.5 min
Discarded = 22.66 cfs @ 12.89 hrs, Volume= 11.751 af
Secondary = 0.00 cfs @ 0.50 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Peak Elev= 70.21' @ 12.89 hrs Surf.Area= 3.531 ac Storage= 2.488 af

Plug-Flow detention time= 37.8 min calculated for 11.751 af (100% of inflow)
Center-of-Mass det. time= 37.8 min (892.9 - 855.1)

Volume	Invert	Avail.Storage	Storage Description
#1	69.50'	15.020 af	**Custom Stage Data (Prismatic)** Listed below

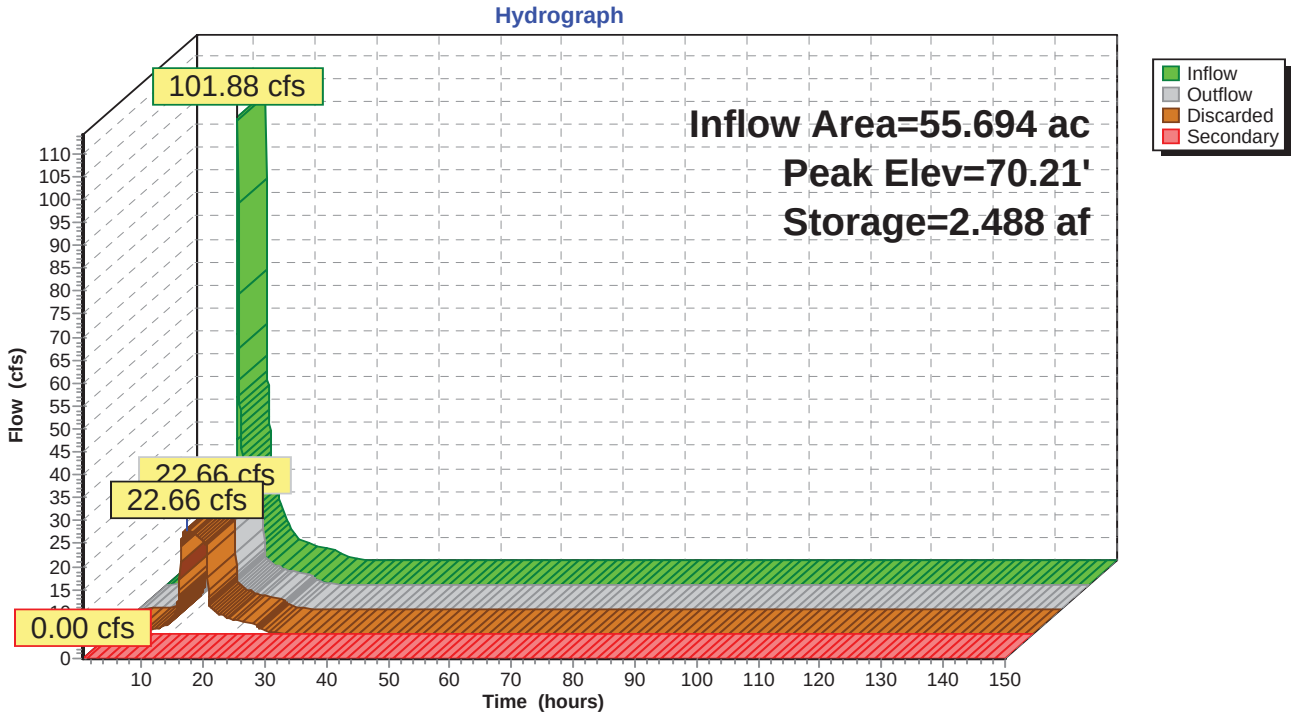
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
69.50	3.410	0.000	0.000
70.50	3.580	3.495	3.495
71.50	3.750	3.665	7.160
72.50	3.930	3.840	11.000
73.50	4.110	4.020	15.020

Device	Routing	Invert	Outlet Devices
#1	Discarded	69.50'	**5.510 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 65.00'
#2	Secondary	72.50'	**10.0' long x 11.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

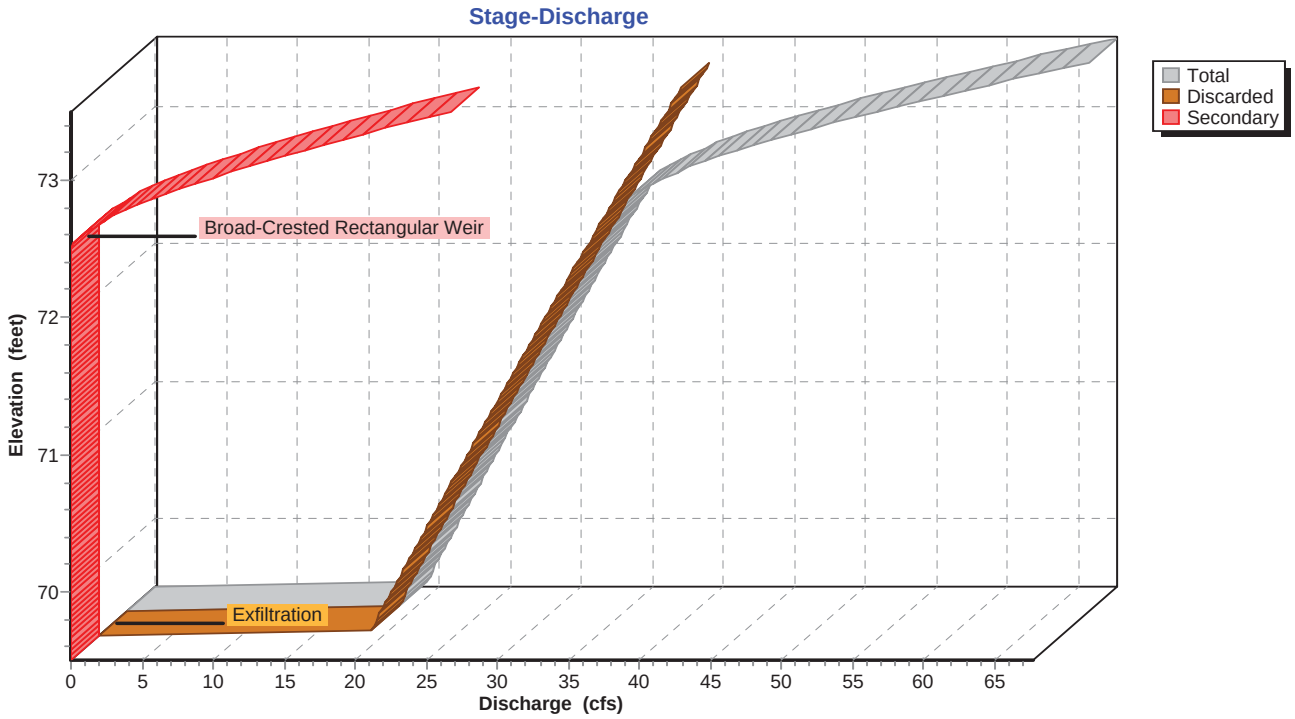
Discarded OutFlow Max=22.66 cfs @ 12.89 hrs HW=70.21' (Free Discharge)
↑**1=Exfiltration** (Controls 22.66 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.50 hrs HW=69.50' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

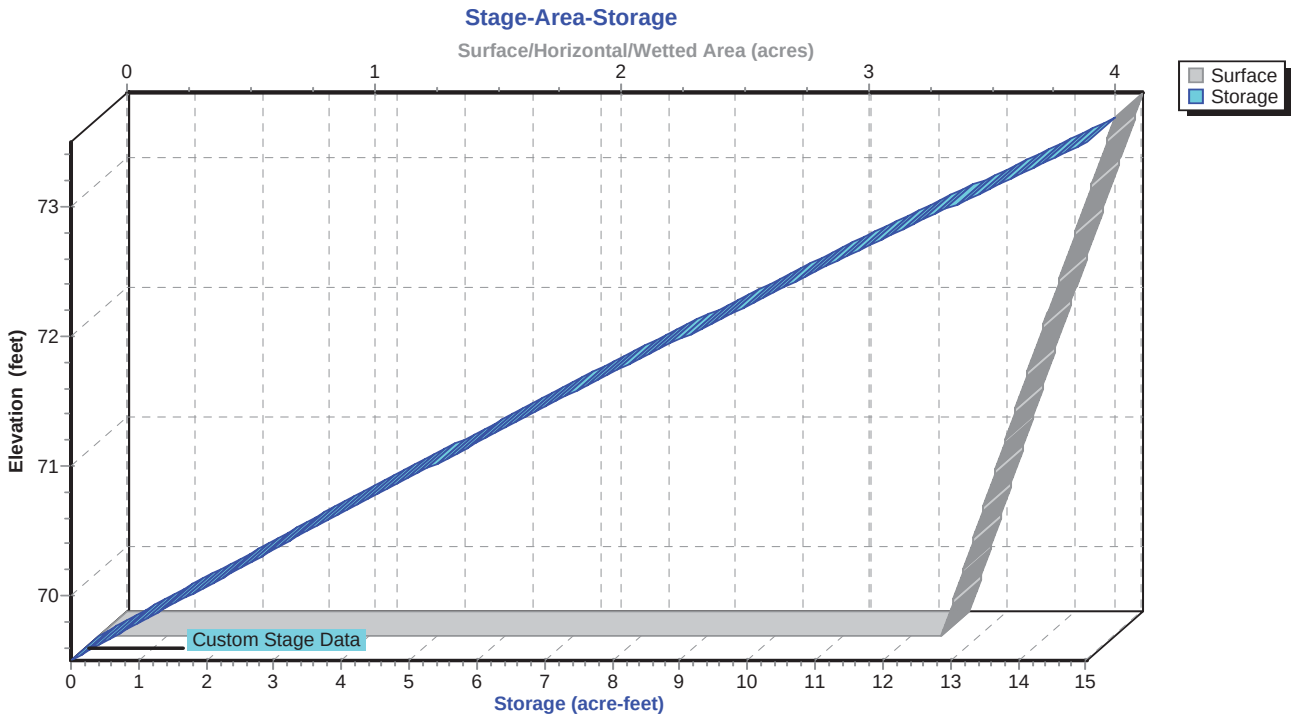
Pond 7P: Stormwater Pond



Pond 7P: Stormwater Pond



Pond 7P: Stormwater Pond



Hydrograph for Pond 7P: Stormwater Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
0.50	0.00	0.000	69.50	0.00	0.00	**0.00**
1.00	0.01	0.000	69.50	0.00	0.00	0.00
1.50	0.08	0.000	69.50	0.07	0.07	0.00
2.00	0.14	0.001	69.50	0.13	0.13	0.00
2.50	0.20	0.001	69.50	0.19	0.19	0.00
3.00	0.24	0.002	69.50	0.23	0.23	0.00
3.50	0.28	0.002	69.50	0.28	0.28	0.00
4.00	0.32	0.002	69.50	0.32	0.32	0.00
4.50	0.37	0.003	69.50	0.36	0.36	0.00
5.00	0.43	0.003	69.50	0.41	0.41	0.00
5.50	0.51	0.004	69.50	0.49	0.49	0.00
6.00	0.60	0.004	69.50	0.59	0.59	0.00
6.50	0.71	0.005	69.50	0.69	0.69	0.00
7.00	0.84	0.006	69.50	0.81	0.81	0.00
7.50	0.97	0.007	69.50	0.95	0.95	0.00
8.00	1.11	0.008	69.50	1.09	1.09	0.00
8.50	1.40	0.010	69.50	1.34	1.34	0.00
9.00	1.77	0.012	69.50	1.71	1.71	0.00
9.50	2.00	0.014	69.50	1.97	1.97	0.00
10.00	2.53	0.018	69.51	2.41	2.41	0.00
10.50	3.47	0.024	69.51	3.28	3.28	0.00
11.00	5.08	0.035	69.51	4.76	4.76	0.00
11.50	8.69	0.058	69.52	7.92	7.92	0.00
12.00	**101.00**	1.124	69.82	20.61	20.61	0.00
12.50	34.58	**2.300**	**70.16**	**22.38**	**22.38**	0.00
13.00	20.54	**2.478**	**70.21**	**22.65**	**22.65**	0.00
13.50	16.39	2.290	70.16	22.36	22.36	0.00
14.00	14.55	2.014	70.08	21.95	21.95	0.00
14.50	12.25	1.672	69.98	21.43	21.43	0.00
15.00	10.02	1.259	69.86	20.81	20.81	0.00
15.50	8.13	0.785	69.72	20.11	20.11	0.00
16.00	6.78	0.277	69.58	19.35	19.35	0.00
16.50	5.86	0.045	69.51	6.18	6.18	0.00
17.00	5.23	0.039	69.51	5.33	5.33	0.00
17.50	4.75	0.035	69.51	4.83	4.83	0.00
18.00	4.35	0.032	69.51	4.42	4.42	0.00
18.50	4.01	0.030	69.51	4.07	4.07	0.00
19.00	3.70	0.027	69.51	3.76	3.76	0.00
19.50	3.42	0.025	69.51	3.47	3.47	0.00
20.00	3.16	0.023	69.51	3.21	3.21	0.00
20.50	2.97	0.022	69.51	3.00	3.00	0.00
21.00	2.84	0.021	69.51	2.86	2.86	0.00
21.50	2.73	0.020	69.51	2.75	2.75	0.00
22.00	2.64	0.019	69.51	2.66	2.66	0.00
22.50	2.56	0.019	69.51	2.58	2.58	0.00
23.00	2.50	0.018	69.51	2.51	2.51	0.00
23.50	2.44	0.018	69.51	2.45	2.45	0.00
24.00	2.38	0.017	69.50	2.39	2.39	0.00
24.50	1.27	0.010	69.50	1.36	1.36	0.00
25.00	0.86	0.007	69.50	0.91	0.91	0.00
25.50	0.66	0.005	69.50	0.69	0.69	0.00
26.00	0.52	0.004	69.50	0.54	0.54	0.00
26.50	0.39	0.003	69.50	0.41	0.41	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
27.00	0.30	0.002	69.50	0.31	0.31	0.00
27.50	0.23	0.002	69.50	0.24	0.24	0.00
28.00	0.17	0.001	69.50	0.18	0.18	0.00
28.50	0.14	0.001	69.50	0.14	0.14	0.00
29.00	0.11	0.001	69.50	0.11	0.11	0.00
29.50	0.09	0.001	69.50	0.09	0.09	0.00
30.00	0.07	0.001	69.50	0.08	0.08	0.00
30.50	0.06	0.000	69.50	0.06	0.06	0.00
31.00	0.05	0.000	69.50	0.05	0.05	0.00
31.50	0.04	0.000	69.50	0.05	0.05	0.00
32.00	0.04	0.000	69.50	0.04	0.04	0.00
32.50	0.03	0.000	69.50	0.03	0.03	0.00
33.00	0.03	0.000	69.50	0.03	0.03	0.00
33.50	0.03	0.000	69.50	0.03	0.03	0.00
34.00	0.03	0.000	69.50	0.03	0.03	0.00
34.50	0.02	0.000	69.50	0.02	0.02	0.00
35.00	0.02	0.000	69.50	0.02	0.02	0.00
35.50	0.02	0.000	69.50	0.02	0.02	0.00
36.00	0.02	0.000	69.50	0.02	0.02	0.00
36.50	0.02	0.000	69.50	0.02	0.02	0.00
37.00	0.01	0.000	69.50	0.01	0.01	0.00
37.50	0.01	0.000	69.50	0.01	0.01	0.00
38.00	0.01	0.000	69.50	0.01	0.01	0.00
38.50	0.01	0.000	69.50	0.01	0.01	0.00
39.00	0.01	0.000	69.50	0.01	0.01	0.00
39.50	0.01	0.000	69.50	0.01	0.01	0.00
40.00	0.01	0.000	69.50	0.01	0.01	0.00
40.50	0.01	0.000	69.50	0.01	0.01	0.00
41.00	0.01	0.000	69.50	0.01	0.01	0.00
41.50	0.01	0.000	69.50	0.01	0.01	0.00
42.00	0.01	0.000	69.50	0.01	0.01	0.00
42.50	0.01	0.000	69.50	0.01	0.01	0.00
43.00	0.01	0.000	69.50	0.01	0.01	0.00
43.50	0.01	0.000	69.50	0.01	0.01	0.00
44.00	0.01	0.000	69.50	0.01	0.01	0.00
44.50	0.01	0.000	69.50	0.01	0.01	0.00
45.00	0.01	0.000	69.50	0.01	0.01	0.00
45.50	0.01	0.000	69.50	0.01	0.01	0.00
46.00	0.01	0.000	69.50	0.01	0.01	0.00
46.50	0.01	0.000	69.50	0.01	0.01	0.00
47.00	0.01	0.000	69.50	0.01	0.01	0.00
47.50	0.01	0.000	69.50	0.01	0.01	0.00
48.00	0.01	0.000	69.50	0.01	0.01	0.00
48.50	0.01	0.000	69.50	0.01	0.01	0.00
49.00	0.01	0.000	69.50	0.01	0.01	0.00
49.50	0.00	0.000	69.50	0.00	0.00	0.00
50.00	0.00	0.000	69.50	0.00	0.00	0.00
50.50	0.00	0.000	69.50	0.00	0.00	0.00
51.00	0.00	0.000	69.50	0.00	0.00	0.00
51.50	0.00	0.000	69.50	0.00	0.00	0.00
52.00	0.00	0.000	69.50	0.00	0.00	0.00
52.50	0.00	0.000	69.50	0.00	0.00	0.00
53.00	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
53.50	0.00	0.000	69.50	0.00	0.00	0.00
54.00	0.00	0.000	69.50	0.00	0.00	0.00
54.50	0.00	0.000	69.50	0.00	0.00	0.00
55.00	0.00	0.000	69.50	0.00	0.00	0.00
55.50	0.00	0.000	69.50	0.00	0.00	0.00
56.00	0.00	0.000	69.50	0.00	0.00	0.00
56.50	0.00	0.000	69.50	0.00	0.00	0.00
57.00	0.00	0.000	69.50	0.00	0.00	0.00
57.50	0.00	0.000	69.50	0.00	0.00	0.00
58.00	0.00	0.000	69.50	0.00	0.00	0.00
58.50	0.00	0.000	69.50	0.00	0.00	0.00
59.00	0.00	0.000	69.50	0.00	0.00	0.00
59.50	0.00	0.000	69.50	0.00	0.00	0.00
60.00	0.00	0.000	69.50	0.00	0.00	0.00
60.50	0.00	0.000	69.50	0.00	0.00	0.00
61.00	0.00	0.000	69.50	0.00	0.00	0.00
61.50	0.00	0.000	69.50	0.00	0.00	0.00
62.00	0.00	0.000	69.50	0.00	0.00	0.00
62.50	0.00	0.000	69.50	0.00	0.00	0.00
63.00	0.00	0.000	69.50	0.00	0.00	0.00
63.50	0.00	0.000	69.50	0.00	0.00	0.00
64.00	0.00	0.000	69.50	0.00	0.00	0.00
64.50	0.00	0.000	69.50	0.00	0.00	0.00
65.00	0.00	0.000	69.50	0.00	0.00	0.00
65.50	0.00	0.000	69.50	0.00	0.00	0.00
66.00	0.00	0.000	69.50	0.00	0.00	0.00
66.50	0.00	0.000	69.50	0.00	0.00	0.00
67.00	0.00	0.000	69.50	0.00	0.00	0.00
67.50	0.00	0.000	69.50	0.00	0.00	0.00
68.00	0.00	0.000	69.50	0.00	0.00	0.00
68.50	0.00	0.000	69.50	0.00	0.00	0.00
69.00	0.00	0.000	69.50	0.00	0.00	0.00
69.50	0.00	0.000	69.50	0.00	0.00	0.00
70.00	0.00	0.000	69.50	0.00	0.00	0.00
70.50	0.00	0.000	69.50	0.00	0.00	0.00
71.00	0.00	0.000	69.50	0.00	0.00	0.00
71.50	0.00	0.000	69.50	0.00	0.00	0.00
72.00	0.00	0.000	69.50	0.00	0.00	0.00
72.50	0.00	0.000	69.50	0.00	0.00	0.00
73.00	0.00	0.000	69.50	0.00	0.00	0.00
73.50	0.00	0.000	69.50	0.00	0.00	0.00
74.00	0.00	0.000	69.50	0.00	0.00	0.00
74.50	0.00	0.000	69.50	0.00	0.00	0.00
75.00	0.00	0.000	69.50	0.00	0.00	0.00
75.50	0.00	0.000	69.50	0.00	0.00	0.00
76.00	0.00	0.000	69.50	0.00	0.00	0.00
76.50	0.00	0.000	69.50	0.00	0.00	0.00
77.00	0.00	0.000	69.50	0.00	0.00	0.00
77.50	0.00	0.000	69.50	0.00	0.00	0.00
78.00	0.00	0.000	69.50	0.00	0.00	0.00
78.50	0.00	0.000	69.50	0.00	0.00	0.00
79.00	0.00	0.000	69.50	0.00	0.00	0.00
79.50	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
80.00	0.00	0.000	69.50	0.00	0.00	0.00
80.50	0.00	0.000	69.50	0.00	0.00	0.00
81.00	0.00	0.000	69.50	0.00	0.00	0.00
81.50	0.00	0.000	69.50	0.00	0.00	0.00
82.00	0.00	0.000	69.50	0.00	0.00	0.00
82.50	0.00	0.000	69.50	0.00	0.00	0.00
83.00	0.00	0.000	69.50	0.00	0.00	0.00
83.50	0.00	0.000	69.50	0.00	0.00	0.00
84.00	0.00	0.000	69.50	0.00	0.00	0.00
84.50	0.00	0.000	69.50	0.00	0.00	0.00
85.00	0.00	0.000	69.50	0.00	0.00	0.00
85.50	0.00	0.000	69.50	0.00	0.00	0.00
86.00	0.00	0.000	69.50	0.00	0.00	0.00
86.50	0.00	0.000	69.50	0.00	0.00	0.00
87.00	0.00	0.000	69.50	0.00	0.00	0.00
87.50	0.00	0.000	69.50	0.00	0.00	0.00
88.00	0.00	0.000	69.50	0.00	0.00	0.00
88.50	0.00	0.000	69.50	0.00	0.00	0.00
89.00	0.00	0.000	69.50	0.00	0.00	0.00
89.50	0.00	0.000	69.50	0.00	0.00	0.00
90.00	0.00	0.000	69.50	0.00	0.00	0.00
90.50	0.00	0.000	69.50	0.00	0.00	0.00
91.00	0.00	0.000	69.50	0.00	0.00	0.00
91.50	0.00	0.000	69.50	0.00	0.00	0.00
92.00	0.00	0.000	69.50	0.00	0.00	0.00
92.50	0.00	0.000	69.50	0.00	0.00	0.00
93.00	0.00	0.000	69.50	0.00	0.00	0.00
93.50	0.00	0.000	69.50	0.00	0.00	0.00
94.00	0.00	0.000	69.50	0.00	0.00	0.00
94.50	0.00	0.000	69.50	0.00	0.00	0.00
95.00	0.00	0.000	69.50	0.00	0.00	0.00
95.50	0.00	0.000	69.50	0.00	0.00	0.00
96.00	0.00	0.000	69.50	0.00	0.00	0.00
96.50	0.00	0.000	69.50	0.00	0.00	0.00
97.00	0.00	0.000	69.50	0.00	0.00	0.00
97.50	0.00	0.000	69.50	0.00	0.00	0.00
98.00	0.00	0.000	69.50	0.00	0.00	0.00
98.50	0.00	0.000	69.50	0.00	0.00	0.00
99.00	0.00	0.000	69.50	0.00	0.00	0.00
99.50	0.00	0.000	69.50	0.00	0.00	0.00
100.00	0.00	0.000	69.50	0.00	0.00	0.00
100.50	0.00	0.000	69.50	0.00	0.00	0.00
101.00	0.00	0.000	69.50	0.00	0.00	0.00
101.50	0.00	0.000	69.50	0.00	0.00	0.00
102.00	0.00	0.000	69.50	0.00	0.00	0.00
102.50	0.00	0.000	69.50	0.00	0.00	0.00
103.00	0.00	0.000	69.50	0.00	0.00	0.00
103.50	0.00	0.000	69.50	0.00	0.00	0.00
104.00	0.00	0.000	69.50	0.00	0.00	0.00
104.50	0.00	0.000	69.50	0.00	0.00	0.00
105.00	0.00	0.000	69.50	0.00	0.00	0.00
105.50	0.00	0.000	69.50	0.00	0.00	0.00
106.00	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
106.50	0.00	0.000	69.50	0.00	0.00	0.00
107.00	0.00	0.000	69.50	0.00	0.00	0.00
107.50	0.00	0.000	69.50	0.00	0.00	0.00
108.00	0.00	0.000	69.50	0.00	0.00	0.00
108.50	0.00	0.000	69.50	0.00	0.00	0.00
109.00	0.00	0.000	69.50	0.00	0.00	0.00
109.50	0.00	0.000	69.50	0.00	0.00	0.00
110.00	0.00	0.000	69.50	0.00	0.00	0.00
110.50	0.00	0.000	69.50	0.00	0.00	0.00
111.00	0.00	0.000	69.50	0.00	0.00	0.00
111.50	0.00	0.000	69.50	0.00	0.00	0.00
112.00	0.00	0.000	69.50	0.00	0.00	0.00
112.50	0.00	0.000	69.50	0.00	0.00	0.00
113.00	0.00	0.000	69.50	0.00	0.00	0.00
113.50	0.00	0.000	69.50	0.00	0.00	0.00
114.00	0.00	0.000	69.50	0.00	0.00	0.00
114.50	0.00	0.000	69.50	0.00	0.00	0.00
115.00	0.00	0.000	69.50	0.00	0.00	0.00
115.50	0.00	0.000	69.50	0.00	0.00	0.00
116.00	0.00	0.000	69.50	0.00	0.00	0.00
116.50	0.00	0.000	69.50	0.00	0.00	0.00
117.00	0.00	0.000	69.50	0.00	0.00	0.00
117.50	0.00	0.000	69.50	0.00	0.00	0.00
118.00	0.00	0.000	69.50	0.00	0.00	0.00
118.50	0.00	0.000	69.50	0.00	0.00	0.00
119.00	0.00	0.000	69.50	0.00	0.00	0.00
119.50	0.00	0.000	69.50	0.00	0.00	0.00
120.00	0.00	0.000	69.50	0.00	0.00	0.00
120.50	0.00	0.000	69.50	0.00	0.00	0.00
121.00	0.00	0.000	69.50	0.00	0.00	0.00
121.50	0.00	0.000	69.50	0.00	0.00	0.00
122.00	0.00	0.000	69.50	0.00	0.00	0.00
122.50	0.00	0.000	69.50	0.00	0.00	0.00
123.00	0.00	0.000	69.50	0.00	0.00	0.00
123.50	0.00	0.000	69.50	0.00	0.00	0.00
124.00	0.00	0.000	69.50	0.00	0.00	0.00
124.50	0.00	0.000	69.50	0.00	0.00	0.00
125.00	0.00	0.000	69.50	0.00	0.00	0.00
125.50	0.00	0.000	69.50	0.00	0.00	0.00
126.00	0.00	0.000	69.50	0.00	0.00	0.00
126.50	0.00	0.000	69.50	0.00	0.00	0.00
127.00	0.00	0.000	69.50	0.00	0.00	0.00
127.50	0.00	0.000	69.50	0.00	0.00	0.00
128.00	0.00	0.000	69.50	0.00	0.00	0.00
128.50	0.00	0.000	69.50	0.00	0.00	0.00
129.00	0.00	0.000	69.50	0.00	0.00	0.00
129.50	0.00	0.000	69.50	0.00	0.00	0.00
130.00	0.00	0.000	69.50	0.00	0.00	0.00
130.50	0.00	0.000	69.50	0.00	0.00	0.00
131.00	0.00	0.000	69.50	0.00	0.00	0.00
131.50	0.00	0.000	69.50	0.00	0.00	0.00
132.00	0.00	0.000	69.50	0.00	0.00	0.00
132.50	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
133.00	0.00	0.000	69.50	0.00	0.00	0.00
133.50	0.00	0.000	69.50	0.00	0.00	0.00
134.00	0.00	0.000	69.50	0.00	0.00	0.00
134.50	0.00	0.000	69.50	0.00	0.00	0.00
135.00	0.00	0.000	69.50	0.00	0.00	0.00
135.50	0.00	0.000	69.50	0.00	0.00	0.00
136.00	0.00	0.000	69.50	0.00	0.00	0.00
136.50	0.00	0.000	69.50	0.00	0.00	0.00
137.00	0.00	0.000	69.50	0.00	0.00	0.00
137.50	0.00	0.000	69.50	0.00	0.00	0.00
138.00	0.00	0.000	69.50	0.00	0.00	0.00
138.50	0.00	0.000	69.50	0.00	0.00	0.00
139.00	0.00	0.000	69.50	0.00	0.00	0.00
139.50	0.00	0.000	69.50	0.00	0.00	0.00
140.00	0.00	0.000	69.50	0.00	0.00	0.00
140.50	0.00	0.000	69.50	0.00	0.00	0.00
141.00	0.00	0.000	69.50	0.00	0.00	0.00
141.50	0.00	0.000	69.50	0.00	0.00	0.00
142.00	0.00	0.000	69.50	0.00	0.00	0.00
142.50	0.00	0.000	69.50	0.00	0.00	0.00
143.00	0.00	0.000	69.50	0.00	0.00	0.00
143.50	0.00	0.000	69.50	0.00	0.00	0.00
144.00	0.00	0.000	69.50	0.00	0.00	0.00
144.50	0.00	0.000	69.50	0.00	0.00	0.00
145.00	0.00	0.000	69.50	0.00	0.00	0.00
145.50	0.00	0.000	69.50	0.00	0.00	0.00
146.00	0.00	0.000	69.50	0.00	0.00	0.00
146.50	0.00	0.000	69.50	0.00	0.00	0.00
147.00	0.00	0.000	69.50	0.00	0.00	0.00
147.50	0.00	0.000	69.50	0.00	0.00	0.00
148.00	0.00	0.000	69.50	0.00	0.00	0.00
148.50	0.00	0.000	69.50	0.00	0.00	0.00
149.00	0.00	0.000	69.50	0.00	0.00	0.00
149.50	0.00	0.000	69.50	0.00	0.00	0.00
150.00	0.00	0.000	69.50	0.00	0.00	0.00

Stage-Discharge for Pond 7P: Stormwater Pond

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
69.50	0.00	0.00	0.00	70.03	21.70	21.70	0.00
69.51	19.00	19.00	0.00	70.04	21.76	21.76	0.00
69.52	19.05	19.05	0.00	70.05	21.81	21.81	0.00
69.53	19.10	19.10	0.00	70.06	21.86	21.86	0.00
69.54	19.15	19.15	0.00	70.07	21.91	21.91	0.00
69.55	19.20	19.20	0.00	70.08	21.97	21.97	0.00
69.56	19.26	19.26	0.00	70.09	22.02	22.02	0.00
69.57	19.31	19.31	0.00	70.10	22.07	22.07	0.00
69.58	19.36	19.36	0.00	70.11	22.12	22.12	0.00
69.59	19.41	19.41	0.00	70.12	22.18	22.18	0.00
69.60	19.46	19.46	0.00	70.13	22.23	22.23	0.00
69.61	19.51	19.51	0.00	70.14	22.28	22.28	0.00
69.62	19.57	19.57	0.00	70.15	22.34	22.34	0.00
69.63	19.62	19.62	0.00	70.16	22.39	22.39	0.00
69.64	19.67	19.67	0.00	70.17	22.44	22.44	0.00
69.65	19.72	19.72	0.00	70.18	22.49	22.49	0.00
69.66	19.77	19.77	0.00	70.19	22.55	22.55	0.00
69.67	19.82	19.82	0.00	70.20	22.60	22.60	0.00
69.68	19.88	19.88	0.00	70.21	22.65	22.65	0.00
69.69	19.93	19.93	0.00	70.22	22.71	22.71	0.00
69.70	19.98	19.98	0.00	70.23	22.76	22.76	0.00
69.71	20.03	20.03	0.00	70.24	22.81	22.81	0.00
69.72	20.08	20.08	0.00	70.25	22.86	22.86	0.00
69.73	20.14	20.14	0.00	70.26	22.92	22.92	0.00
69.74	20.19	20.19	0.00	70.27	22.97	22.97	0.00
69.75	20.24	20.24	0.00	70.28	23.02	23.02	0.00
69.76	20.29	20.29	0.00	70.29	23.08	23.08	0.00
69.77	20.34	20.34	0.00	70.30	23.13	23.13	0.00
69.78	20.40	20.40	0.00	70.31	23.18	23.18	0.00
69.79	20.45	20.45	0.00	70.32	23.24	23.24	0.00
69.80	20.50	20.50	0.00	70.33	23.29	23.29	0.00
69.81	20.55	20.55	0.00	70.34	23.34	23.34	0.00
69.82	20.60	20.60	0.00	70.35	23.40	23.40	0.00
69.83	20.66	20.66	0.00	70.36	23.45	23.45	0.00
69.84	20.71	20.71	0.00	70.37	23.50	23.50	0.00
69.85	20.76	20.76	0.00	70.38	23.55	23.55	0.00
69.86	20.81	20.81	0.00	70.39	23.61	23.61	0.00
69.87	20.87	20.87	0.00	70.40	23.66	23.66	0.00
69.88	20.92	20.92	0.00	70.41	23.71	23.71	0.00
69.89	20.97	20.97	0.00	70.42	23.77	23.77	0.00
69.90	21.02	21.02	0.00	70.43	23.82	23.82	0.00
69.91	21.07	21.07	0.00	70.44	23.87	23.87	0.00
69.92	21.13	21.13	0.00	70.45	23.93	23.93	0.00
69.93	21.18	21.18	0.00	70.46	23.98	23.98	0.00
69.94	21.23	21.23	0.00	70.47	24.03	24.03	0.00
69.95	21.28	21.28	0.00	70.48	24.09	24.09	0.00
69.96	21.34	21.34	0.00	70.49	24.14	24.14	0.00
69.97	21.39	21.39	0.00	70.50	24.19	24.19	0.00
69.98	21.44	21.44	0.00	70.51	24.25	24.25	0.00
69.99	21.49	21.49	0.00	70.52	24.30	24.30	0.00
70.00	21.55	21.55	0.00	70.53	24.35	24.35	0.00
70.01	21.60	21.60	0.00	70.54	24.41	24.41	0.00
70.02	21.65	21.65	0.00	70.55	24.46	24.46	0.00

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
70.56	24.51	24.51	0.00	71.09	27.37	27.37	0.00
70.57	24.57	24.57	0.00	71.10	27.43	27.43	0.00
70.58	24.62	24.62	0.00	71.11	27.48	27.48	0.00
70.59	24.68	24.68	0.00	71.12	27.54	27.54	0.00
70.60	24.73	24.73	0.00	71.13	27.59	27.59	0.00
70.61	24.78	24.78	0.00	71.14	27.65	27.65	0.00
70.62	24.84	24.84	0.00	71.15	27.70	27.70	0.00
70.63	24.89	24.89	0.00	71.16	27.75	27.75	0.00
70.64	24.94	24.94	0.00	71.17	27.81	27.81	0.00
70.65	25.00	25.00	0.00	71.18	27.86	27.86	0.00
70.66	25.05	25.05	0.00	71.19	27.92	27.92	0.00
70.67	25.10	25.10	0.00	71.20	27.97	27.97	0.00
70.68	25.16	25.16	0.00	71.21	28.03	28.03	0.00
70.69	25.21	25.21	0.00	71.22	28.08	28.08	0.00
70.70	25.27	25.27	0.00	71.23	28.14	28.14	0.00
70.71	25.32	25.32	0.00	71.24	28.19	28.19	0.00
70.72	25.37	25.37	0.00	71.25	28.25	28.25	0.00
70.73	25.43	25.43	0.00	71.26	28.30	28.30	0.00
70.74	25.48	25.48	0.00	71.27	28.35	28.35	0.00
70.75	25.53	25.53	0.00	71.28	28.41	28.41	0.00
70.76	25.59	25.59	0.00	71.29	28.46	28.46	0.00
70.77	25.64	25.64	0.00	71.30	28.52	28.52	0.00
70.78	25.70	25.70	0.00	71.31	28.57	28.57	0.00
70.79	25.75	25.75	0.00	71.32	28.63	28.63	0.00
70.80	25.80	25.80	0.00	71.33	28.68	28.68	0.00
70.81	25.86	25.86	0.00	71.34	28.74	28.74	0.00
70.82	25.91	25.91	0.00	71.35	28.79	28.79	0.00
70.83	25.97	25.97	0.00	71.36	28.85	28.85	0.00
70.84	26.02	26.02	0.00	71.37	28.90	28.90	0.00
70.85	26.07	26.07	0.00	71.38	28.96	28.96	0.00
70.86	26.13	26.13	0.00	71.39	29.01	29.01	0.00
70.87	26.18	26.18	0.00	71.40	29.07	29.07	0.00
70.88	26.24	26.24	0.00	71.41	29.12	29.12	0.00
70.89	26.29	26.29	0.00	71.42	29.18	29.18	0.00
70.90	26.34	26.34	0.00	71.43	29.23	29.23	0.00
70.91	26.40	26.40	0.00	71.44	29.29	29.29	0.00
70.92	26.45	26.45	0.00	71.45	29.34	29.34	0.00
70.93	26.51	26.51	0.00	71.46	29.40	29.40	0.00
70.94	26.56	26.56	0.00	71.47	29.45	29.45	0.00
70.95	26.61	26.61	0.00	71.48	29.51	29.51	0.00
70.96	26.67	26.67	0.00	71.49	29.56	29.56	0.00
70.97	26.72	26.72	0.00	71.50	29.62	29.62	0.00
70.98	26.78	26.78	0.00	71.51	29.67	29.67	0.00
70.99	26.83	26.83	0.00	71.52	29.73	29.73	0.00
71.00	26.88	26.88	0.00	71.53	29.78	29.78	0.00
71.01	26.94	26.94	0.00	71.54	29.84	29.84	0.00
71.02	26.99	26.99	0.00	71.55	29.89	29.89	0.00
71.03	27.05	27.05	0.00	71.56	29.95	29.95	0.00
71.04	27.10	27.10	0.00	71.57	30.00	30.00	0.00
71.05	27.16	27.16	0.00	71.58	30.06	30.06	0.00
71.06	27.21	27.21	0.00	71.59	30.12	30.12	0.00
71.07	27.26	27.26	0.00	71.60	30.17	30.17	0.00
71.08	27.32	27.32	0.00	71.61	30.23	30.23	0.00

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
71.62	30.28	30.28	0.00	72.15	33.26	33.26	0.00
71.63	30.34	30.34	0.00	72.16	33.31	33.31	0.00
71.64	30.39	30.39	0.00	72.17	33.37	33.37	0.00
71.65	30.45	30.45	0.00	72.18	33.43	33.43	0.00
71.66	30.51	30.51	0.00	72.19	33.48	33.48	0.00
71.67	30.56	30.56	0.00	72.20	33.54	33.54	0.00
71.68	30.62	30.62	0.00	72.21	33.60	33.60	0.00
71.69	30.67	30.67	0.00	72.22	33.65	33.65	0.00
71.70	30.73	30.73	0.00	72.23	33.71	33.71	0.00
71.71	30.78	30.78	0.00	72.24	33.77	33.77	0.00
71.72	30.84	30.84	0.00	72.25	33.82	33.82	0.00
71.73	30.90	30.90	0.00	72.26	33.88	33.88	0.00
71.74	30.95	30.95	0.00	72.27	33.94	33.94	0.00
71.75	31.01	31.01	0.00	72.28	33.99	33.99	0.00
71.76	31.06	31.06	0.00	72.29	34.05	34.05	0.00
71.77	31.12	31.12	0.00	72.30	34.11	34.11	0.00
71.78	31.18	31.18	0.00	72.31	34.16	34.16	0.00
71.79	31.23	31.23	0.00	72.32	34.22	34.22	0.00
71.80	31.29	31.29	0.00	72.33	34.28	34.28	0.00
71.81	31.34	31.34	0.00	72.34	34.33	34.33	0.00
71.82	31.40	31.40	0.00	72.35	34.39	34.39	0.00
71.83	31.46	31.46	0.00	72.36	34.45	34.45	0.00
71.84	31.51	31.51	0.00	72.37	34.50	34.50	0.00
71.85	31.57	31.57	0.00	72.38	34.56	34.56	0.00
71.86	31.62	31.62	0.00	72.39	34.62	34.62	0.00
71.87	31.68	31.68	0.00	72.40	34.67	34.67	0.00
71.88	31.74	31.74	0.00	72.41	34.73	34.73	0.00
71.89	31.79	31.79	0.00	72.42	34.79	34.79	0.00
71.90	31.85	31.85	0.00	72.43	34.84	34.84	0.00
71.91	31.90	31.90	0.00	72.44	34.90	34.90	0.00
71.92	31.96	31.96	0.00	72.45	34.96	34.96	0.00
71.93	32.02	32.02	0.00	72.46	35.01	35.01	0.00
71.94	32.07	32.07	0.00	72.47	35.07	35.07	0.00
71.95	32.13	32.13	0.00	72.48	35.13	35.13	0.00
71.96	32.19	32.19	0.00	72.49	35.18	35.18	0.00
71.97	32.24	32.24	0.00	72.50	35.24	35.24	0.00
71.98	32.30	32.30	0.00	72.51	35.32	35.30	0.03
71.99	32.35	32.35	0.00	72.52	35.43	35.36	0.07
72.00	32.41	32.41	0.00	72.53	35.54	35.41	0.13
72.01	32.47	32.47	0.00	72.54	35.67	35.47	0.20
72.02	32.52	32.52	0.00	72.55	35.81	35.53	0.28
72.03	32.58	32.58	0.00	72.56	35.96	35.58	0.37
72.04	32.64	32.64	0.00	72.57	36.11	35.64	0.47
72.05	32.69	32.69	0.00	72.58	36.27	35.70	0.57
72.06	32.75	32.75	0.00	72.59	36.44	35.75	0.68
72.07	32.80	32.80	0.00	72.60	36.61	35.81	0.80
72.08	32.86	32.86	0.00	72.61	36.79	35.87	0.92
72.09	32.92	32.92	0.00	72.62	36.98	35.93	1.05
72.10	32.97	32.97	0.00	72.63	37.17	35.98	1.19
72.11	33.03	33.03	0.00	72.64	37.37	36.04	1.33
72.12	33.09	33.09	0.00	72.65	37.57	36.10	1.47
72.13	33.14	33.14	0.00	72.66	37.77	36.15	1.62
72.14	33.20	33.20	0.00	72.67	37.99	36.21	1.77

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
72.68	38.20	36.27	1.93
72.69	38.42	36.33	2.10
72.70	38.65	36.38	2.26
72.71	38.88	36.44	2.44
72.72	39.11	36.50	2.62
72.73	39.36	36.56	2.80
72.74	39.60	36.61	2.99
72.75	39.85	36.67	3.18
72.76	40.11	36.73	3.38
72.77	40.36	36.78	3.58
72.78	40.63	36.84	3.78
72.79	40.89	36.90	3.99
72.80	41.16	36.96	4.21
72.81	41.44	37.01	4.42
72.82	41.72	37.07	4.64
72.83	42.00	37.13	4.87
72.84	42.29	37.19	5.10
72.85	42.58	37.24	5.33
72.86	42.87	37.30	5.57
72.87	43.17	37.36	5.81
72.88	43.47	37.42	6.05
72.89	43.77	37.47	6.30
72.90	44.08	37.53	6.55
72.91	44.40	37.59	6.81
72.92	44.73	37.65	7.08
72.93	45.05	37.70	7.35
72.94	45.38	37.76	7.62
72.95	45.72	37.82	7.90
72.96	46.06	37.88	8.18
72.97	46.40	37.93	8.47
72.98	46.75	37.99	8.76
72.99	47.10	38.05	9.05
73.00	47.46	38.11	9.35
73.01	47.82	38.16	9.65
73.02	48.18	38.22	9.96
73.03	48.55	38.28	10.27
73.04	48.92	38.34	10.58
73.05	49.30	38.39	10.90
73.06	49.67	38.45	11.22
73.07	50.06	38.51	11.55
73.08	50.45	38.57	11.88
73.09	50.84	38.63	12.21
73.10	51.23	38.68	12.55
73.11	51.60	38.74	12.86
73.12	51.97	38.80	13.17
73.13	52.34	38.86	13.49
73.14	52.72	38.91	13.80
73.15	53.09	38.97	14.12
73.16	53.47	39.03	14.44
73.17	53.86	39.09	14.77
73.18	54.24	39.15	15.10
73.19	54.63	39.20	15.42
73.20	55.02	39.26	15.75
73.21	55.41	39.32	16.09
73.22	55.80	39.38	16.42
73.23	56.19	39.43	16.76
73.24	56.59	39.49	17.10
73.25	56.99	39.55	17.44
73.26	57.39	39.61	17.78
73.27	57.79	39.67	18.13
73.28	58.20	39.72	18.48
73.29	58.61	39.78	18.83
73.30	59.02	39.84	19.18
73.31	59.43	39.90	19.53
73.32	59.85	39.96	19.89
73.33	60.27	40.01	20.25
73.34	60.69	40.07	20.62
73.35	61.11	40.13	20.98
73.36	61.54	40.19	21.35
73.37	61.97	40.25	21.72
73.38	62.39	40.30	22.09
73.39	62.83	40.36	22.46
73.40	63.26	40.42	22.84
73.41	63.70	40.48	23.22
73.42	64.13	40.54	23.60
73.43	64.57	40.59	23.98
73.44	65.01	40.65	24.36
73.45	65.46	40.71	24.75
73.46	65.90	40.77	25.13
73.47	66.35	40.83	25.52
73.48	66.80	40.89	25.91
73.49	67.25	40.94	26.31
73.50	**67.70**	**41.00**	**26.70**

Stage-Area-Storage for Pond 7P: Stormwater Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
69.50	3.410	0.000	70.03	3.500	1.852
69.51	3.412	0.035	70.04	3.502	1.887
69.52	3.413	0.070	70.05	3.503	1.922
69.53	3.415	0.105	70.06	3.505	1.957
69.54	3.417	0.140	70.07	3.507	1.992
69.55	3.418	0.175	70.08	3.509	2.027
69.56	3.420	0.210	70.09	3.510	2.062
69.57	3.422	0.245	70.10	3.512	2.097
69.58	3.424	0.280	70.11	3.514	2.132
69.59	3.425	0.315	70.12	3.515	2.167
69.60	3.427	0.349	70.13	3.517	2.202
69.61	3.429	0.384	70.14	3.519	2.237
69.62	3.430	0.419	70.15	3.521	2.272
69.63	3.432	0.454	70.16	3.522	2.307
69.64	3.434	0.489	70.17	3.524	2.342
69.65	3.436	0.524	70.18	3.526	2.377
69.66	3.437	0.559	70.19	3.527	2.412
69.67	3.439	0.594	70.20	3.529	2.447
69.68	3.441	0.629	70.21	3.531	2.481
69.69	3.442	0.664	70.22	3.532	2.516
69.70	3.444	0.699	70.23	3.534	2.551
69.71	3.446	0.734	70.24	3.536	2.586
69.72	3.447	0.769	70.25	3.537	2.621
69.73	3.449	0.804	70.26	3.539	2.656
69.74	3.451	0.839	70.27	3.541	2.691
69.75	3.452	0.874	70.28	3.543	2.726
69.76	3.454	0.909	70.29	3.544	2.761
69.77	3.456	0.944	70.30	3.546	2.796
69.78	3.458	0.979	70.31	3.548	2.831
69.79	3.459	1.014	70.32	3.549	2.866
69.80	3.461	1.048	70.33	3.551	2.901
69.81	3.463	1.083	70.34	3.553	2.936
69.82	3.464	1.118	70.35	3.554	2.971
69.83	3.466	1.153	70.36	3.556	3.006
69.84	3.468	1.188	70.37	3.558	3.041
69.85	3.469	1.223	70.38	3.560	3.076
69.86	3.471	1.258	70.39	3.561	3.111
69.87	3.473	1.293	70.40	3.563	3.146
69.88	3.475	1.328	70.41	3.565	3.180
69.89	3.476	1.363	70.42	3.566	3.215
69.90	3.478	1.398	70.43	3.568	3.250
69.91	3.480	1.433	70.44	3.570	3.285
69.92	3.481	1.468	70.45	3.572	3.320
69.93	3.483	1.503	70.46	3.573	3.355
69.94	3.485	1.538	70.47	3.575	3.390
69.95	3.487	1.573	70.48	3.577	3.425
69.96	3.488	1.608	70.49	3.578	3.460
69.97	3.490	1.643	70.50	3.580	3.495
69.98	3.492	1.678	70.51	3.582	3.532
69.99	3.493	1.713	70.52	3.583	3.568
70.00	3.495	1.748	70.53	3.585	3.605
70.01	3.497	1.782	70.54	3.587	3.642
70.02	3.498	1.817	70.55	3.588	3.678

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
70.56	3.590	3.715	71.09	3.680	5.657
70.57	3.592	3.752	71.10	3.682	5.694
70.58	3.594	3.788	71.11	3.684	5.731
70.59	3.595	3.825	71.12	3.685	5.767
70.60	3.597	3.861	71.13	3.687	5.804
70.61	3.599	3.898	71.14	3.689	5.841
70.62	3.600	3.935	71.15	3.691	5.877
70.63	3.602	3.971	71.16	3.692	5.914
70.64	3.604	4.008	71.17	3.694	5.951
70.65	3.606	4.045	71.18	3.696	5.987
70.66	3.607	4.081	71.19	3.697	6.024
70.67	3.609	4.118	71.20	3.699	6.061
70.68	3.611	4.155	71.21	3.701	6.097
70.69	3.612	4.191	71.22	3.702	6.134
70.70	3.614	4.228	71.23	3.704	6.170
70.71	3.616	4.265	71.24	3.706	6.207
70.72	3.617	4.301	71.25	3.708	6.244
70.73	3.619	4.338	71.26	3.709	6.280
70.74	3.621	4.375	71.27	3.711	6.317
70.75	3.622	4.411	71.28	3.713	6.354
70.76	3.624	4.448	71.29	3.714	6.390
70.77	3.626	4.485	71.30	3.716	6.427
70.78	3.628	4.521	71.31	3.718	6.464
70.79	3.629	4.558	71.32	3.719	6.500
70.80	3.631	4.594	71.33	3.721	6.537
70.81	3.633	4.631	71.34	3.723	6.574
70.82	3.634	4.668	71.35	3.724	6.610
70.83	3.636	4.704	71.36	3.726	6.647
70.84	3.638	4.741	71.37	3.728	6.684
70.85	3.639	4.778	71.38	3.730	6.720
70.86	3.641	4.814	71.39	3.731	6.757
70.87	3.643	4.851	71.40	3.733	6.794
70.88	3.645	4.888	71.41	3.735	6.830
70.89	3.646	4.924	71.42	3.736	6.867
70.90	3.648	4.961	71.43	3.738	6.903
70.91	3.650	4.998	71.44	3.740	6.940
70.92	3.651	5.034	71.45	3.742	6.977
70.93	3.653	5.071	71.46	3.743	7.013
70.94	3.655	5.108	71.47	3.745	7.050
70.95	3.657	5.144	71.48	3.747	7.087
70.96	3.658	5.181	71.49	3.748	7.123
70.97	3.660	5.218	71.50	3.750	7.160
70.98	3.662	5.254	71.51	3.752	7.198
70.99	3.663	5.291	71.52	3.754	7.237
71.00	3.665	5.327	71.53	3.755	7.275
71.01	3.667	5.364	71.54	3.757	7.314
71.02	3.668	5.401	71.55	3.759	7.352
71.03	3.670	5.437	71.56	3.761	7.390
71.04	3.672	5.474	71.57	3.763	7.429
71.05	3.673	5.511	71.58	3.764	7.467
71.06	3.675	5.547	71.59	3.766	7.506
71.07	3.677	5.584	71.60	3.768	7.544
71.08	3.679	5.621	71.61	3.770	7.582

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
71.62	3.772	7.621	72.15	3.867	9.656
71.63	3.773	7.659	72.16	3.869	9.694
71.64	3.775	7.698	72.17	3.871	9.733
71.65	3.777	7.736	72.18	3.872	9.771
71.66	3.779	7.774	72.19	3.874	9.810
71.67	3.781	7.813	72.20	3.876	9.848
71.68	3.782	7.851	72.21	3.878	9.886
71.69	3.784	7.890	72.22	3.880	9.925
71.70	3.786	7.928	72.23	3.881	9.963
71.71	3.788	7.966	72.24	3.883	10.002
71.72	3.790	8.005	72.25	3.885	10.040
71.73	3.791	8.043	72.26	3.887	10.078
71.74	3.793	8.082	72.27	3.889	10.117
71.75	3.795	8.120	72.28	3.890	10.155
71.76	3.797	8.158	72.29	3.892	10.194
71.77	3.799	8.197	72.30	3.894	10.232
71.78	3.800	8.235	72.31	3.896	10.270
71.79	3.802	8.274	72.32	3.898	10.309
71.80	3.804	8.312	72.33	3.899	10.347
71.81	3.806	8.350	72.34	3.901	10.386
71.82	3.808	8.389	72.35	3.903	10.424
71.83	3.809	8.427	72.36	3.905	10.462
71.84	3.811	8.466	72.37	3.907	10.501
71.85	3.813	8.504	72.38	3.908	10.539
71.86	3.815	8.542	72.39	3.910	10.578
71.87	3.817	8.581	72.40	3.912	10.616
71.88	3.818	8.619	72.41	3.914	10.654
71.89	3.820	8.658	72.42	3.916	10.693
71.90	3.822	8.696	72.43	3.917	10.731
71.91	3.824	8.734	72.44	3.919	10.770
71.92	3.826	8.773	72.45	3.921	10.808
71.93	3.827	8.811	72.46	3.923	10.846
71.94	3.829	8.850	72.47	3.925	10.885
71.95	3.831	8.888	72.48	3.926	10.923
71.96	3.833	8.926	72.49	3.928	10.962
71.97	3.835	8.965	72.50	3.930	11.000
71.98	3.836	9.003	72.51	3.932	11.040
71.99	3.838	9.042	72.52	3.934	11.080
72.00	3.840	9.080	72.53	3.935	11.121
72.01	3.842	9.118	72.54	3.937	11.161
72.02	3.844	9.157	72.55	3.939	11.201
72.03	3.845	9.195	72.56	3.941	11.241
72.04	3.847	9.234	72.57	3.943	11.281
72.05	3.849	9.272	72.58	3.944	11.322
72.06	3.851	9.310	72.59	3.946	11.362
72.07	3.853	9.349	72.60	3.948	11.402
72.08	3.854	9.387	72.61	3.950	11.442
72.09	3.856	9.426	72.62	3.952	11.482
72.10	3.858	9.464	72.63	3.953	11.523
72.11	3.860	9.502	72.64	3.955	11.563
72.12	3.862	9.541	72.65	3.957	11.603
72.13	3.863	9.579	72.66	3.959	11.643
72.14	3.865	9.618	72.67	3.961	11.683

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
72.68	3.962	11.724
72.69	3.964	11.764
72.70	3.966	11.804
72.71	3.968	11.844
72.72	3.970	11.884
72.73	3.971	11.925
72.74	3.973	11.965
72.75	3.975	12.005
72.76	3.977	12.045
72.77	3.979	12.085
72.78	3.980	12.126
72.79	3.982	12.166
72.80	3.984	12.206
72.81	3.986	12.246
72.82	3.988	12.286
72.83	3.989	12.327
72.84	3.991	12.367
72.85	3.993	12.407
72.86	3.995	12.447
72.87	3.997	12.487
72.88	3.998	12.528
72.89	4.000	12.568
72.90	4.002	12.608
72.91	4.004	12.648
72.92	4.006	12.688
72.93	4.007	12.729
72.94	4.009	12.769
72.95	4.011	12.809
72.96	4.013	12.849
72.97	4.015	12.889
72.98	4.016	12.930
72.99	4.018	12.970
73.00	4.020	13.010
73.01	4.022	13.050
73.02	4.024	13.090
73.03	4.025	13.131
73.04	4.027	13.171
73.05	4.029	13.211
73.06	4.031	13.251
73.07	4.033	13.291
73.08	4.034	13.332
73.09	4.036	13.372
73.10	4.038	13.412
73.11	4.040	13.452
73.12	4.042	13.492
73.13	4.043	13.533
73.14	4.045	13.573
73.15	4.047	13.613
73.16	4.049	13.653
73.17	4.051	13.693
73.18	4.052	13.734
73.19	4.054	13.774
73.20	4.056	13.814
73.21	4.058	13.854
73.22	4.060	13.894
73.23	4.061	13.935
73.24	4.063	13.975
73.25	4.065	14.015
73.26	4.067	14.055
73.27	4.069	14.095
73.28	4.070	14.136
73.29	4.072	14.176
73.30	4.074	14.216
73.31	4.076	14.256
73.32	4.078	14.296
73.33	4.079	14.337
73.34	4.081	14.377
73.35	4.083	14.417
73.36	4.085	14.457
73.37	4.087	14.497
73.38	4.088	14.538
73.39	4.090	14.578
73.40	4.092	14.618
73.41	4.094	14.658
73.42	4.096	14.698
73.43	4.097	14.739
73.44	4.099	14.779
73.45	4.101	14.819
73.46	4.103	14.859
73.47	4.105	14.899
73.48	4.106	14.940
73.49	4.108	14.980
73.50	**4.110**	**15.020**

Summary for Pond 8P: Switch Yard Ditch

Inflow Area = 23.940 ac, 61.82% Impervious, Inflow Depth = 2.11" for 2.3yr-24hr event
Inflow = 33.28 cfs @ 11.97 hrs, Volume= 4.211 af
Outflow = 15.55 cfs @ 12.08 hrs, Volume= 4.211 af, Atten= 53%, Lag= 6.7 min
Primary = 15.55 cfs @ 12.08 hrs, Volume= 4.211 af

Routing by Stor-Ind method, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Peak Elev= 75.65' @ 12.08 hrs Surf.Area= 0 sf Storage= 25,716 cf

Plug-Flow detention time= 56.7 min calculated for 4.209 af (100% of inflow)
Center-of-Mass det. time= 58.0 min (936.8 - 878.8)

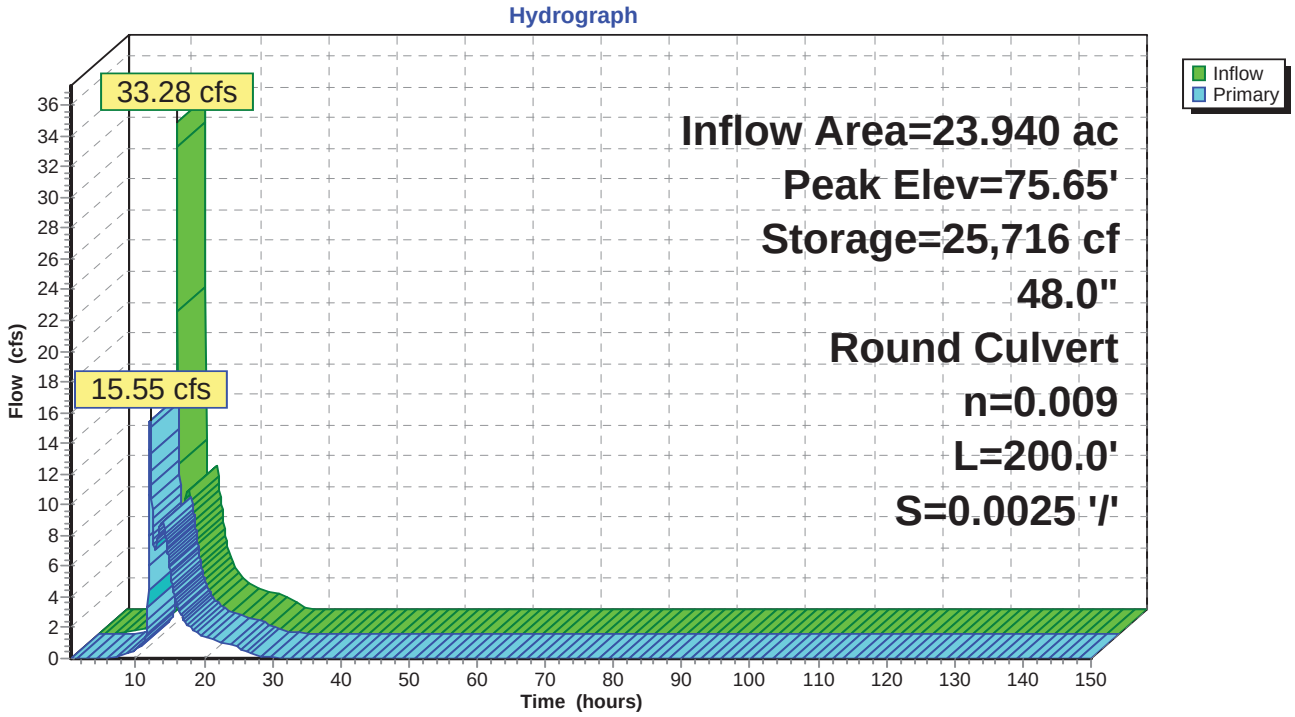
Volume	Invert	Avail.Storage	Storage Description
#1	74.00'	85,305 cf	**Custom Stage Data** Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
74.00	0	0
75.00	13,622	13,622
76.00	18,598	32,220
77.00	23,771	55,991
78.00	29,314	85,305

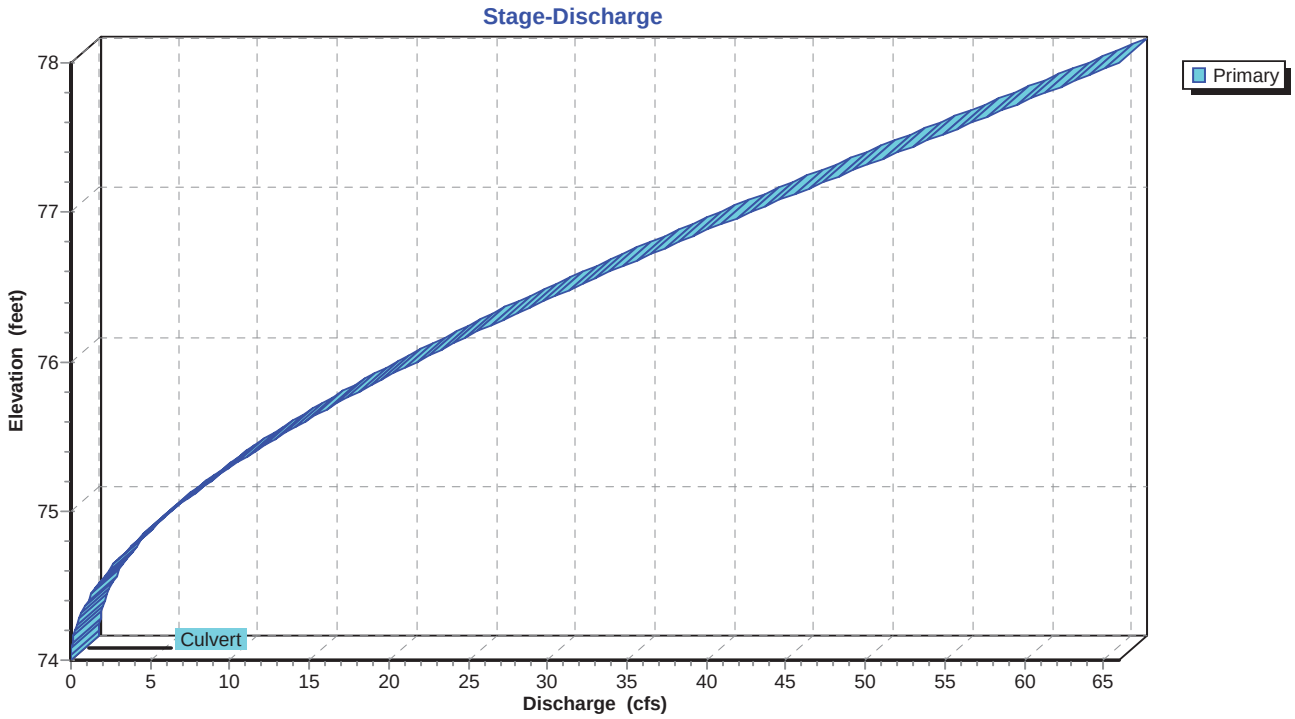
Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**48.0" Round Culvert** L= 200.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 74.00' / 73.50' S= 0.0025 '/' Cc= 0.900 n= 0.009 PVC, smooth interior, Flow Area= 12.57 sf

Primary OutFlow Max=15.43 cfs @ 12.08 hrs HW=75.64' (Free Discharge)
1=Culvert (Barrel Controls 15.43 cfs @ 4.69 fps)

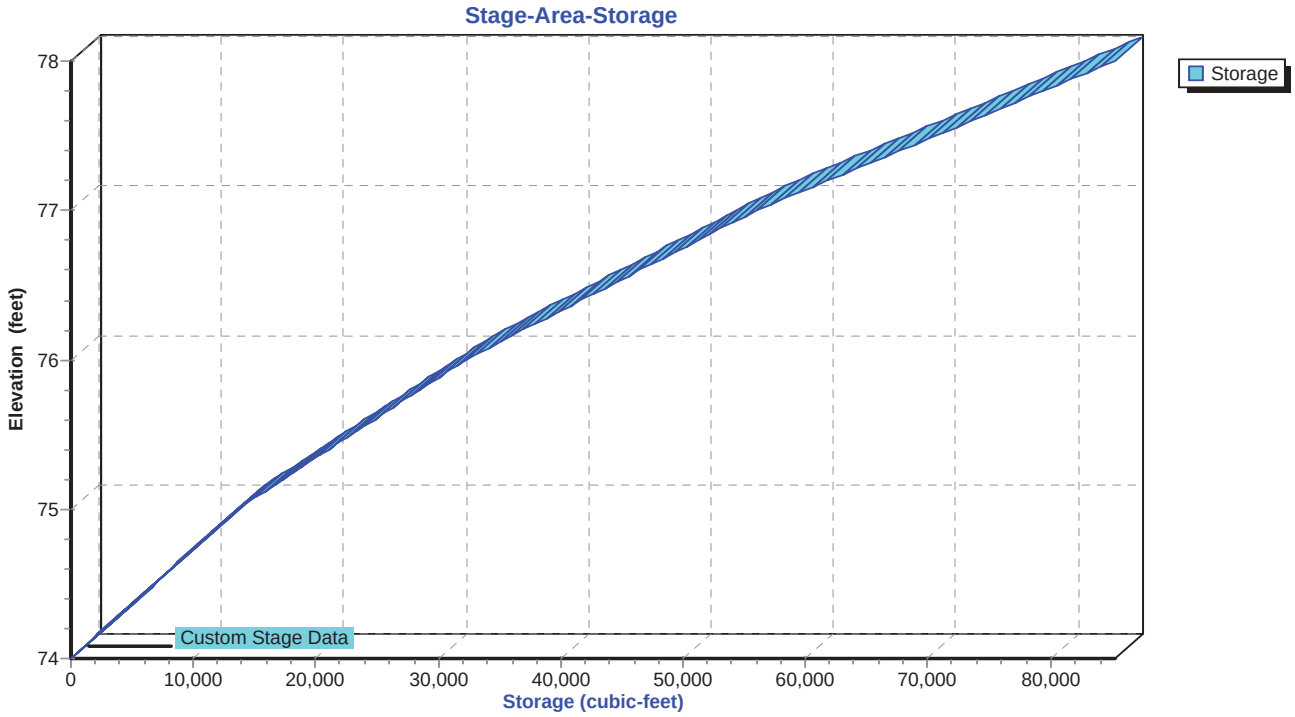
Pond 8P: Switch Yard Ditch



Pond 8P: Switch Yard Ditch



Pond 8P: Switch Yard Ditch



Hydrograph for Pond 8P: Switch Yard Ditch

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.50	0.00	0	74.00	0.00
1.00	0.00	0	74.00	0.00
1.50	0.00	0	74.00	0.00
2.00	0.00	0	74.00	0.00
2.50	0.02	8	74.00	0.00
3.00	0.05	64	74.00	0.00
3.50	0.08	172	74.01	0.00
4.00	0.10	329	74.02	0.01
4.50	0.14	534	74.04	0.01
5.00	0.17	784	74.06	0.02
5.50	0.20	1,069	74.08	0.04
6.00	0.24	1,378	74.10	0.06
6.50	0.27	1,698	74.12	0.10
7.00	0.31	2,010	74.15	0.14
7.50	0.34	2,309	74.17	0.19
8.00	0.38	2,584	74.19	0.23
8.50	0.47	2,873	74.21	0.29
9.00	0.59	3,236	74.24	0.37
9.50	0.63	3,596	74.26	0.46
10.00	0.79	3,940	74.29	0.56
10.50	1.05	4,447	74.33	0.71
11.00	1.49	5,204	74.38	0.98
11.50	**2.52**	6,525	74.48	1.54
12.00	**31.74**	**23,368**	**75.52**	**13.51**
12.50	4.79	**17,022**	**75.18**	**8.56**
13.00	7.88	14,837	75.07	7.07
13.50	9.50	16,982	75.18	8.53
14.00	8.35	17,434	75.20	8.85
14.50	6.16	15,539	75.10	7.53
15.00	4.70	13,134	74.96	5.87
15.50	3.69	11,389	74.84	4.50
16.00	3.00	10,126	74.74	3.60
16.50	2.54	9,182	74.67	2.99
17.00	2.21	8,475	74.62	2.56
17.50	1.97	7,916	74.58	2.25
18.00	1.78	7,469	74.55	2.00
18.50	1.63	7,105	74.52	1.82
19.00	1.50	6,791	74.50	1.66
19.50	1.40	6,523	74.48	1.54
20.00	1.30	6,282	74.46	1.43
20.50	1.22	6,065	74.45	1.33
21.00	1.15	5,879	74.43	1.25
21.50	1.09	5,710	74.42	1.18
22.00	1.05	5,565	74.41	1.12
22.50	1.01	5,448	74.40	1.07
23.00	0.99	5,353	74.39	1.04
23.50	0.97	5,274	74.39	1.01
24.00	0.95	5,206	74.38	0.98
24.50	0.65	4,840	74.36	0.85
25.00	0.57	4,522	74.33	0.74
25.50	0.41	4,173	74.31	0.63
26.00	0.24	3,736	74.27	0.50
26.50	0.13	3,272	74.24	0.38

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
27.00	0.07	2,853	74.21	0.29
27.50	0.04	2,500	74.18	0.22
28.00	0.02	2,207	74.16	0.17
28.50	0.01	1,967	74.14	0.13
29.00	0.01	1,767	74.13	0.11
29.50	0.00	1,604	74.12	0.09
30.00	0.00	1,466	74.11	0.07
30.50	0.00	1,347	74.10	0.06
31.00	0.00	1,245	74.09	0.05
31.50	0.00	1,160	74.09	0.04
32.00	0.00	1,087	74.08	0.04
32.50	0.00	1,024	74.08	0.03
33.00	0.00	966	74.07	0.03
33.50	0.00	913	74.07	0.03
34.00	0.00	865	74.06	0.03
34.50	0.00	822	74.06	0.02
35.00	0.00	782	74.06	0.02
35.50	0.00	746	74.05	0.02
36.00	0.00	714	74.05	0.02
36.50	0.00	684	74.05	0.02
37.00	0.00	657	74.05	0.01
37.50	0.00	632	74.05	0.01
38.00	0.00	610	74.04	0.01
38.50	0.00	590	74.04	0.01
39.00	0.00	571	74.04	0.01
39.50	0.00	555	74.04	0.01
40.00	0.00	539	74.04	0.01
40.50	0.00	525	74.04	0.01
41.00	0.00	510	74.04	0.01
41.50	0.00	496	74.04	0.01
42.00	0.00	483	74.04	0.01
42.50	0.00	470	74.03	0.01
43.00	0.00	457	74.03	0.01
43.50	0.00	444	74.03	0.01
44.00	0.00	432	74.03	0.01
44.50	0.00	420	74.03	0.01
45.00	0.00	409	74.03	0.01
45.50	0.00	398	74.03	0.01
46.00	0.00	387	74.03	0.01
46.50	0.00	376	74.03	0.01
47.00	0.00	366	74.03	0.01
47.50	0.00	356	74.03	0.01
48.00	0.00	346	74.03	0.01
48.50	0.00	337	74.02	0.01
49.00	0.00	328	74.02	0.01
49.50	0.00	319	74.02	0.00
50.00	0.00	310	74.02	0.00
50.50	0.00	302	74.02	0.00
51.00	0.00	293	74.02	0.00
51.50	0.00	285	74.02	0.00
52.00	0.00	278	74.02	0.00
52.50	0.00	270	74.02	0.00
53.00	0.00	263	74.02	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
53.50	0.00	256	74.02	0.00
54.00	0.00	249	74.02	0.00
54.50	0.00	242	74.02	0.00
55.00	0.00	235	74.02	0.00
55.50	0.00	229	74.02	0.00
56.00	0.00	223	74.02	0.00
56.50	0.00	216	74.02	0.00
57.00	0.00	211	74.02	0.00
57.50	0.00	205	74.02	0.00
58.00	0.00	199	74.01	0.00
58.50	0.00	194	74.01	0.00
59.00	0.00	188	74.01	0.00
59.50	0.00	183	74.01	0.00
60.00	0.00	178	74.01	0.00
60.50	0.00	173	74.01	0.00
61.00	0.00	169	74.01	0.00
61.50	0.00	164	74.01	0.00
62.00	0.00	160	74.01	0.00
62.50	0.00	155	74.01	0.00
63.00	0.00	151	74.01	0.00
63.50	0.00	147	74.01	0.00
64.00	0.00	143	74.01	0.00
64.50	0.00	139	74.01	0.00
65.00	0.00	135	74.01	0.00
65.50	0.00	132	74.01	0.00
66.00	0.00	128	74.01	0.00
66.50	0.00	124	74.01	0.00
67.00	0.00	121	74.01	0.00
67.50	0.00	118	74.01	0.00
68.00	0.00	115	74.01	0.00
68.50	0.00	111	74.01	0.00
69.00	0.00	108	74.01	0.00
69.50	0.00	105	74.01	0.00
70.00	0.00	103	74.01	0.00
70.50	0.00	100	74.01	0.00
71.00	0.00	97	74.01	0.00
71.50	0.00	94	74.01	0.00
72.00	0.00	92	74.01	0.00
72.50	0.00	89	74.01	0.00
73.00	0.00	87	74.01	0.00
73.50	0.00	85	74.01	0.00
74.00	0.00	82	74.01	0.00
74.50	0.00	80	74.01	0.00
75.00	0.00	78	74.01	0.00
75.50	0.00	76	74.01	0.00
76.00	0.00	74	74.01	0.00
76.50	0.00	72	74.01	0.00
77.00	0.00	70	74.01	0.00
77.50	0.00	68	74.00	0.00
78.00	0.00	66	74.00	0.00
78.50	0.00	64	74.00	0.00
79.00	0.00	62	74.00	0.00
79.50	0.00	61	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
80.00	0.00	59	74.00	0.00
80.50	0.00	57	74.00	0.00
81.00	0.00	56	74.00	0.00
81.50	0.00	54	74.00	0.00
82.00	0.00	53	74.00	0.00
82.50	0.00	51	74.00	0.00
83.00	0.00	50	74.00	0.00
83.50	0.00	49	74.00	0.00
84.00	0.00	47	74.00	0.00
84.50	0.00	46	74.00	0.00
85.00	0.00	45	74.00	0.00
85.50	0.00	44	74.00	0.00
86.00	0.00	42	74.00	0.00
86.50	0.00	41	74.00	0.00
87.00	0.00	40	74.00	0.00
87.50	0.00	39	74.00	0.00
88.00	0.00	38	74.00	0.00
88.50	0.00	37	74.00	0.00
89.00	0.00	36	74.00	0.00
89.50	0.00	35	74.00	0.00
90.00	0.00	34	74.00	0.00
90.50	0.00	33	74.00	0.00
91.00	0.00	32	74.00	0.00
91.50	0.00	31	74.00	0.00
92.00	0.00	30	74.00	0.00
92.50	0.00	30	74.00	0.00
93.00	0.00	29	74.00	0.00
93.50	0.00	28	74.00	0.00
94.00	0.00	27	74.00	0.00
94.50	0.00	26	74.00	0.00
95.00	0.00	26	74.00	0.00
95.50	0.00	25	74.00	0.00
96.00	0.00	24	74.00	0.00
96.50	0.00	24	74.00	0.00
97.00	0.00	23	74.00	0.00
97.50	0.00	22	74.00	0.00
98.00	0.00	22	74.00	0.00
98.50	0.00	21	74.00	0.00
99.00	0.00	21	74.00	0.00
99.50	0.00	20	74.00	0.00
100.00	0.00	20	74.00	0.00
100.50	0.00	19	74.00	0.00
101.00	0.00	18	74.00	0.00
101.50	0.00	18	74.00	0.00
102.00	0.00	17	74.00	0.00
102.50	0.00	17	74.00	0.00
103.00	0.00	17	74.00	0.00
103.50	0.00	16	74.00	0.00
104.00	0.00	16	74.00	0.00
104.50	0.00	15	74.00	0.00
105.00	0.00	15	74.00	0.00
105.50	0.00	14	74.00	0.00
106.00	0.00	14	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
106.50	0.00	14	74.00	0.00
107.00	0.00	13	74.00	0.00
107.50	0.00	13	74.00	0.00
108.00	0.00	13	74.00	0.00
108.50	0.00	12	74.00	0.00
109.00	0.00	12	74.00	0.00
109.50	0.00	12	74.00	0.00
110.00	0.00	11	74.00	0.00
110.50	0.00	11	74.00	0.00
111.00	0.00	11	74.00	0.00
111.50	0.00	10	74.00	0.00
112.00	0.00	10	74.00	0.00
112.50	0.00	10	74.00	0.00
113.00	0.00	10	74.00	0.00
113.50	0.00	9	74.00	0.00
114.00	0.00	9	74.00	0.00
114.50	0.00	9	74.00	0.00
115.00	0.00	9	74.00	0.00
115.50	0.00	8	74.00	0.00
116.00	0.00	8	74.00	0.00
116.50	0.00	8	74.00	0.00
117.00	0.00	8	74.00	0.00
117.50	0.00	7	74.00	0.00
118.00	0.00	7	74.00	0.00
118.50	0.00	7	74.00	0.00
119.00	0.00	7	74.00	0.00
119.50	0.00	7	74.00	0.00
120.00	0.00	6	74.00	0.00
120.50	0.00	6	74.00	0.00
121.00	0.00	6	74.00	0.00
121.50	0.00	6	74.00	0.00
122.00	0.00	6	74.00	0.00
122.50	0.00	6	74.00	0.00
123.00	0.00	5	74.00	0.00
123.50	0.00	5	74.00	0.00
124.00	0.00	5	74.00	0.00
124.50	0.00	5	74.00	0.00
125.00	0.00	5	74.00	0.00
125.50	0.00	5	74.00	0.00
126.00	0.00	5	74.00	0.00
126.50	0.00	5	74.00	0.00
127.00	0.00	4	74.00	0.00
127.50	0.00	4	74.00	0.00
128.00	0.00	4	74.00	0.00
128.50	0.00	4	74.00	0.00
129.00	0.00	4	74.00	0.00
129.50	0.00	4	74.00	0.00
130.00	0.00	4	74.00	0.00
130.50	0.00	4	74.00	0.00
131.00	0.00	4	74.00	0.00
131.50	0.00	3	74.00	0.00
132.00	0.00	3	74.00	0.00
132.50	0.00	3	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
133.00	0.00	3	74.00	0.00
133.50	0.00	3	74.00	0.00
134.00	0.00	3	74.00	0.00
134.50	0.00	3	74.00	0.00
135.00	0.00	3	74.00	0.00
135.50	0.00	3	74.00	0.00
136.00	0.00	3	74.00	0.00
136.50	0.00	3	74.00	0.00
137.00	0.00	3	74.00	0.00
137.50	0.00	2	74.00	0.00
138.00	0.00	2	74.00	0.00
138.50	0.00	2	74.00	0.00
139.00	0.00	2	74.00	0.00
139.50	0.00	2	74.00	0.00
140.00	0.00	2	74.00	0.00
140.50	0.00	2	74.00	0.00
141.00	0.00	2	74.00	0.00
141.50	0.00	2	74.00	0.00
142.00	0.00	2	74.00	0.00
142.50	0.00	2	74.00	0.00
143.00	0.00	2	74.00	0.00
143.50	0.00	2	74.00	0.00
144.00	0.00	2	74.00	0.00
144.50	0.00	2	74.00	0.00
145.00	0.00	2	74.00	0.00
145.50	0.00	2	74.00	0.00
146.00	0.00	2	74.00	0.00
146.50	0.00	1	74.00	0.00
147.00	0.00	1	74.00	0.00
147.50	0.00	1	74.00	0.00
148.00	0.00	1	74.00	0.00
148.50	0.00	1	74.00	0.00
149.00	0.00	1	74.00	0.00
149.50	0.00	1	74.00	0.00
150.00	0.00	1	74.00	0.00

Stage-Discharge for Pond 8P: Switch Yard Ditch

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
74.00	0.00	74.53	1.87	75.06	7.00	75.59	14.56
74.01	0.00	74.54	1.94	75.07	7.12	75.60	14.73
74.02	0.00	74.55	2.02	75.08	7.24	75.61	14.89
74.03	0.00	74.56	2.09	75.09	7.37	75.62	15.05
74.04	0.01	74.57	2.16	75.10	7.49	75.63	15.22
74.05	0.01	74.58	2.23	75.11	7.62	75.64	15.38
74.06	0.02	74.59	2.31	75.12	7.74	75.65	15.55
74.07	0.03	74.60	2.39	75.13	7.87	75.66	15.72
74.08	0.04	74.61	2.46	75.14	8.00	75.67	15.88
74.09	0.05	74.62	2.54	75.15	8.13	75.68	16.05
74.10	0.06	74.63	2.62	75.16	8.26	75.69	16.22
74.11	0.07	74.64	2.70	75.17	8.39	75.70	16.39
74.12	0.09	74.65	2.79	75.18	8.52	75.71	16.56
74.13	0.10	74.66	2.87	75.19	8.65	75.72	16.73
74.14	0.12	74.67	2.95	75.20	8.78	75.73	16.90
74.15	0.14	74.68	3.04	75.21	8.92	75.74	17.07
74.16	0.16	74.69	3.12	75.22	9.05	75.75	17.24
74.17	0.18	74.70	3.21	75.23	9.19	75.76	17.42
74.18	0.21	74.71	3.30	75.24	9.32	75.77	17.59
74.19	0.23	74.72	3.39	75.25	9.46	75.78	17.77
74.20	0.26	74.73	3.48	75.26	9.60	75.79	17.94
74.21	0.29	74.74	3.57	75.27	9.74	75.80	18.12
74.22	0.32	74.75	3.66	75.28	9.88	75.81	18.29
74.23	0.35	74.76	3.76	75.29	10.02	75.82	18.47
74.24	0.38	74.77	3.85	75.30	10.16	75.83	18.65
74.25	0.41	74.78	3.95	75.31	10.30	75.84	18.82
74.26	0.45	74.79	4.04	75.32	10.44	75.85	19.00
74.27	0.48	74.80	4.14	75.33	10.58	75.86	19.18
74.28	0.52	74.81	4.24	75.34	10.73	75.87	19.36
74.29	0.56	74.82	4.34	75.35	10.87	75.88	19.54
74.30	0.60	74.83	4.44	75.36	11.02	75.89	19.72
74.31	0.64	74.84	4.54	75.37	11.16	75.90	19.90
74.32	0.68	74.85	4.64	75.38	11.31	75.91	20.09
74.33	0.73	74.86	4.74	75.39	11.46	75.92	20.27
74.34	0.77	74.87	4.85	75.40	11.61	75.93	20.45
74.35	0.82	74.88	4.95	75.41	11.76	75.94	20.64
74.36	0.87	74.89	5.06	75.42	11.91	75.95	20.82
74.37	0.92	74.90	5.17	75.43	12.06	75.96	21.01
74.38	0.97	74.91	5.27	75.44	12.21	75.97	21.19
74.39	1.02	74.92	5.38	75.45	12.36	75.98	21.38
74.40	1.07	74.93	5.49	75.46	12.51	75.99	21.57
74.41	1.13	74.94	5.60	75.47	12.67	76.00	21.75
74.42	1.18	74.95	5.71	75.48	12.82	76.01	21.94
74.43	1.24	74.96	5.83	75.49	12.98	76.02	22.13
74.44	1.30	74.97	5.94	75.50	13.13	76.03	22.32
74.45	1.36	74.98	6.05	75.51	13.29	76.04	22.51
74.46	1.42	74.99	6.17	75.52	13.44	76.05	22.70
74.47	1.48	75.00	6.28	75.53	13.60	76.06	22.89
74.48	1.54	75.01	6.40	75.54	13.76	76.07	23.08
74.49	1.61	75.02	6.52	75.55	13.92	76.08	23.27
74.50	1.67	75.03	6.64	75.56	14.08	76.09	23.46
74.51	1.74	75.04	6.76	75.57	14.24	76.10	23.66
74.52	1.81	75.05	6.88	75.58	14.40	76.11	23.85

Stage-Discharge for Pond 8P: Switch Yard Ditch (continued)

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
76.12	24.04	76.65	34.98	77.18	46.91	77.71	59.26
76.13	24.24	76.66	35.20	77.19	47.14	77.72	59.50
76.14	24.43	76.67	35.42	77.20	47.37	77.73	59.73
76.15	24.63	76.68	35.64	77.21	47.60	77.74	59.96
76.16	24.82	76.69	35.85	77.22	47.83	77.75	60.19
76.17	25.02	76.70	36.07	77.23	48.06	77.76	60.43
76.18	25.22	76.71	36.29	77.24	48.30	77.77	60.66
76.19	25.41	76.72	36.51	77.25	48.53	77.78	60.89
76.20	25.61	76.73	36.73	77.26	48.76	77.79	61.12
76.21	25.81	76.74	36.95	77.27	48.99	77.80	61.36
76.22	26.01	76.75	37.17	77.28	49.22	77.81	61.59
76.23	26.21	76.76	37.39	77.29	49.46	77.82	61.82
76.24	26.41	76.77	37.61	77.30	49.69	77.83	62.05
76.25	26.61	76.78	37.84	77.31	49.92	77.84	62.28
76.26	26.81	76.79	38.06	77.32	50.15	77.85	62.51
76.27	27.01	76.80	38.28	77.33	50.39	77.86	62.75
76.28	27.21	76.81	38.50	77.34	50.62	77.87	62.98
76.29	27.41	76.82	38.72	77.35	50.85	77.88	63.21
76.30	27.62	76.83	38.95	77.36	51.09	77.89	63.44
76.31	27.82	76.84	39.17	77.37	51.32	77.90	63.67
76.32	28.02	76.85	39.39	77.38	51.55	77.91	63.90
76.33	28.23	76.86	39.62	77.39	51.79	77.92	64.13
76.34	28.43	76.87	39.84	77.40	52.02	77.93	64.36
76.35	28.64	76.88	40.07	77.41	52.25	77.94	64.59
76.36	28.84	76.89	40.29	77.42	52.49	77.95	64.82
76.37	29.05	76.90	40.52	77.43	52.72	77.96	65.05
76.38	29.26	76.91	40.74	77.44	52.95	77.97	65.28
76.39	29.46	76.92	40.97	77.45	53.19	77.98	65.51
76.40	29.67	76.93	41.19	77.46	53.42	77.99	65.73
76.41	29.88	76.94	41.42	77.47	53.65	78.00	**65.96**
76.42	30.09	76.95	41.64	77.48	53.89		
76.43	30.29	76.96	41.87	77.49	54.12		
76.44	30.50	76.97	42.10	77.50	54.36		
76.45	30.71	76.98	42.32	77.51	54.59		
76.46	30.92	76.99	42.55	77.52	54.82		
76.47	31.13	77.00	42.78	77.53	55.06		
76.48	31.34	77.01	43.01	77.54	55.29		
76.49	31.55	77.02	43.23	77.55	55.53		
76.50	31.77	77.03	43.46	77.56	55.76		
76.51	31.98	77.04	43.69	77.57	55.99		
76.52	32.19	77.05	43.92	77.58	56.23		
76.53	32.40	77.06	44.15	77.59	56.46		
76.54	32.61	77.07	44.38	77.60	56.69		
76.55	32.83	77.08	44.61	77.61	56.93		
76.56	33.04	77.09	44.84	77.62	57.16		
76.57	33.26	77.10	45.06	77.63	57.40		
76.58	33.47	77.11	45.29	77.64	57.63		
76.59	33.69	77.12	45.52	77.65	57.86		
76.60	33.90	77.13	45.75	77.66	58.10		
76.61	34.12	77.14	45.98	77.67	58.33		
76.62	34.33	77.15	46.22	77.68	58.56		
76.63	34.55	77.16	46.45	77.69	58.80		
76.64	34.77	77.17	46.68	77.70	59.03		

Stage-Area-Storage for Pond 8P: Switch Yard Ditch

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
74.00	0	74.53	7,220	75.06	14,738
74.01	136	74.54	7,356	75.07	14,924
74.02	272	74.55	7,492	75.08	15,110
74.03	409	74.56	7,628	75.09	15,296
74.04	545	74.57	7,765	75.10	15,482
74.05	681	74.58	7,901	75.11	15,668
74.06	817	74.59	8,037	75.12	15,854
74.07	954	74.60	8,173	75.13	16,040
74.08	1,090	74.61	8,309	75.14	16,226
74.09	1,226	74.62	8,446	75.15	16,412
74.10	1,362	74.63	8,582	75.16	16,598
74.11	1,498	74.64	8,718	75.17	16,784
74.12	1,635	74.65	8,854	75.18	16,970
74.13	1,771	74.66	8,991	75.19	17,156
74.14	1,907	74.67	9,127	75.20	17,342
74.15	2,043	74.68	9,263	75.21	17,528
74.16	2,180	74.69	9,399	75.22	17,714
74.17	2,316	74.70	9,535	75.23	17,900
74.18	2,452	74.71	9,672	75.24	18,086
74.19	2,588	74.72	9,808	75.25	18,272
74.20	2,724	74.73	9,944	75.26	18,457
74.21	2,861	74.74	10,080	75.27	18,643
74.22	2,997	74.75	10,217	75.28	18,829
74.23	3,133	74.76	10,353	75.29	19,015
74.24	3,269	74.77	10,489	75.30	19,201
74.25	3,406	74.78	10,625	75.31	19,387
74.26	3,542	74.79	10,761	75.32	19,573
74.27	3,678	74.80	10,898	75.33	19,759
74.28	3,814	74.81	11,034	75.34	19,945
74.29	3,950	74.82	11,170	75.35	20,131
74.30	4,087	74.83	11,306	75.36	20,317
74.31	4,223	74.84	11,442	75.37	20,503
74.32	4,359	74.85	11,579	75.38	20,689
74.33	4,495	74.86	11,715	75.39	20,875
74.34	4,631	74.87	11,851	75.40	21,061
74.35	4,768	74.88	11,987	75.41	21,247
74.36	4,904	74.89	12,124	75.42	21,433
74.37	5,040	74.90	12,260	75.43	21,619
74.38	5,176	74.91	12,396	75.44	21,805
74.39	5,313	74.92	12,532	75.45	21,991
74.40	5,449	74.93	12,668	75.46	22,177
74.41	5,585	74.94	12,805	75.47	22,363
74.42	5,721	74.95	12,941	75.48	22,549
74.43	5,857	74.96	13,077	75.49	22,735
74.44	5,994	74.97	13,213	75.50	22,921
74.45	6,130	74.98	13,350	75.51	23,107
74.46	6,266	74.99	13,486	75.52	23,293
74.47	6,402	75.00	13,622	75.53	23,479
74.48	6,539	75.01	13,808	75.54	23,665
74.49	6,675	75.02	13,994	75.55	23,851
74.50	6,811	75.03	14,180	75.56	24,037
74.51	6,947	75.04	14,366	75.57	24,223
74.52	7,083	75.05	14,552	75.58	24,409

Stage-Area-Storage for Pond 8P: Switch Yard Ditch (continued)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
75.59	24,595	76.12	35,073	76.65	47,671
75.60	24,781	76.13	35,310	76.66	47,909
75.61	24,967	76.14	35,548	76.67	48,147
75.62	25,153	76.15	35,786	76.68	48,384
75.63	25,339	76.16	36,023	76.69	48,622
75.64	25,525	76.17	36,261	76.70	48,860
75.65	25,711	76.18	36,499	76.71	49,097
75.66	25,897	76.19	36,736	76.72	49,335
75.67	26,083	76.20	36,974	76.73	49,573
75.68	26,269	76.21	37,212	76.74	49,811
75.69	26,455	76.22	37,450	76.75	50,048
75.70	26,641	76.23	37,687	76.76	50,286
75.71	26,827	76.24	37,925	76.77	50,524
75.72	27,013	76.25	38,163	76.78	50,761
75.73	27,199	76.26	38,400	76.79	50,999
75.74	27,385	76.27	38,638	76.80	51,237
75.75	27,571	76.28	38,876	76.81	51,475
75.76	27,756	76.29	39,114	76.82	51,712
75.77	27,942	76.30	39,351	76.83	51,950
75.78	28,128	76.31	39,589	76.84	52,188
75.79	28,314	76.32	39,827	76.85	52,425
75.80	28,500	76.33	40,064	76.86	52,663
75.81	28,686	76.34	40,302	76.87	52,901
75.82	28,872	76.35	40,540	76.88	53,138
75.83	29,058	76.36	40,778	76.89	53,376
75.84	29,244	76.37	41,015	76.90	53,614
75.85	29,430	76.38	41,253	76.91	53,852
75.86	29,616	76.39	41,491	76.92	54,089
75.87	29,802	76.40	41,728	76.93	54,327
75.88	29,988	76.41	41,966	76.94	54,565
75.89	30,174	76.42	42,204	76.95	54,802
75.90	30,360	76.43	42,442	76.96	55,040
75.91	30,546	76.44	42,679	76.97	55,278
75.92	30,732	76.45	42,917	76.98	55,516
75.93	30,918	76.46	43,155	76.99	55,753
75.94	31,104	76.47	43,392	77.00	55,991
75.95	31,290	76.48	43,630	77.01	56,284
75.96	31,476	76.49	43,868	77.02	56,577
75.97	31,662	76.50	44,106	77.03	56,870
75.98	31,848	76.51	44,343	77.04	57,164
75.99	32,034	76.52	44,581	77.05	57,457
76.00	32,220	76.53	44,819	77.06	57,750
76.01	32,458	76.54	45,056	77.07	58,043
76.02	32,695	76.55	45,294	77.08	58,336
76.03	32,933	76.56	45,532	77.09	58,629
76.04	33,171	76.57	45,769	77.10	58,922
76.05	33,409	76.58	46,007	77.11	59,216
76.06	33,646	76.59	46,245	77.12	59,509
76.07	33,884	76.60	46,483	77.13	59,802
76.08	34,122	76.61	46,720	77.14	60,095
76.09	34,359	76.62	46,958	77.15	60,388
76.10	34,597	76.63	47,196	77.16	60,681
76.11	34,835	76.64	47,433	77.17	60,974

Stage-Area-Storage for Pond 8P: Switch Yard Ditch (continued)

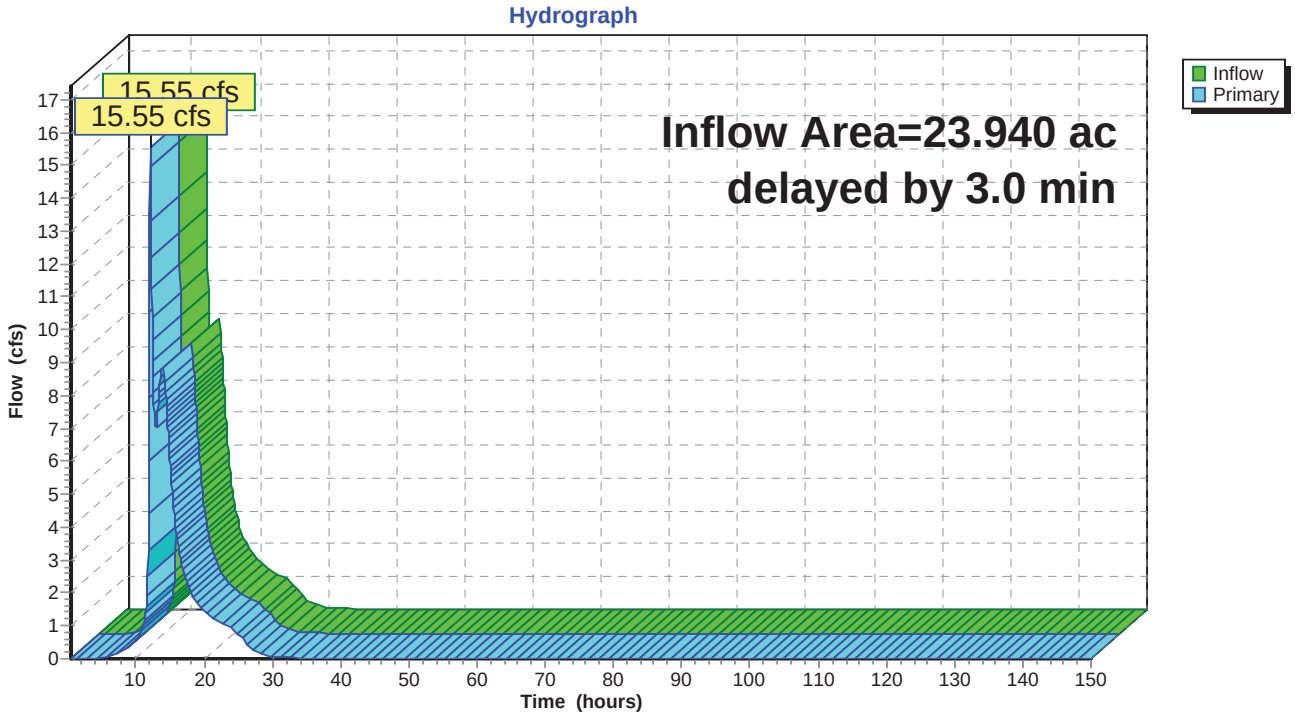
Elevation (feet)	Storage (cubic-feet)
77.18	61,268
77.19	61,561
77.20	61,854
77.21	62,147
77.22	62,440
77.23	62,733
77.24	63,026
77.25	63,320
77.26	63,613
77.27	63,906
77.28	64,199
77.29	64,492
77.30	64,785
77.31	65,078
77.32	65,371
77.33	65,665
77.34	65,958
77.35	66,251
77.36	66,544
77.37	66,837
77.38	67,130
77.39	67,423
77.40	67,717
77.41	68,010
77.42	68,303
77.43	68,596
77.44	68,889
77.45	69,182
77.46	69,475
77.47	69,769
77.48	70,062
77.49	70,355
77.50	70,648
77.51	70,941
77.52	71,234
77.53	71,527
77.54	71,821
77.55	72,114
77.56	72,407
77.57	72,700
77.58	72,993
77.59	73,286
77.60	73,579
77.61	73,873
77.62	74,166
77.63	74,459
77.64	74,752
77.65	75,045
77.66	75,338
77.67	75,631
77.68	75,925
77.69	76,218
77.70	76,511
77.71	76,804
77.72	77,097
77.73	77,390
77.74	77,683
77.75	77,977
77.76	78,270
77.77	78,563
77.78	78,856
77.79	79,149
77.80	79,442
77.81	79,735
77.82	80,028
77.83	80,322
77.84	80,615
77.85	80,908
77.86	81,201
77.87	81,494
77.88	81,787
77.89	82,080
77.90	82,374
77.91	82,667
77.92	82,960
77.93	83,253
77.94	83,546
77.95	83,839
77.96	84,132
77.97	84,426
77.98	84,719
77.99	85,012
78.00	**85,305**

Summary for Link 10L: Stormwater Piping

Inflow Area = 23.940 ac, 61.82% Impervious, Inflow Depth = 2.11" for 2.3yr-24hr event
Inflow = 15.55 cfs @ 12.08 hrs, Volume= 4.211 af
Primary = 15.55 cfs @ 12.13 hrs, Volume= 4.211 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow delayed by 3.0 min, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs

Link 10L: Stormwater Piping



Hydrograph for Link 10L: Stormwater Piping

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.50	0.00	**0.00**	0.00	13.75	8.94	0.00	8.89
0.75	0.00	0.00	0.00	14.00	8.85	0.00	8.91
1.00	0.00	0.00	0.00	14.25	8.32	0.00	8.46
1.25	0.00	0.00	0.00	14.50	7.53	0.00	7.70
1.50	0.00	0.00	0.00	14.75	6.72	0.00	6.88
1.75	0.00	0.00	0.00	15.00	5.87	0.00	6.06
2.00	0.00	0.00	0.00	15.25	5.11	0.00	5.25
2.25	0.00	0.00	0.00	15.50	4.50	0.00	4.61
2.50	0.00	0.00	0.00	15.75	4.01	0.00	4.10
2.75	0.00	0.00	0.00	16.00	3.60	0.00	3.68
3.00	0.00	0.00	0.00	16.25	3.27	0.00	3.33
3.25	0.00	0.00	0.00	16.50	2.99	0.00	3.04
3.50	0.00	0.00	0.00	16.75	2.76	0.00	2.80
3.75	0.00	0.00	0.00	17.00	2.56	0.00	2.60
4.00	0.01	0.00	0.00	17.25	2.39	0.00	2.42
4.25	0.01	0.00	0.01	17.50	2.25	0.00	2.27
4.50	0.01	0.00	0.01	17.75	2.12	0.00	2.14
4.75	0.01	0.00	0.01	18.00	2.00	0.00	2.03
5.00	0.02	0.00	0.02	18.25	1.91	0.00	1.93
5.25	0.03	0.00	0.03	18.50	1.82	0.00	1.83
5.50	0.04	0.00	0.03	18.75	1.74	0.00	1.75
5.75	0.05	0.00	0.05	19.00	1.66	0.00	1.68
6.00	0.06	0.00	0.06	19.25	1.60	0.00	1.61
6.25	0.08	0.00	0.08	19.50	1.54	0.00	1.55
6.50	0.10	0.00	0.09	19.75	1.48	0.00	1.49
6.75	0.12	0.00	0.11	20.00	1.43	0.00	1.44
7.00	0.14	0.00	0.14	20.25	1.38	0.00	1.39
7.25	0.16	0.00	0.16	20.50	1.33	0.00	1.34
7.50	0.19	0.00	0.18	20.75	1.29	0.00	1.30
7.75	0.21	0.00	0.21	21.00	1.25	0.00	1.26
8.00	0.23	0.00	0.23	21.25	1.21	0.00	1.22
8.25	0.26	0.00	0.25	21.50	1.18	0.00	1.19
8.50	0.29	0.00	0.28	21.75	1.15	0.00	1.16
8.75	0.33	0.00	0.32	22.00	1.12	0.00	1.13
9.00	0.37	0.00	0.36	22.25	1.10	0.00	1.10
9.25	0.42	0.00	0.41	22.50	1.07	0.00	1.08
9.50	0.46	0.00	0.46	22.75	1.05	0.00	1.06
9.75	0.50	0.00	0.50	23.00	1.04	0.00	1.04
10.00	0.56	0.00	0.55	23.25	1.02	0.00	1.02
10.25	0.63	0.00	0.61	23.50	1.01	0.00	1.01
10.50	0.71	0.00	0.69	23.75	0.99	0.00	1.00
10.75	0.83	0.00	0.80	24.00	0.98	0.00	0.98
11.00	0.98	0.00	0.95	24.25	0.92	0.00	0.94
11.25	1.19	0.00	1.14	24.50	0.85	0.00	0.86
11.50	1.54	0.00	1.46	24.75	0.79	0.00	0.80
11.75	3.29	0.00	2.52	25.00	0.74	0.00	0.75
12.00	**13.51**	0.00	**10.56**	25.25	0.68	0.00	0.70
12.25	**12.22**	0.00	**13.34**	25.50	0.63	0.00	0.64
12.50	8.56	0.00	9.08	25.75	0.56	0.00	0.58
12.75	7.07	0.00	7.23	26.00	0.50	0.00	0.51
13.00	7.07	0.00	6.99	26.25	0.44	0.00	0.45
13.25	7.77	0.00	7.60	26.50	0.38	0.00	0.39
13.50	8.53	0.00	8.40	26.75	0.33	0.00	0.34

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
27.00	0.29	0.00	0.30	40.25	0.01	0.00	0.01
27.25	0.25	0.00	0.26	40.50	0.01	0.00	0.01
27.50	0.22	0.00	0.23	40.75	0.01	0.00	0.01
27.75	0.19	0.00	0.20	41.00	0.01	0.00	0.01
28.00	0.17	0.00	0.17	41.25	0.01	0.00	0.01
28.25	0.15	0.00	0.15	41.50	0.01	0.00	0.01
28.50	0.13	0.00	0.14	41.75	0.01	0.00	0.01
28.75	0.12	0.00	0.12	42.00	0.01	0.00	0.01
29.00	0.11	0.00	0.11	42.25	0.01	0.00	0.01
29.25	0.09	0.00	0.10	42.50	0.01	0.00	0.01
29.50	0.09	0.00	0.09	42.75	0.01	0.00	0.01
29.75	0.08	0.00	0.08	43.00	0.01	0.00	0.01
30.00	0.07	0.00	0.07	43.25	0.01	0.00	0.01
30.25	0.07	0.00	0.07	43.50	0.01	0.00	0.01
30.50	0.06	0.00	0.06	43.75	0.01	0.00	0.01
30.75	0.06	0.00	0.06	44.00	0.01	0.00	0.01
31.00	0.05	0.00	0.05	44.25	0.01	0.00	0.01
31.25	0.05	0.00	0.05	44.50	0.01	0.00	0.01
31.50	0.04	0.00	0.04	44.75	0.01	0.00	0.01
31.75	0.04	0.00	0.04	45.00	0.01	0.00	0.01
32.00	0.04	0.00	0.04	45.25	0.01	0.00	0.01
32.25	0.04	0.00	0.04	45.50	0.01	0.00	0.01
32.50	0.03	0.00	0.03	45.75	0.01	0.00	0.01
32.75	0.03	0.00	0.03	46.00	0.01	0.00	0.01
33.00	0.03	0.00	0.03	46.25	0.01	0.00	0.01
33.25	0.03	0.00	0.03	46.50	0.01	0.00	0.01
33.50	0.03	0.00	0.03	46.75	0.01	0.00	0.01
33.75	0.03	0.00	0.03	47.00	0.01	0.00	0.01
34.00	0.03	0.00	0.03	47.25	0.01	0.00	0.01
34.25	0.02	0.00	0.02	47.50	0.01	0.00	0.01
34.50	0.02	0.00	0.02	47.75	0.01	0.00	0.01
34.75	0.02	0.00	0.02	48.00	0.01	0.00	0.01
35.00	0.02	0.00	0.02	48.25	0.01	0.00	0.01
35.25	0.02	0.00	0.02	48.50	0.01	0.00	0.01
35.50	0.02	0.00	0.02	48.75	0.01	0.00	0.01
35.75	0.02	0.00	0.02	49.00	0.01	0.00	0.01
36.00	0.02	0.00	0.02	49.25	0.00	0.00	0.00
36.25	0.02	0.00	0.02	49.50	0.00	0.00	0.00
36.50	0.02	0.00	0.02	49.75	0.00	0.00	0.00
36.75	0.01	0.00	0.02	50.00	0.00	0.00	0.00
37.00	0.01	0.00	0.01	50.25	0.00	0.00	0.00
37.25	0.01	0.00	0.01	50.50	0.00	0.00	0.00
37.50	0.01	0.00	0.01	50.75	0.00	0.00	0.00
37.75	0.01	0.00	0.01	51.00	0.00	0.00	0.00
38.00	0.01	0.00	0.01	51.25	0.00	0.00	0.00
38.25	0.01	0.00	0.01	51.50	0.00	0.00	0.00
38.50	0.01	0.00	0.01	51.75	0.00	0.00	0.00
38.75	0.01	0.00	0.01	52.00	0.00	0.00	0.00
39.00	0.01	0.00	0.01	52.25	0.00	0.00	0.00
39.25	0.01	0.00	0.01	52.50	0.00	0.00	0.00
39.50	0.01	0.00	0.01	52.75	0.00	0.00	0.00
39.75	0.01	0.00	0.01	53.00	0.00	0.00	0.00
40.00	0.01	0.00	0.01	53.25	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
53.50	0.00	0.00	0.00	66.75	0.00	0.00	0.00
53.75	0.00	0.00	0.00	67.00	0.00	0.00	0.00
54.00	0.00	0.00	0.00	67.25	0.00	0.00	0.00
54.25	0.00	0.00	0.00	67.50	0.00	0.00	0.00
54.50	0.00	0.00	0.00	67.75	0.00	0.00	0.00
54.75	0.00	0.00	0.00	68.00	0.00	0.00	0.00
55.00	0.00	0.00	0.00	68.25	0.00	0.00	0.00
55.25	0.00	0.00	0.00	68.50	0.00	0.00	0.00
55.50	0.00	0.00	0.00	68.75	0.00	0.00	0.00
55.75	0.00	0.00	0.00	69.00	0.00	0.00	0.00
56.00	0.00	0.00	0.00	69.25	0.00	0.00	0.00
56.25	0.00	0.00	0.00	69.50	0.00	0.00	0.00
56.50	0.00	0.00	0.00	69.75	0.00	0.00	0.00
56.75	0.00	0.00	0.00	70.00	0.00	0.00	0.00
57.00	0.00	0.00	0.00	70.25	0.00	0.00	0.00
57.25	0.00	0.00	0.00	70.50	0.00	0.00	0.00
57.50	0.00	0.00	0.00	70.75	0.00	0.00	0.00
57.75	0.00	0.00	0.00	71.00	0.00	0.00	0.00
58.00	0.00	0.00	0.00	71.25	0.00	0.00	0.00
58.25	0.00	0.00	0.00	71.50	0.00	0.00	0.00
58.50	0.00	0.00	0.00	71.75	0.00	0.00	0.00
58.75	0.00	0.00	0.00	72.00	0.00	0.00	0.00
59.00	0.00	0.00	0.00	72.25	0.00	0.00	0.00
59.25	0.00	0.00	0.00	72.50	0.00	0.00	0.00
59.50	0.00	0.00	0.00	72.75	0.00	0.00	0.00
59.75	0.00	0.00	0.00	73.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	73.25	0.00	0.00	0.00
60.25	0.00	0.00	0.00	73.50	0.00	0.00	0.00
60.50	0.00	0.00	0.00	73.75	0.00	0.00	0.00
60.75	0.00	0.00	0.00	74.00	0.00	0.00	0.00
61.00	0.00	0.00	0.00	74.25	0.00	0.00	0.00
61.25	0.00	0.00	0.00	74.50	0.00	0.00	0.00
61.50	0.00	0.00	0.00	74.75	0.00	0.00	0.00
61.75	0.00	0.00	0.00	75.00	0.00	0.00	0.00
62.00	0.00	0.00	0.00	75.25	0.00	0.00	0.00
62.25	0.00	0.00	0.00	75.50	0.00	0.00	0.00
62.50	0.00	0.00	0.00	75.75	0.00	0.00	0.00
62.75	0.00	0.00	0.00	76.00	0.00	0.00	0.00
63.00	0.00	0.00	0.00	76.25	0.00	0.00	0.00
63.25	0.00	0.00	0.00	76.50	0.00	0.00	0.00
63.50	0.00	0.00	0.00	76.75	0.00	0.00	0.00
63.75	0.00	0.00	0.00	77.00	0.00	0.00	0.00
64.00	0.00	0.00	0.00	77.25	0.00	0.00	0.00
64.25	0.00	0.00	0.00	77.50	0.00	0.00	0.00
64.50	0.00	0.00	0.00	77.75	0.00	0.00	0.00
64.75	0.00	0.00	0.00	78.00	0.00	0.00	0.00
65.00	0.00	0.00	0.00	78.25	0.00	0.00	0.00
65.25	0.00	0.00	0.00	78.50	0.00	0.00	0.00
65.50	0.00	0.00	0.00	78.75	0.00	0.00	0.00
65.75	0.00	0.00	0.00	79.00	0.00	0.00	0.00
66.00	0.00	0.00	0.00	79.25	0.00	0.00	0.00
66.25	0.00	0.00	0.00	79.50	0.00	0.00	0.00
66.50	0.00	0.00	0.00	79.75	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
80.00	0.00	0.00	0.00	93.25	0.00	0.00	0.00
80.25	0.00	0.00	0.00	93.50	0.00	0.00	0.00
80.50	0.00	0.00	0.00	93.75	0.00	0.00	0.00
80.75	0.00	0.00	0.00	94.00	0.00	0.00	0.00
81.00	0.00	0.00	0.00	94.25	0.00	0.00	0.00
81.25	0.00	0.00	0.00	94.50	0.00	0.00	0.00
81.50	0.00	0.00	0.00	94.75	0.00	0.00	0.00
81.75	0.00	0.00	0.00	95.00	0.00	0.00	0.00
82.00	0.00	0.00	0.00	95.25	0.00	0.00	0.00
82.25	0.00	0.00	0.00	95.50	0.00	0.00	0.00
82.50	0.00	0.00	0.00	95.75	0.00	0.00	0.00
82.75	0.00	0.00	0.00	96.00	0.00	0.00	0.00
83.00	0.00	0.00	0.00	96.25	0.00	0.00	0.00
83.25	0.00	0.00	0.00	96.50	0.00	0.00	0.00
83.50	0.00	0.00	0.00	96.75	0.00	0.00	0.00
83.75	0.00	0.00	0.00	97.00	0.00	0.00	0.00
84.00	0.00	0.00	0.00	97.25	0.00	0.00	0.00
84.25	0.00	0.00	0.00	97.50	0.00	0.00	0.00
84.50	0.00	0.00	0.00	97.75	0.00	0.00	0.00
84.75	0.00	0.00	0.00	98.00	0.00	0.00	0.00
85.00	0.00	0.00	0.00	98.25	0.00	0.00	0.00
85.25	0.00	0.00	0.00	98.50	0.00	0.00	0.00
85.50	0.00	0.00	0.00	98.75	0.00	0.00	0.00
85.75	0.00	0.00	0.00	99.00	0.00	0.00	0.00
86.00	0.00	0.00	0.00	99.25	0.00	0.00	0.00
86.25	0.00	0.00	0.00	99.50	0.00	0.00	0.00
86.50	0.00	0.00	0.00	99.75	0.00	0.00	0.00
86.75	0.00	0.00	0.00	100.00	0.00	0.00	0.00
87.00	0.00	0.00	0.00	100.25	0.00	0.00	0.00
87.25	0.00	0.00	0.00	100.50	0.00	0.00	0.00
87.50	0.00	0.00	0.00	100.75	0.00	0.00	0.00
87.75	0.00	0.00	0.00	101.00	0.00	0.00	0.00
88.00	0.00	0.00	0.00	101.25	0.00	0.00	0.00
88.25	0.00	0.00	0.00	101.50	0.00	0.00	0.00
88.50	0.00	0.00	0.00	101.75	0.00	0.00	0.00
88.75	0.00	0.00	0.00	102.00	0.00	0.00	0.00
89.00	0.00	0.00	0.00	102.25	0.00	0.00	0.00
89.25	0.00	0.00	0.00	102.50	0.00	0.00	0.00
89.50	0.00	0.00	0.00	102.75	0.00	0.00	0.00
89.75	0.00	0.00	0.00	103.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	103.25	0.00	0.00	0.00
90.25	0.00	0.00	0.00	103.50	0.00	0.00	0.00
90.50	0.00	0.00	0.00	103.75	0.00	0.00	0.00
90.75	0.00	0.00	0.00	104.00	0.00	0.00	0.00
91.00	0.00	0.00	0.00	104.25	0.00	0.00	0.00
91.25	0.00	0.00	0.00	104.50	0.00	0.00	0.00
91.50	0.00	0.00	0.00	104.75	0.00	0.00	0.00
91.75	0.00	0.00	0.00	105.00	0.00	0.00	0.00
92.00	0.00	0.00	0.00	105.25	0.00	0.00	0.00
92.25	0.00	0.00	0.00	105.50	0.00	0.00	0.00
92.50	0.00	0.00	0.00	105.75	0.00	0.00	0.00
92.75	0.00	0.00	0.00	106.00	0.00	0.00	0.00
93.00	0.00	0.00	0.00	106.25	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
106.50	0.00	0.00	0.00	119.75	0.00	0.00	0.00
106.75	0.00	0.00	0.00	120.00	0.00	0.00	0.00
107.00	0.00	0.00	0.00	120.25	0.00	0.00	0.00
107.25	0.00	0.00	0.00	120.50	0.00	0.00	0.00
107.50	0.00	0.00	0.00	120.75	0.00	0.00	0.00
107.75	0.00	0.00	0.00	121.00	0.00	0.00	0.00
108.00	0.00	0.00	0.00	121.25	0.00	0.00	0.00
108.25	0.00	0.00	0.00	121.50	0.00	0.00	0.00
108.50	0.00	0.00	0.00	121.75	0.00	0.00	0.00
108.75	0.00	0.00	0.00	122.00	0.00	0.00	0.00
109.00	0.00	0.00	0.00	122.25	0.00	0.00	0.00
109.25	0.00	0.00	0.00	122.50	0.00	0.00	0.00
109.50	0.00	0.00	0.00	122.75	0.00	0.00	0.00
109.75	0.00	0.00	0.00	123.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	123.25	0.00	0.00	0.00
110.25	0.00	0.00	0.00	123.50	0.00	0.00	0.00
110.50	0.00	0.00	0.00	123.75	0.00	0.00	0.00
110.75	0.00	0.00	0.00	124.00	0.00	0.00	0.00
111.00	0.00	0.00	0.00	124.25	0.00	0.00	0.00
111.25	0.00	0.00	0.00	124.50	0.00	0.00	0.00
111.50	0.00	0.00	0.00	124.75	0.00	0.00	0.00
111.75	0.00	0.00	0.00	125.00	0.00	0.00	0.00
112.00	0.00	0.00	0.00	125.25	0.00	0.00	0.00
112.25	0.00	0.00	0.00	125.50	0.00	0.00	0.00
112.50	0.00	0.00	0.00	125.75	0.00	0.00	0.00
112.75	0.00	0.00	0.00	126.00	0.00	0.00	0.00
113.00	0.00	0.00	0.00	126.25	0.00	0.00	0.00
113.25	0.00	0.00	0.00	126.50	0.00	0.00	0.00
113.50	0.00	0.00	0.00	126.75	0.00	0.00	0.00
113.75	0.00	0.00	0.00	127.00	0.00	0.00	0.00
114.00	0.00	0.00	0.00	127.25	0.00	0.00	0.00
114.25	0.00	0.00	0.00	127.50	0.00	0.00	0.00
114.50	0.00	0.00	0.00	127.75	0.00	0.00	0.00
114.75	0.00	0.00	0.00	128.00	0.00	0.00	0.00
115.00	0.00	0.00	0.00	128.25	0.00	0.00	0.00
115.25	0.00	0.00	0.00	128.50	0.00	0.00	0.00
115.50	0.00	0.00	0.00	128.75	0.00	0.00	0.00
115.75	0.00	0.00	0.00	129.00	0.00	0.00	0.00
116.00	0.00	0.00	0.00	129.25	0.00	0.00	0.00
116.25	0.00	0.00	0.00	129.50	0.00	0.00	0.00
116.50	0.00	0.00	0.00	129.75	0.00	0.00	0.00
116.75	0.00	0.00	0.00	130.00	0.00	0.00	0.00
117.00	0.00	0.00	0.00	130.25	0.00	0.00	0.00
117.25	0.00	0.00	0.00	130.50	0.00	0.00	0.00
117.50	0.00	0.00	0.00	130.75	0.00	0.00	0.00
117.75	0.00	0.00	0.00	131.00	0.00	0.00	0.00
118.00	0.00	0.00	0.00	131.25	0.00	0.00	0.00
118.25	0.00	0.00	0.00	131.50	0.00	0.00	0.00
118.50	0.00	0.00	0.00	131.75	0.00	0.00	0.00
118.75	0.00	0.00	0.00	132.00	0.00	0.00	0.00
119.00	0.00	0.00	0.00	132.25	0.00	0.00	0.00
119.25	0.00	0.00	0.00	132.50	0.00	0.00	0.00
119.50	0.00	0.00	0.00	132.75	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

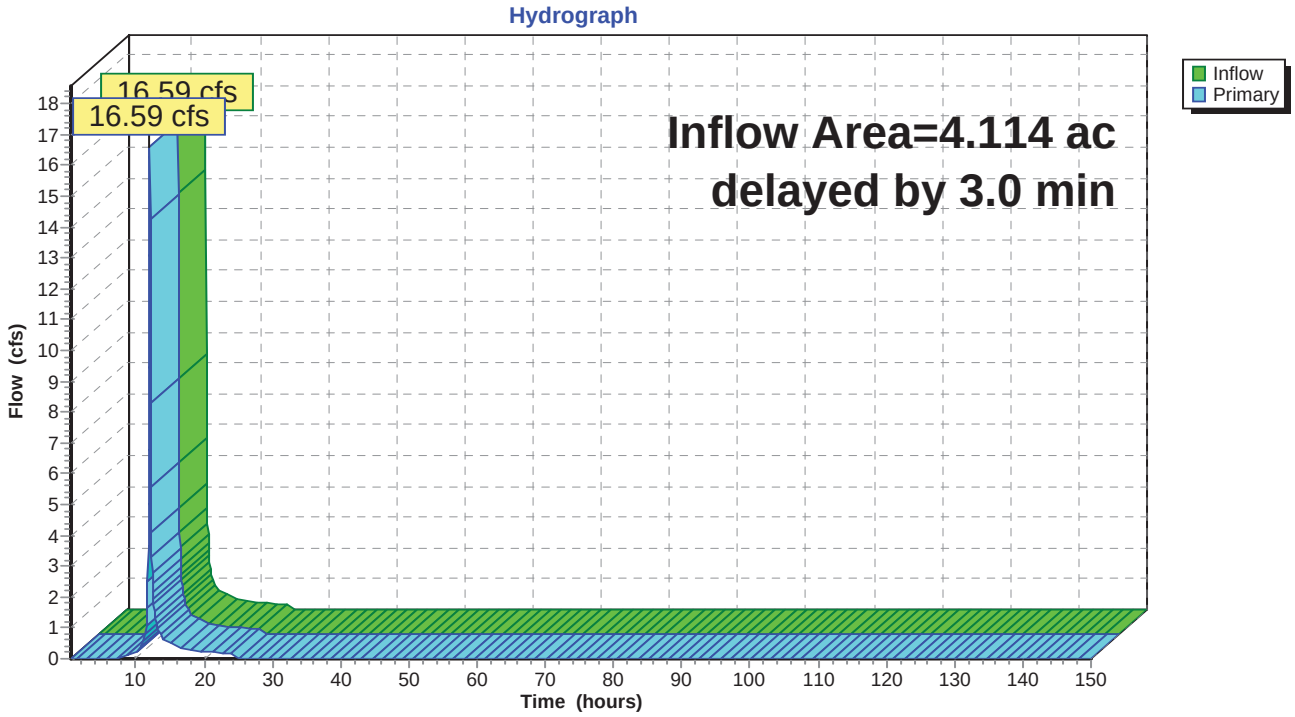
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
133.00	0.00	0.00	0.00
133.25	0.00	0.00	0.00
133.50	0.00	0.00	0.00
133.75	0.00	0.00	0.00
134.00	0.00	0.00	0.00
134.25	0.00	0.00	0.00
134.50	0.00	0.00	0.00
134.75	0.00	0.00	0.00
135.00	0.00	0.00	0.00
135.25	0.00	0.00	0.00
135.50	0.00	0.00	0.00
135.75	0.00	0.00	0.00
136.00	0.00	0.00	0.00
136.25	0.00	0.00	0.00
136.50	0.00	0.00	0.00
136.75	0.00	0.00	0.00
137.00	0.00	0.00	0.00
137.25	0.00	0.00	0.00
137.50	0.00	0.00	0.00
137.75	0.00	0.00	0.00
138.00	0.00	0.00	0.00
138.25	0.00	0.00	0.00
138.50	0.00	0.00	0.00
138.75	0.00	0.00	0.00
139.00	0.00	0.00	0.00
139.25	0.00	0.00	0.00
139.50	0.00	0.00	0.00
139.75	0.00	0.00	0.00
140.00	0.00	0.00	0.00
140.25	0.00	0.00	0.00
140.50	0.00	0.00	0.00
140.75	0.00	0.00	0.00
141.00	0.00	0.00	0.00
141.25	0.00	0.00	0.00
141.50	0.00	0.00	0.00
141.75	0.00	0.00	0.00
142.00	0.00	0.00	0.00
142.25	0.00	0.00	0.00
142.50	0.00	0.00	0.00
142.75	0.00	0.00	0.00
143.00	0.00	0.00	0.00
143.25	0.00	0.00	0.00
143.50	0.00	0.00	0.00
143.75	0.00	0.00	0.00
144.00	0.00	0.00	0.00
144.25	0.00	0.00	0.00
144.50	0.00	0.00	0.00
144.75	0.00	0.00	0.00
145.00	0.00	0.00	0.00
145.25	0.00	0.00	0.00
145.50	0.00	0.00	0.00
145.75	0.00	0.00	0.00
146.00	0.00	0.00	0.00
146.25	0.00	0.00	0.00
146.50	0.00	0.00	0.00
146.75	0.00	0.00	0.00
147.00	0.00	0.00	0.00
147.25	0.00	0.00	0.00
147.50	0.00	0.00	0.00
147.75	0.00	0.00	0.00
148.00	0.00	0.00	0.00
148.25	0.00	0.00	0.00
148.50	0.00	0.00	0.00
148.75	0.00	0.00	0.00
149.00	0.00	0.00	0.00
149.25	0.00	0.00	0.00
149.50	0.00	0.00	0.00
149.75	0.00	0.00	0.00
150.00	0.00	0.00	0.00

Summary for Link 11L: Power Block SW Piping

Inflow Area = 4.114 ac, 76.91% Impervious, Inflow Depth = 2.77" for 2.3yr-24hr event
Inflow = 16.59 cfs @ 12.02 hrs, Volume= 0.950 af
Primary = 16.59 cfs @ 12.07 hrs, Volume= 0.950 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow delayed by 3.0 min, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs

Link 11L: Power Block SW Piping



Hydrograph for Link 11L: Power Block SW Piping

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.50	0.00	**0.00**	0.00	13.75	0.72	0.00	0.74
0.75	0.00	0.00	0.00	14.00	0.64	0.00	0.66
1.00	0.00	0.00	0.00	14.25	0.58	0.00	0.59
1.25	0.00	0.00	0.00	14.50	0.55	0.00	0.56
1.50	0.00	0.00	0.00	14.75	0.53	0.00	0.53
1.75	0.00	0.00	0.00	15.00	0.50	0.00	0.51
2.00	0.00	0.00	0.00	15.25	0.47	0.00	0.48
2.25	0.00	0.00	0.00	15.50	0.45	0.00	0.45
2.50	0.00	0.00	0.00	15.75	0.42	0.00	0.42
2.75	0.00	0.00	0.00	16.00	0.39	0.00	0.40
3.00	0.00	0.00	0.00	16.25	0.37	0.00	0.37
3.25	0.00	0.00	0.00	16.50	0.36	0.00	0.36
3.50	0.00	0.00	0.00	16.75	0.35	0.00	0.35
3.75	0.00	0.00	0.00	17.00	0.34	0.00	0.34
4.00	0.00	0.00	0.00	17.25	0.33	0.00	0.33
4.25	0.00	0.00	0.00	17.50	0.32	0.00	0.32
4.50	0.00	0.00	0.00	17.75	0.31	0.00	0.31
4.75	0.00	0.00	0.00	18.00	0.30	0.00	0.30
5.00	0.00	0.00	0.00	18.25	0.29	0.00	0.29
5.25	0.00	0.00	0.00	18.50	0.28	0.00	0.28
5.50	0.00	0.00	0.00	18.75	0.27	0.00	0.27
5.75	0.00	0.00	0.00	19.00	0.26	0.00	0.26
6.00	0.00	0.00	0.00	19.25	0.25	0.00	0.25
6.25	0.00	0.00	0.00	19.50	0.24	0.00	0.24
6.50	0.00	0.00	0.00	19.75	0.23	0.00	0.23
6.75	0.01	0.00	0.01	20.00	0.22	0.00	0.22
7.00	0.02	0.00	0.01	20.25	0.21	0.00	0.21
7.25	0.02	0.00	0.02	20.50	0.21	0.00	0.21
7.50	0.03	0.00	0.03	20.75	0.21	0.00	0.21
7.75	0.04	0.00	0.04	21.00	0.21	0.00	0.21
8.00	0.05	0.00	0.05	21.25	0.21	0.00	0.21
8.25	0.06	0.00	0.06	21.50	0.20	0.00	0.20
8.50	0.08	0.00	0.08	21.75	0.20	0.00	0.20
8.75	0.10	0.00	0.10	22.00	0.20	0.00	0.20
9.00	0.12	0.00	0.12	22.25	0.20	0.00	0.20
9.25	0.14	0.00	0.14	22.50	0.20	0.00	0.20
9.50	0.16	0.00	0.16	22.75	0.19	0.00	0.19
9.75	0.18	0.00	0.17	23.00	0.19	0.00	0.19
10.00	0.22	0.00	0.21	23.25	0.19	0.00	0.19
10.25	0.26	0.00	0.25	23.50	0.19	0.00	0.19
10.50	0.33	0.00	0.31	23.75	0.19	0.00	0.19
10.75	0.41	0.00	0.39	24.00	0.18	0.00	0.18
11.00	0.52	0.00	0.49	24.25	0.02	0.00	0.05
11.25	0.69	0.00	0.64	24.50	0.00	0.00	0.00
11.50	0.97	0.00	0.91	24.75	0.00	0.00	0.00
11.75	3.61	0.00	2.49	25.00	0.00	0.00	0.00
12.00	**16.24**	0.00	**13.09**	25.25	0.00	0.00	0.00
12.25	4.11	0.00	**5.58**	25.50	0.00	0.00	0.00
12.50	1.96	0.00	2.18	25.75	0.00	0.00	0.00
12.75	1.31	0.00	1.38	26.00	0.00	0.00	0.00
13.00	1.09	0.00	1.13	26.25	0.00	0.00	0.00
13.25	0.93	0.00	0.95	26.50	0.00	0.00	0.00
13.50	0.82	0.00	0.84	26.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
27.00	0.00	0.00	0.00	40.25	0.00	0.00	0.00
27.25	0.00	0.00	0.00	40.50	0.00	0.00	0.00
27.50	0.00	0.00	0.00	40.75	0.00	0.00	0.00
27.75	0.00	0.00	0.00	41.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	41.25	0.00	0.00	0.00
28.25	0.00	0.00	0.00	41.50	0.00	0.00	0.00
28.50	0.00	0.00	0.00	41.75	0.00	0.00	0.00
28.75	0.00	0.00	0.00	42.00	0.00	0.00	0.00
29.00	0.00	0.00	0.00	42.25	0.00	0.00	0.00
29.25	0.00	0.00	0.00	42.50	0.00	0.00	0.00
29.50	0.00	0.00	0.00	42.75	0.00	0.00	0.00
29.75	0.00	0.00	0.00	43.00	0.00	0.00	0.00
30.00	0.00	0.00	0.00	43.25	0.00	0.00	0.00
30.25	0.00	0.00	0.00	43.50	0.00	0.00	0.00
30.50	0.00	0.00	0.00	43.75	0.00	0.00	0.00
30.75	0.00	0.00	0.00	44.00	0.00	0.00	0.00
31.00	0.00	0.00	0.00	44.25	0.00	0.00	0.00
31.25	0.00	0.00	0.00	44.50	0.00	0.00	0.00
31.50	0.00	0.00	0.00	44.75	0.00	0.00	0.00
31.75	0.00	0.00	0.00	45.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	45.25	0.00	0.00	0.00
32.25	0.00	0.00	0.00	45.50	0.00	0.00	0.00
32.50	0.00	0.00	0.00	45.75	0.00	0.00	0.00
32.75	0.00	0.00	0.00	46.00	0.00	0.00	0.00
33.00	0.00	0.00	0.00	46.25	0.00	0.00	0.00
33.25	0.00	0.00	0.00	46.50	0.00	0.00	0.00
33.50	0.00	0.00	0.00	46.75	0.00	0.00	0.00
33.75	0.00	0.00	0.00	47.00	0.00	0.00	0.00
34.00	0.00	0.00	0.00	47.25	0.00	0.00	0.00
34.25	0.00	0.00	0.00	47.50	0.00	0.00	0.00
34.50	0.00	0.00	0.00	47.75	0.00	0.00	0.00
34.75	0.00	0.00	0.00	48.00	0.00	0.00	0.00
35.00	0.00	0.00	0.00	48.25	0.00	0.00	0.00
35.25	0.00	0.00	0.00	48.50	0.00	0.00	0.00
35.50	0.00	0.00	0.00	48.75	0.00	0.00	0.00
35.75	0.00	0.00	0.00	49.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	49.25	0.00	0.00	0.00
36.25	0.00	0.00	0.00	49.50	0.00	0.00	0.00
36.50	0.00	0.00	0.00	49.75	0.00	0.00	0.00
36.75	0.00	0.00	0.00	50.00	0.00	0.00	0.00
37.00	0.00	0.00	0.00	50.25	0.00	0.00	0.00
37.25	0.00	0.00	0.00	50.50	0.00	0.00	0.00
37.50	0.00	0.00	0.00	50.75	0.00	0.00	0.00
37.75	0.00	0.00	0.00	51.00	0.00	0.00	0.00
38.00	0.00	0.00	0.00	51.25	0.00	0.00	0.00
38.25	0.00	0.00	0.00	51.50	0.00	0.00	0.00
38.50	0.00	0.00	0.00	51.75	0.00	0.00	0.00
38.75	0.00	0.00	0.00	52.00	0.00	0.00	0.00
39.00	0.00	0.00	0.00	52.25	0.00	0.00	0.00
39.25	0.00	0.00	0.00	52.50	0.00	0.00	0.00
39.50	0.00	0.00	0.00	52.75	0.00	0.00	0.00
39.75	0.00	0.00	0.00	53.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	53.25	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
53.50	0.00	0.00	0.00	66.75	0.00	0.00	0.00
53.75	0.00	0.00	0.00	67.00	0.00	0.00	0.00
54.00	0.00	0.00	0.00	67.25	0.00	0.00	0.00
54.25	0.00	0.00	0.00	67.50	0.00	0.00	0.00
54.50	0.00	0.00	0.00	67.75	0.00	0.00	0.00
54.75	0.00	0.00	0.00	68.00	0.00	0.00	0.00
55.00	0.00	0.00	0.00	68.25	0.00	0.00	0.00
55.25	0.00	0.00	0.00	68.50	0.00	0.00	0.00
55.50	0.00	0.00	0.00	68.75	0.00	0.00	0.00
55.75	0.00	0.00	0.00	69.00	0.00	0.00	0.00
56.00	0.00	0.00	0.00	69.25	0.00	0.00	0.00
56.25	0.00	0.00	0.00	69.50	0.00	0.00	0.00
56.50	0.00	0.00	0.00	69.75	0.00	0.00	0.00
56.75	0.00	0.00	0.00	70.00	0.00	0.00	0.00
57.00	0.00	0.00	0.00	70.25	0.00	0.00	0.00
57.25	0.00	0.00	0.00	70.50	0.00	0.00	0.00
57.50	0.00	0.00	0.00	70.75	0.00	0.00	0.00
57.75	0.00	0.00	0.00	71.00	0.00	0.00	0.00
58.00	0.00	0.00	0.00	71.25	0.00	0.00	0.00
58.25	0.00	0.00	0.00	71.50	0.00	0.00	0.00
58.50	0.00	0.00	0.00	71.75	0.00	0.00	0.00
58.75	0.00	0.00	0.00	72.00	0.00	0.00	0.00
59.00	0.00	0.00	0.00	72.25	0.00	0.00	0.00
59.25	0.00	0.00	0.00	72.50	0.00	0.00	0.00
59.50	0.00	0.00	0.00	72.75	0.00	0.00	0.00
59.75	0.00	0.00	0.00	73.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	73.25	0.00	0.00	0.00
60.25	0.00	0.00	0.00	73.50	0.00	0.00	0.00
60.50	0.00	0.00	0.00	73.75	0.00	0.00	0.00
60.75	0.00	0.00	0.00	74.00	0.00	0.00	0.00
61.00	0.00	0.00	0.00	74.25	0.00	0.00	0.00
61.25	0.00	0.00	0.00	74.50	0.00	0.00	0.00
61.50	0.00	0.00	0.00	74.75	0.00	0.00	0.00
61.75	0.00	0.00	0.00	75.00	0.00	0.00	0.00
62.00	0.00	0.00	0.00	75.25	0.00	0.00	0.00
62.25	0.00	0.00	0.00	75.50	0.00	0.00	0.00
62.50	0.00	0.00	0.00	75.75	0.00	0.00	0.00
62.75	0.00	0.00	0.00	76.00	0.00	0.00	0.00
63.00	0.00	0.00	0.00	76.25	0.00	0.00	0.00
63.25	0.00	0.00	0.00	76.50	0.00	0.00	0.00
63.50	0.00	0.00	0.00	76.75	0.00	0.00	0.00
63.75	0.00	0.00	0.00	77.00	0.00	0.00	0.00
64.00	0.00	0.00	0.00	77.25	0.00	0.00	0.00
64.25	0.00	0.00	0.00	77.50	0.00	0.00	0.00
64.50	0.00	0.00	0.00	77.75	0.00	0.00	0.00
64.75	0.00	0.00	0.00	78.00	0.00	0.00	0.00
65.00	0.00	0.00	0.00	78.25	0.00	0.00	0.00
65.25	0.00	0.00	0.00	78.50	0.00	0.00	0.00
65.50	0.00	0.00	0.00	78.75	0.00	0.00	0.00
65.75	0.00	0.00	0.00	79.00	0.00	0.00	0.00
66.00	0.00	0.00	0.00	79.25	0.00	0.00	0.00
66.25	0.00	0.00	0.00	79.50	0.00	0.00	0.00
66.50	0.00	0.00	0.00	79.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
80.00	0.00	0.00	0.00	93.25	0.00	0.00	0.00
80.25	0.00	0.00	0.00	93.50	0.00	0.00	0.00
80.50	0.00	0.00	0.00	93.75	0.00	0.00	0.00
80.75	0.00	0.00	0.00	94.00	0.00	0.00	0.00
81.00	0.00	0.00	0.00	94.25	0.00	0.00	0.00
81.25	0.00	0.00	0.00	94.50	0.00	0.00	0.00
81.50	0.00	0.00	0.00	94.75	0.00	0.00	0.00
81.75	0.00	0.00	0.00	95.00	0.00	0.00	0.00
82.00	0.00	0.00	0.00	95.25	0.00	0.00	0.00
82.25	0.00	0.00	0.00	95.50	0.00	0.00	0.00
82.50	0.00	0.00	0.00	95.75	0.00	0.00	0.00
82.75	0.00	0.00	0.00	96.00	0.00	0.00	0.00
83.00	0.00	0.00	0.00	96.25	0.00	0.00	0.00
83.25	0.00	0.00	0.00	96.50	0.00	0.00	0.00
83.50	0.00	0.00	0.00	96.75	0.00	0.00	0.00
83.75	0.00	0.00	0.00	97.00	0.00	0.00	0.00
84.00	0.00	0.00	0.00	97.25	0.00	0.00	0.00
84.25	0.00	0.00	0.00	97.50	0.00	0.00	0.00
84.50	0.00	0.00	0.00	97.75	0.00	0.00	0.00
84.75	0.00	0.00	0.00	98.00	0.00	0.00	0.00
85.00	0.00	0.00	0.00	98.25	0.00	0.00	0.00
85.25	0.00	0.00	0.00	98.50	0.00	0.00	0.00
85.50	0.00	0.00	0.00	98.75	0.00	0.00	0.00
85.75	0.00	0.00	0.00	99.00	0.00	0.00	0.00
86.00	0.00	0.00	0.00	99.25	0.00	0.00	0.00
86.25	0.00	0.00	0.00	99.50	0.00	0.00	0.00
86.50	0.00	0.00	0.00	99.75	0.00	0.00	0.00
86.75	0.00	0.00	0.00	100.00	0.00	0.00	0.00
87.00	0.00	0.00	0.00	100.25	0.00	0.00	0.00
87.25	0.00	0.00	0.00	100.50	0.00	0.00	0.00
87.50	0.00	0.00	0.00	100.75	0.00	0.00	0.00
87.75	0.00	0.00	0.00	101.00	0.00	0.00	0.00
88.00	0.00	0.00	0.00	101.25	0.00	0.00	0.00
88.25	0.00	0.00	0.00	101.50	0.00	0.00	0.00
88.50	0.00	0.00	0.00	101.75	0.00	0.00	0.00
88.75	0.00	0.00	0.00	102.00	0.00	0.00	0.00
89.00	0.00	0.00	0.00	102.25	0.00	0.00	0.00
89.25	0.00	0.00	0.00	102.50	0.00	0.00	0.00
89.50	0.00	0.00	0.00	102.75	0.00	0.00	0.00
89.75	0.00	0.00	0.00	103.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	103.25	0.00	0.00	0.00
90.25	0.00	0.00	0.00	103.50	0.00	0.00	0.00
90.50	0.00	0.00	0.00	103.75	0.00	0.00	0.00
90.75	0.00	0.00	0.00	104.00	0.00	0.00	0.00
91.00	0.00	0.00	0.00	104.25	0.00	0.00	0.00
91.25	0.00	0.00	0.00	104.50	0.00	0.00	0.00
91.50	0.00	0.00	0.00	104.75	0.00	0.00	0.00
91.75	0.00	0.00	0.00	105.00	0.00	0.00	0.00
92.00	0.00	0.00	0.00	105.25	0.00	0.00	0.00
92.25	0.00	0.00	0.00	105.50	0.00	0.00	0.00
92.50	0.00	0.00	0.00	105.75	0.00	0.00	0.00
92.75	0.00	0.00	0.00	106.00	0.00	0.00	0.00
93.00	0.00	0.00	0.00	106.25	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

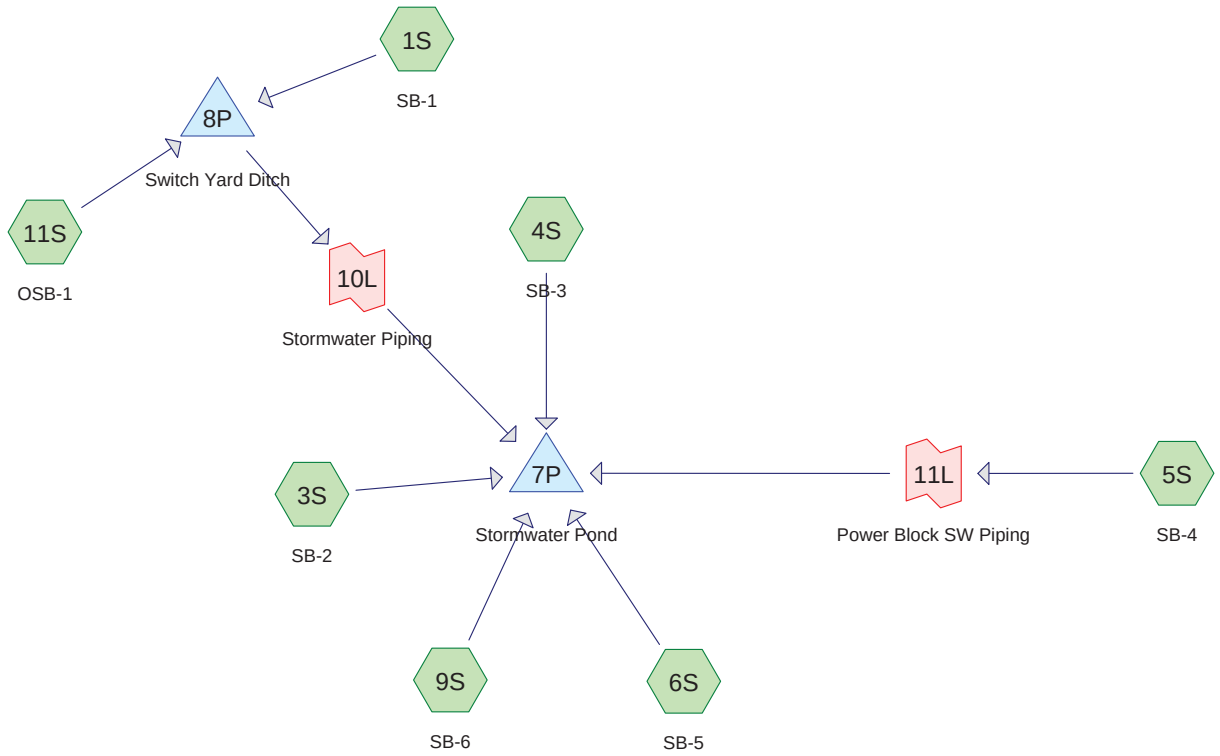
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
106.50	0.00	0.00	0.00	119.75	0.00	0.00	0.00
106.75	0.00	0.00	0.00	120.00	0.00	0.00	0.00
107.00	0.00	0.00	0.00	120.25	0.00	0.00	0.00
107.25	0.00	0.00	0.00	120.50	0.00	0.00	0.00
107.50	0.00	0.00	0.00	120.75	0.00	0.00	0.00
107.75	0.00	0.00	0.00	121.00	0.00	0.00	0.00
108.00	0.00	0.00	0.00	121.25	0.00	0.00	0.00
108.25	0.00	0.00	0.00	121.50	0.00	0.00	0.00
108.50	0.00	0.00	0.00	121.75	0.00	0.00	0.00
108.75	0.00	0.00	0.00	122.00	0.00	0.00	0.00
109.00	0.00	0.00	0.00	122.25	0.00	0.00	0.00
109.25	0.00	0.00	0.00	122.50	0.00	0.00	0.00
109.50	0.00	0.00	0.00	122.75	0.00	0.00	0.00
109.75	0.00	0.00	0.00	123.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	123.25	0.00	0.00	0.00
110.25	0.00	0.00	0.00	123.50	0.00	0.00	0.00
110.50	0.00	0.00	0.00	123.75	0.00	0.00	0.00
110.75	0.00	0.00	0.00	124.00	0.00	0.00	0.00
111.00	0.00	0.00	0.00	124.25	0.00	0.00	0.00
111.25	0.00	0.00	0.00	124.50	0.00	0.00	0.00
111.50	0.00	0.00	0.00	124.75	0.00	0.00	0.00
111.75	0.00	0.00	0.00	125.00	0.00	0.00	0.00
112.00	0.00	0.00	0.00	125.25	0.00	0.00	0.00
112.25	0.00	0.00	0.00	125.50	0.00	0.00	0.00
112.50	0.00	0.00	0.00	125.75	0.00	0.00	0.00
112.75	0.00	0.00	0.00	126.00	0.00	0.00	0.00
113.00	0.00	0.00	0.00	126.25	0.00	0.00	0.00
113.25	0.00	0.00	0.00	126.50	0.00	0.00	0.00
113.50	0.00	0.00	0.00	126.75	0.00	0.00	0.00
113.75	0.00	0.00	0.00	127.00	0.00	0.00	0.00
114.00	0.00	0.00	0.00	127.25	0.00	0.00	0.00
114.25	0.00	0.00	0.00	127.50	0.00	0.00	0.00
114.50	0.00	0.00	0.00	127.75	0.00	0.00	0.00
114.75	0.00	0.00	0.00	128.00	0.00	0.00	0.00
115.00	0.00	0.00	0.00	128.25	0.00	0.00	0.00
115.25	0.00	0.00	0.00	128.50	0.00	0.00	0.00
115.50	0.00	0.00	0.00	128.75	0.00	0.00	0.00
115.75	0.00	0.00	0.00	129.00	0.00	0.00	0.00
116.00	0.00	0.00	0.00	129.25	0.00	0.00	0.00
116.25	0.00	0.00	0.00	129.50	0.00	0.00	0.00
116.50	0.00	0.00	0.00	129.75	0.00	0.00	0.00
116.75	0.00	0.00	0.00	130.00	0.00	0.00	0.00
117.00	0.00	0.00	0.00	130.25	0.00	0.00	0.00
117.25	0.00	0.00	0.00	130.50	0.00	0.00	0.00
117.50	0.00	0.00	0.00	130.75	0.00	0.00	0.00
117.75	0.00	0.00	0.00	131.00	0.00	0.00	0.00
118.00	0.00	0.00	0.00	131.25	0.00	0.00	0.00
118.25	0.00	0.00	0.00	131.50	0.00	0.00	0.00
118.50	0.00	0.00	0.00	131.75	0.00	0.00	0.00
118.75	0.00	0.00	0.00	132.00	0.00	0.00	0.00
119.00	0.00	0.00	0.00	132.25	0.00	0.00	0.00
119.25	0.00	0.00	0.00	132.50	0.00	0.00	0.00
119.50	0.00	0.00	0.00	132.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
133.00	0.00	0.00	0.00
133.25	0.00	0.00	0.00
133.50	0.00	0.00	0.00
133.75	0.00	0.00	0.00
134.00	0.00	0.00	0.00
134.25	0.00	0.00	0.00
134.50	0.00	0.00	0.00
134.75	0.00	0.00	0.00
135.00	0.00	0.00	0.00
135.25	0.00	0.00	0.00
135.50	0.00	0.00	0.00
135.75	0.00	0.00	0.00
136.00	0.00	0.00	0.00
136.25	0.00	0.00	0.00
136.50	0.00	0.00	0.00
136.75	0.00	0.00	0.00
137.00	0.00	0.00	0.00
137.25	0.00	0.00	0.00
137.50	0.00	0.00	0.00
137.75	0.00	0.00	0.00
138.00	0.00	0.00	0.00
138.25	0.00	0.00	0.00
138.50	0.00	0.00	0.00
138.75	0.00	0.00	0.00
139.00	0.00	0.00	0.00
139.25	0.00	0.00	0.00
139.50	0.00	0.00	0.00
139.75	0.00	0.00	0.00
140.00	0.00	0.00	0.00
140.25	0.00	0.00	0.00
140.50	0.00	0.00	0.00
140.75	0.00	0.00	0.00
141.00	0.00	0.00	0.00
141.25	0.00	0.00	0.00
141.50	0.00	0.00	0.00
141.75	0.00	0.00	0.00
142.00	0.00	0.00	0.00
142.25	0.00	0.00	0.00
142.50	0.00	0.00	0.00
142.75	0.00	0.00	0.00
143.00	0.00	0.00	0.00
143.25	0.00	0.00	0.00
143.50	0.00	0.00	0.00
143.75	0.00	0.00	0.00
144.00	0.00	0.00	0.00
144.25	0.00	0.00	0.00
144.50	0.00	0.00	0.00
144.75	0.00	0.00	0.00
145.00	0.00	0.00	0.00
145.25	0.00	0.00	0.00
145.50	0.00	0.00	0.00
145.75	0.00	0.00	0.00
146.00	0.00	0.00	0.00
146.25	0.00	0.00	0.00
146.50	0.00	0.00	0.00
146.75	0.00	0.00	0.00
147.00	0.00	0.00	0.00
147.25	0.00	0.00	0.00
147.50	0.00	0.00	0.00
147.75	0.00	0.00	0.00
148.00	0.00	0.00	0.00
148.25	0.00	0.00	0.00
148.50	0.00	0.00	0.00
148.75	0.00	0.00	0.00
149.00	0.00	0.00	0.00
149.25	0.00	0.00	0.00
149.50	0.00	0.00	0.00
149.75	0.00	0.00	0.00
150.00	0.00	0.00	0.00

Attachment 6

HydroCAD Report - 25yr-24hr



Subcat Reach Pond Link

Routing Diagram for 190285 Post-Development Stormwater Design REV 2
Prepared by Black & Veatch, Printed 1/23/2017
HydroCAD® 10.00-14 s/n 05108 © 2015 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
16.580	39	>75% Grass cover, Good, HSG A (1S, 3S, 5S, 6S, 11S)
27.664	98	Gravel surface, HSG A (1S, 3S, 4S, 5S, 6S, 9S, 11S)
6.050	98	Paved roads w/curbs & sewers, HSG A (1S, 4S, 5S, 6S)
0.570	98	Roofs, HSG A (5S, 6S)
4.830	98	Water Surface, HSG A (1S, 6S)
55.694	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
55.694	HSG A	1S, 3S, 4S, 5S, 6S, 9S, 11S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
55.694		**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
16.580	0.000	0.000	0.000	0.000	16.580	>75% Grass cover, Good	1S, 3S, 5S, 6S, 11S
27.664	0.000	0.000	0.000	0.000	27.664	Gravel surface	1S, 3S, 4S, 5S, 6S, 9S, 11S
6.050	0.000	0.000	0.000	0.000	6.050	Paved roads w/curbs & sewers	1S, 4S, 5S, 6S
0.570	0.000	0.000	0.000	0.000	0.570	Roofs	5S, 6S
4.830	0.000	0.000	0.000	0.000	4.830	Water Surface	1S, 6S
55.694	**0.000**	**0.000**	**0.000**	**0.000**	**55.694**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	4S	0.00	0.00	351.0	0.0030	0.009	24.0	0.0	0.0
2	8P	74.00	73.50	200.0	0.0025	0.009	48.0	0.0	0.0

Time span=0.50-150.00 hrs, dt=0.05 hrs, 2991 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SB-1 Runoff Area=18.310 ac 51.61% Impervious Runoff Depth=4.08"
Flow Length=1,416' Tc=123.5 min CN=69 Runoff=22.97 cfs 6.224 af

Subcatchment 3S: SB-2 Runoff Area=6.530 ac 83.46% Impervious Runoff Depth=6.26"
Flow Length=422' Tc=7.0 min CN=88 Runoff=63.43 cfs 3.404 af

Subcatchment 4S: SB-3 Runoff Area=6.460 ac 100.00% Impervious Runoff Depth=7.44"
Flow Length=640' Slope=0.0030 '/' Tc=6.1 min CN=98 Runoff=68.62 cfs 4.005 af

Subcatchment 5S: SB-4 Runoff Area=4.114 ac 76.91% Impervious Runoff Depth=5.79"
Flow Length=590' Slope=0.0030 '/' Tc=10.8 min CN=84 Runoff=33.55 cfs 1.984 af

Subcatchment 6S: SB-5 Runoff Area=13.820 ac 60.85% Impervious Runoff Depth=4.75"
Flow Length=365' Slope=0.0025 '/' Tc=48.8 min CN=75 Runoff=40.74 cfs 5.475 af

Subcatchment 9S: SB-6 Runoff Area=0.830 ac 100.00% Impervious Runoff Depth=7.44"
Flow Length=290' Slope=0.0030 '/' Tc=5.1 min CN=98 Runoff=9.16 cfs 0.515 af

Subcatchment 11S: OSB-1 Runoff Area=5.630 ac 95.03% Impervious Runoff Depth=7.08"
Flow Length=396' Slope=0.0040 '/' Tc=6.4 min CN=95 Runoff=58.46 cfs 3.323 af

Pond 7P: Stormwater Pond Peak Elev=71.69' Storage=7.872 af Inflow=194.82 cfs 24.930 af
Discarded=30.65 cfs 24.930 af Secondary=0.00 cfs 0.000 af Outflow=30.65 cfs 24.930 af

Pond 8P: Switch Yard Ditch Peak Elev=76.46' Storage=43,078 cf Inflow=60.34 cfs 9.547 af
48.0" Round Culvert n=0.009 L=200.0' S=0.0025 '/' Outflow=30.85 cfs 9.547 af

Link 10L: Stormwater Piping delayed by 3.0 min Inflow=30.85 cfs 9.547 af
Primary=30.85 cfs 9.547 af

Link 11L: Power Block SW Piping delayed by 3.0 min Inflow=33.55 cfs 1.984 af
Primary=33.55 cfs 1.984 af

Total Runoff Area = 55.694 ac Runoff Volume = 24.930 af Average Runoff Depth = 5.37"
29.77% Pervious = 16.580 ac 70.23% Impervious = 39.114 ac

Summary for Subcatchment 1S: SB-1

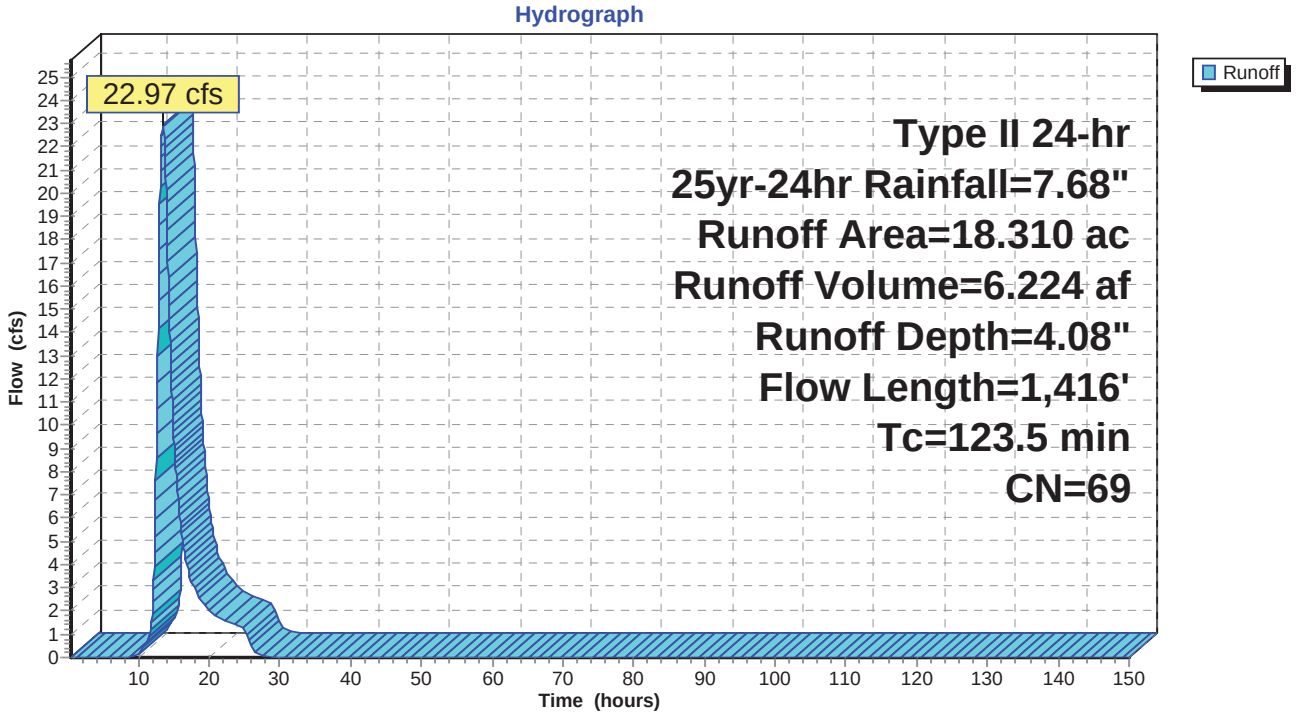
Runoff = 22.97 cfs @ 13.51 hrs, Volume= 6.224 af, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
	0.490	98	Paved roads w/curbs & sewers, HSG A
	0.730	98	Water Surface, HSG A
	8.860	39	>75% Grass cover, Good, HSG A
*	8.230	98	Gravel surface, HSG A
	18.310	69	Weighted Average
	8.860		48.39% Pervious Area
	9.450		51.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
95.0	300	0.0030	0.05		**Sheet Flow, Overland Flow - Open Area** Grass: Bermuda n= 0.410 P2= 4.50"
18.3	485	0.0040	0.44		**Shallow Concentrated Flow, Overland Flow - Open Area** Short Grass Pasture Kv= 7.0 fps
10.2	631	0.0060	1.03	149.67	**Channel Flow, Grassed Ditch** Area= 145.0 sf Perim= 1,366.0' r= 0.11' n= 0.025 Short grass
123.5	1,416	Total			

Subcatchment 1S: SB-1



Hydrograph for Subcatchment 1S: SB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	2.89	21.95
0.75	0.06	0.00	0.00	14.00	6.30	2.95	19.58
1.00	0.08	0.00	0.00	14.25	6.37	3.00	16.39
1.25	0.10	0.00	0.00	14.50	6.43	3.05	13.57
1.50	0.12	0.00	0.00	14.75	6.50	3.10	11.44
1.75	0.15	0.00	0.00	15.00	6.55	3.15	9.76
2.00	0.17	0.00	0.00	15.25	6.61	3.20	8.36
2.25	0.19	0.00	0.00	15.50	6.66	3.24	7.25
2.50	0.22	0.00	0.00	15.75	6.71	3.28	6.36
2.75	0.24	0.00	0.00	16.00	6.76	3.32	5.64
3.00	0.26	0.00	0.00	16.25	6.80	3.35	5.05
3.25	0.29	0.00	0.00	16.50	6.84	3.39	4.57
3.50	0.32	0.00	0.00	16.75	6.89	3.42	4.17
3.75	0.34	0.00	0.00	17.00	6.93	3.45	3.83
4.00	0.37	0.00	0.00	17.25	6.96	3.48	3.54
4.25	0.40	0.00	0.00	17.50	7.00	3.52	3.30
4.50	0.42	0.00	0.00	17.75	7.04	3.55	3.10
4.75	0.45	0.00	0.00	18.00	7.07	3.57	2.93
5.00	0.48	0.00	0.00	18.25	7.11	3.60	2.78
5.25	0.52	0.00	0.00	18.50	7.14	3.63	2.64
5.50	0.55	0.00	0.00	18.75	7.17	3.66	2.52
5.75	0.58	0.00	0.00	19.00	7.20	3.68	2.41
6.00	0.61	0.00	0.00	19.25	7.23	3.70	2.32
6.25	0.65	0.00	0.00	19.50	7.26	3.73	2.24
6.50	0.69	0.00	0.00	19.75	7.29	3.75	2.16
6.75	0.72	0.00	0.00	20.00	7.31	3.77	2.08
7.00	0.76	0.00	0.00	20.25	7.34	3.79	2.01
7.25	0.80	0.00	0.00	20.50	7.36	3.81	1.94
7.50	0.84	0.00	0.00	20.75	7.39	3.83	1.87
7.75	0.88	0.00	0.00	21.00	7.41	3.85	1.80
8.00	0.92	0.00	0.00	21.25	7.43	3.87	1.74
8.25	0.97	0.00	0.00	21.50	7.46	3.89	1.68
8.50	1.02	0.00	0.00	21.75	7.48	3.91	1.64
8.75	1.07	0.01	0.00	22.00	7.50	3.93	1.60
9.00	1.13	0.01	0.01	22.25	7.53	3.95	1.56
9.25	1.19	0.02	0.03	22.50	7.55	3.97	1.54
9.50	1.25	0.03	0.06	22.75	7.57	3.99	1.51
9.75	1.32	0.04	0.11	23.00	7.59	4.01	1.49
10.00	1.39	0.05	0.17	23.25	7.62	4.02	1.47
10.25	1.47	0.07	0.24	23.50	7.64	4.04	1.46
10.50	1.57	0.09	0.33	23.75	7.66	4.06	1.44
10.75	1.68	0.11	0.44	24.00	**7.68**	**4.08**	1.42
11.00	1.80	0.15	0.58	24.25	7.68	4.08	1.41
11.25	1.97	0.20	0.75	24.50	7.68	4.08	1.37
11.50	2.17	0.28	0.99	24.75	7.68	4.08	1.31
11.75	2.97	0.65	1.31	25.00	7.68	4.08	1.20
12.00	5.09	2.02	2.03	25.25	7.68	4.08	1.04
12.25	5.42	2.27	3.90	25.50	7.68	4.08	0.86
12.50	5.64	2.44	7.63	25.75	7.68	4.08	0.68
12.75	5.80	2.56	12.99	26.00	7.68	4.08	0.51
13.00	5.93	2.66	18.60	26.25	7.68	4.08	0.38
13.25	6.04	2.74	22.04	26.50	7.68	4.08	0.28
13.50	6.14	2.82	**22.97**	26.75	7.68	4.08	0.21

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	4.08	0.15	40.25	7.68	4.08	0.00
27.25	7.68	4.08	0.11	40.50	7.68	4.08	0.00
27.50	7.68	4.08	0.08	40.75	7.68	4.08	0.00
27.75	7.68	4.08	0.06	41.00	7.68	4.08	0.00
28.00	7.68	4.08	0.05	41.25	7.68	4.08	0.00
28.25	7.68	4.08	0.03	41.50	7.68	4.08	0.00
28.50	7.68	4.08	0.02	41.75	7.68	4.08	0.00
28.75	7.68	4.08	0.02	42.00	7.68	4.08	0.00
29.00	7.68	4.08	0.01	42.25	7.68	4.08	0.00
29.25	7.68	4.08	0.01	42.50	7.68	4.08	0.00
29.50	7.68	4.08	0.01	42.75	7.68	4.08	0.00
29.75	7.68	4.08	0.00	43.00	7.68	4.08	0.00
30.00	7.68	4.08	0.00	43.25	7.68	4.08	0.00
30.25	7.68	4.08	0.00	43.50	7.68	4.08	0.00
30.50	7.68	4.08	0.00	43.75	7.68	4.08	0.00
30.75	7.68	4.08	0.00	44.00	7.68	4.08	0.00
31.00	7.68	4.08	0.00	44.25	7.68	4.08	0.00
31.25	7.68	4.08	0.00	44.50	7.68	4.08	0.00
31.50	7.68	4.08	0.00	44.75	7.68	4.08	0.00
31.75	7.68	4.08	0.00	45.00	7.68	4.08	0.00
32.00	7.68	4.08	0.00	45.25	7.68	4.08	0.00
32.25	7.68	4.08	0.00	45.50	7.68	4.08	0.00
32.50	7.68	4.08	0.00	45.75	7.68	4.08	0.00
32.75	7.68	4.08	0.00	46.00	7.68	4.08	0.00
33.00	7.68	4.08	0.00	46.25	7.68	4.08	0.00
33.25	7.68	4.08	0.00	46.50	7.68	4.08	0.00
33.50	7.68	4.08	0.00	46.75	7.68	4.08	0.00
33.75	7.68	4.08	0.00	47.00	7.68	4.08	0.00
34.00	7.68	4.08	0.00	47.25	7.68	4.08	0.00
34.25	7.68	4.08	0.00	47.50	7.68	4.08	0.00
34.50	7.68	4.08	0.00	47.75	7.68	4.08	0.00
34.75	7.68	4.08	0.00	48.00	7.68	4.08	0.00
35.00	7.68	4.08	0.00	48.25	7.68	4.08	0.00
35.25	7.68	4.08	0.00	48.50	7.68	4.08	0.00
35.50	7.68	4.08	0.00	48.75	7.68	4.08	0.00
35.75	7.68	4.08	0.00	49.00	7.68	4.08	0.00
36.00	7.68	4.08	0.00	49.25	7.68	4.08	0.00
36.25	7.68	4.08	0.00	49.50	7.68	4.08	0.00
36.50	7.68	4.08	0.00	49.75	7.68	4.08	0.00
36.75	7.68	4.08	0.00	50.00	7.68	4.08	0.00
37.00	7.68	4.08	0.00	50.25	7.68	4.08	0.00
37.25	7.68	4.08	0.00	50.50	7.68	4.08	0.00
37.50	7.68	4.08	0.00	50.75	7.68	4.08	0.00
37.75	7.68	4.08	0.00	51.00	7.68	4.08	0.00
38.00	7.68	4.08	0.00	51.25	7.68	4.08	0.00
38.25	7.68	4.08	0.00	51.50	7.68	4.08	0.00
38.50	7.68	4.08	0.00	51.75	7.68	4.08	0.00
38.75	7.68	4.08	0.00	52.00	7.68	4.08	0.00
39.00	7.68	4.08	0.00	52.25	7.68	4.08	0.00
39.25	7.68	4.08	0.00	52.50	7.68	4.08	0.00
39.50	7.68	4.08	0.00	52.75	7.68	4.08	0.00
39.75	7.68	4.08	0.00	53.00	7.68	4.08	0.00
40.00	7.68	4.08	0.00	53.25	7.68	4.08	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	4.08	0.00	66.75	7.68	4.08	0.00
53.75	7.68	4.08	0.00	67.00	7.68	4.08	0.00
54.00	7.68	4.08	0.00	67.25	7.68	4.08	0.00
54.25	7.68	4.08	0.00	67.50	7.68	4.08	0.00
54.50	7.68	4.08	0.00	67.75	7.68	4.08	0.00
54.75	7.68	4.08	0.00	68.00	7.68	4.08	0.00
55.00	7.68	4.08	0.00	68.25	7.68	4.08	0.00
55.25	7.68	4.08	0.00	68.50	7.68	4.08	0.00
55.50	7.68	4.08	0.00	68.75	7.68	4.08	0.00
55.75	7.68	4.08	0.00	69.00	7.68	4.08	0.00
56.00	7.68	4.08	0.00	69.25	7.68	4.08	0.00
56.25	7.68	4.08	0.00	69.50	7.68	4.08	0.00
56.50	7.68	4.08	0.00	69.75	7.68	4.08	0.00
56.75	7.68	4.08	0.00	70.00	7.68	4.08	0.00
57.00	7.68	4.08	0.00	70.25	7.68	4.08	0.00
57.25	7.68	4.08	0.00	70.50	7.68	4.08	0.00
57.50	7.68	4.08	0.00	70.75	7.68	4.08	0.00
57.75	7.68	4.08	0.00	71.00	7.68	4.08	0.00
58.00	7.68	4.08	0.00	71.25	7.68	4.08	0.00
58.25	7.68	4.08	0.00	71.50	7.68	4.08	0.00
58.50	7.68	4.08	0.00	71.75	7.68	4.08	0.00
58.75	7.68	4.08	0.00	72.00	7.68	4.08	0.00
59.00	7.68	4.08	0.00	72.25	7.68	4.08	0.00
59.25	7.68	4.08	0.00	72.50	7.68	4.08	0.00
59.50	7.68	4.08	0.00	72.75	7.68	4.08	0.00
59.75	7.68	4.08	0.00	73.00	7.68	4.08	0.00
60.00	7.68	4.08	0.00	73.25	7.68	4.08	0.00
60.25	7.68	4.08	0.00	73.50	7.68	4.08	0.00
60.50	7.68	4.08	0.00	73.75	7.68	4.08	0.00
60.75	7.68	4.08	0.00	74.00	7.68	4.08	0.00
61.00	7.68	4.08	0.00	74.25	7.68	4.08	0.00
61.25	7.68	4.08	0.00	74.50	7.68	4.08	0.00
61.50	7.68	4.08	0.00	74.75	7.68	4.08	0.00
61.75	7.68	4.08	0.00	75.00	7.68	4.08	0.00
62.00	7.68	4.08	0.00	75.25	7.68	4.08	0.00
62.25	7.68	4.08	0.00	75.50	7.68	4.08	0.00
62.50	7.68	4.08	0.00	75.75	7.68	4.08	0.00
62.75	7.68	4.08	0.00	76.00	7.68	4.08	0.00
63.00	7.68	4.08	0.00	76.25	7.68	4.08	0.00
63.25	7.68	4.08	0.00	76.50	7.68	4.08	0.00
63.50	7.68	4.08	0.00	76.75	7.68	4.08	0.00
63.75	7.68	4.08	0.00	77.00	7.68	4.08	0.00
64.00	7.68	4.08	0.00	77.25	7.68	4.08	0.00
64.25	7.68	4.08	0.00	77.50	7.68	4.08	0.00
64.50	7.68	4.08	0.00	77.75	7.68	4.08	0.00
64.75	7.68	4.08	0.00	78.00	7.68	4.08	0.00
65.00	7.68	4.08	0.00	78.25	7.68	4.08	0.00
65.25	7.68	4.08	0.00	78.50	7.68	4.08	0.00
65.50	7.68	4.08	0.00	78.75	7.68	4.08	0.00
65.75	7.68	4.08	0.00	79.00	7.68	4.08	0.00
66.00	7.68	4.08	0.00	79.25	7.68	4.08	0.00
66.25	7.68	4.08	0.00	79.50	7.68	4.08	0.00
66.50	7.68	4.08	0.00	79.75	7.68	4.08	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	4.08	0.00	93.25	7.68	4.08	0.00
80.25	7.68	4.08	0.00	93.50	7.68	4.08	0.00
80.50	7.68	4.08	0.00	93.75	7.68	4.08	0.00
80.75	7.68	4.08	0.00	94.00	7.68	4.08	0.00
81.00	7.68	4.08	0.00	94.25	7.68	4.08	0.00
81.25	7.68	4.08	0.00	94.50	7.68	4.08	0.00
81.50	7.68	4.08	0.00	94.75	7.68	4.08	0.00
81.75	7.68	4.08	0.00	95.00	7.68	4.08	0.00
82.00	7.68	4.08	0.00	95.25	7.68	4.08	0.00
82.25	7.68	4.08	0.00	95.50	7.68	4.08	0.00
82.50	7.68	4.08	0.00	95.75	7.68	4.08	0.00
82.75	7.68	4.08	0.00	96.00	7.68	4.08	0.00
83.00	7.68	4.08	0.00	96.25	7.68	4.08	0.00
83.25	7.68	4.08	0.00	96.50	7.68	4.08	0.00
83.50	7.68	4.08	0.00	96.75	7.68	4.08	0.00
83.75	7.68	4.08	0.00	97.00	7.68	4.08	0.00
84.00	7.68	4.08	0.00	97.25	7.68	4.08	0.00
84.25	7.68	4.08	0.00	97.50	7.68	4.08	0.00
84.50	7.68	4.08	0.00	97.75	7.68	4.08	0.00
84.75	7.68	4.08	0.00	98.00	7.68	4.08	0.00
85.00	7.68	4.08	0.00	98.25	7.68	4.08	0.00
85.25	7.68	4.08	0.00	98.50	7.68	4.08	0.00
85.50	7.68	4.08	0.00	98.75	7.68	4.08	0.00
85.75	7.68	4.08	0.00	99.00	7.68	4.08	0.00
86.00	7.68	4.08	0.00	99.25	7.68	4.08	0.00
86.25	7.68	4.08	0.00	99.50	7.68	4.08	0.00
86.50	7.68	4.08	0.00	99.75	7.68	4.08	0.00
86.75	7.68	4.08	0.00	100.00	7.68	4.08	0.00
87.00	7.68	4.08	0.00	100.25	7.68	4.08	0.00
87.25	7.68	4.08	0.00	100.50	7.68	4.08	0.00
87.50	7.68	4.08	0.00	100.75	7.68	4.08	0.00
87.75	7.68	4.08	0.00	101.00	7.68	4.08	0.00
88.00	7.68	4.08	0.00	101.25	7.68	4.08	0.00
88.25	7.68	4.08	0.00	101.50	7.68	4.08	0.00
88.50	7.68	4.08	0.00	101.75	7.68	4.08	0.00
88.75	7.68	4.08	0.00	102.00	7.68	4.08	0.00
89.00	7.68	4.08	0.00	102.25	7.68	4.08	0.00
89.25	7.68	4.08	0.00	102.50	7.68	4.08	0.00
89.50	7.68	4.08	0.00	102.75	7.68	4.08	0.00
89.75	7.68	4.08	0.00	103.00	7.68	4.08	0.00
90.00	7.68	4.08	0.00	103.25	7.68	4.08	0.00
90.25	7.68	4.08	0.00	103.50	7.68	4.08	0.00
90.50	7.68	4.08	0.00	103.75	7.68	4.08	0.00
90.75	7.68	4.08	0.00	104.00	7.68	4.08	0.00
91.00	7.68	4.08	0.00	104.25	7.68	4.08	0.00
91.25	7.68	4.08	0.00	104.50	7.68	4.08	0.00
91.50	7.68	4.08	0.00	104.75	7.68	4.08	0.00
91.75	7.68	4.08	0.00	105.00	7.68	4.08	0.00
92.00	7.68	4.08	0.00	105.25	7.68	4.08	0.00
92.25	7.68	4.08	0.00	105.50	7.68	4.08	0.00
92.50	7.68	4.08	0.00	105.75	7.68	4.08	0.00
92.75	7.68	4.08	0.00	106.00	7.68	4.08	0.00
93.00	7.68	4.08	0.00	106.25	7.68	4.08	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	4.08	0.00	119.75	7.68	4.08	0.00
106.75	7.68	4.08	0.00	120.00	7.68	4.08	0.00
107.00	7.68	4.08	0.00	120.25	7.68	4.08	0.00
107.25	7.68	4.08	0.00	120.50	7.68	4.08	0.00
107.50	7.68	4.08	0.00	120.75	7.68	4.08	0.00
107.75	7.68	4.08	0.00	121.00	7.68	4.08	0.00
108.00	7.68	4.08	0.00	121.25	7.68	4.08	0.00
108.25	7.68	4.08	0.00	121.50	7.68	4.08	0.00
108.50	7.68	4.08	0.00	121.75	7.68	4.08	0.00
108.75	7.68	4.08	0.00	122.00	7.68	4.08	0.00
109.00	7.68	4.08	0.00	122.25	7.68	4.08	0.00
109.25	7.68	4.08	0.00	122.50	7.68	4.08	0.00
109.50	7.68	4.08	0.00	122.75	7.68	4.08	0.00
109.75	7.68	4.08	0.00	123.00	7.68	4.08	0.00
110.00	7.68	4.08	0.00	123.25	7.68	4.08	0.00
110.25	7.68	4.08	0.00	123.50	7.68	4.08	0.00
110.50	7.68	4.08	0.00	123.75	7.68	4.08	0.00
110.75	7.68	4.08	0.00	124.00	7.68	4.08	0.00
111.00	7.68	4.08	0.00	124.25	7.68	4.08	0.00
111.25	7.68	4.08	0.00	124.50	7.68	4.08	0.00
111.50	7.68	4.08	0.00	124.75	7.68	4.08	0.00
111.75	7.68	4.08	0.00	125.00	7.68	4.08	0.00
112.00	7.68	4.08	0.00	125.25	7.68	4.08	0.00
112.25	7.68	4.08	0.00	125.50	7.68	4.08	0.00
112.50	7.68	4.08	0.00	125.75	7.68	4.08	0.00
112.75	7.68	4.08	0.00	126.00	7.68	4.08	0.00
113.00	7.68	4.08	0.00	126.25	7.68	4.08	0.00
113.25	7.68	4.08	0.00	126.50	7.68	4.08	0.00
113.50	7.68	4.08	0.00	126.75	7.68	4.08	0.00
113.75	7.68	4.08	0.00	127.00	7.68	4.08	0.00
114.00	7.68	4.08	0.00	127.25	7.68	4.08	0.00
114.25	7.68	4.08	0.00	127.50	7.68	4.08	0.00
114.50	7.68	4.08	0.00	127.75	7.68	4.08	0.00
114.75	7.68	4.08	0.00	128.00	7.68	4.08	0.00
115.00	7.68	4.08	0.00	128.25	7.68	4.08	0.00
115.25	7.68	4.08	0.00	128.50	7.68	4.08	0.00
115.50	7.68	4.08	0.00	128.75	7.68	4.08	0.00
115.75	7.68	4.08	0.00	129.00	7.68	4.08	0.00
116.00	7.68	4.08	0.00	129.25	7.68	4.08	0.00
116.25	7.68	4.08	0.00	129.50	7.68	4.08	0.00
116.50	7.68	4.08	0.00	129.75	7.68	4.08	0.00
116.75	7.68	4.08	0.00	130.00	7.68	4.08	0.00
117.00	7.68	4.08	0.00	130.25	7.68	4.08	0.00
117.25	7.68	4.08	0.00	130.50	7.68	4.08	0.00
117.50	7.68	4.08	0.00	130.75	7.68	4.08	0.00
117.75	7.68	4.08	0.00	131.00	7.68	4.08	0.00
118.00	7.68	4.08	0.00	131.25	7.68	4.08	0.00
118.25	7.68	4.08	0.00	131.50	7.68	4.08	0.00
118.50	7.68	4.08	0.00	131.75	7.68	4.08	0.00
118.75	7.68	4.08	0.00	132.00	7.68	4.08	0.00
119.00	7.68	4.08	0.00	132.25	7.68	4.08	0.00
119.25	7.68	4.08	0.00	132.50	7.68	4.08	0.00
119.50	7.68	4.08	0.00	132.75	7.68	4.08	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	4.08	0.00
133.25	7.68	4.08	0.00
133.50	7.68	4.08	0.00
133.75	7.68	4.08	0.00
134.00	7.68	4.08	0.00
134.25	7.68	4.08	0.00
134.50	7.68	4.08	0.00
134.75	7.68	4.08	0.00
135.00	7.68	4.08	0.00
135.25	7.68	4.08	0.00
135.50	7.68	4.08	0.00
135.75	7.68	4.08	0.00
136.00	7.68	4.08	0.00
136.25	7.68	4.08	0.00
136.50	7.68	4.08	0.00
136.75	7.68	4.08	0.00
137.00	7.68	4.08	0.00
137.25	7.68	4.08	0.00
137.50	7.68	4.08	0.00
137.75	7.68	4.08	0.00
138.00	7.68	4.08	0.00
138.25	7.68	4.08	0.00
138.50	7.68	4.08	0.00
138.75	7.68	4.08	0.00
139.00	7.68	4.08	0.00
139.25	7.68	4.08	0.00
139.50	7.68	4.08	0.00
139.75	7.68	4.08	0.00
140.00	7.68	4.08	0.00
140.25	7.68	4.08	0.00
140.50	7.68	4.08	0.00
140.75	7.68	4.08	0.00
141.00	7.68	4.08	0.00
141.25	7.68	4.08	0.00
141.50	7.68	4.08	0.00
141.75	7.68	4.08	0.00
142.00	7.68	4.08	0.00
142.25	7.68	4.08	0.00
142.50	7.68	4.08	0.00
142.75	7.68	4.08	0.00
143.00	7.68	4.08	0.00
143.25	7.68	4.08	0.00
143.50	7.68	4.08	0.00
143.75	7.68	4.08	0.00
144.00	7.68	4.08	0.00
144.25	7.68	4.08	0.00
144.50	7.68	4.08	0.00
144.75	7.68	4.08	0.00
145.00	7.68	4.08	0.00
145.25	7.68	4.08	0.00
145.50	7.68	4.08	0.00
145.75	7.68	4.08	0.00
146.00	7.68	4.08	0.00
146.25	7.68	4.08	0.00
146.50	7.68	4.08	0.00
146.75	7.68	4.08	0.00
147.00	7.68	4.08	0.00
147.25	7.68	4.08	0.00
147.50	7.68	4.08	0.00
147.75	7.68	4.08	0.00
148.00	7.68	4.08	0.00
148.25	7.68	4.08	0.00
148.50	7.68	4.08	0.00
148.75	7.68	4.08	0.00
149.00	7.68	4.08	0.00
149.25	7.68	4.08	0.00
149.50	7.68	4.08	0.00
149.75	7.68	4.08	0.00
150.00	7.68	4.08	0.00

Summary for Subcatchment 3S: SB-2

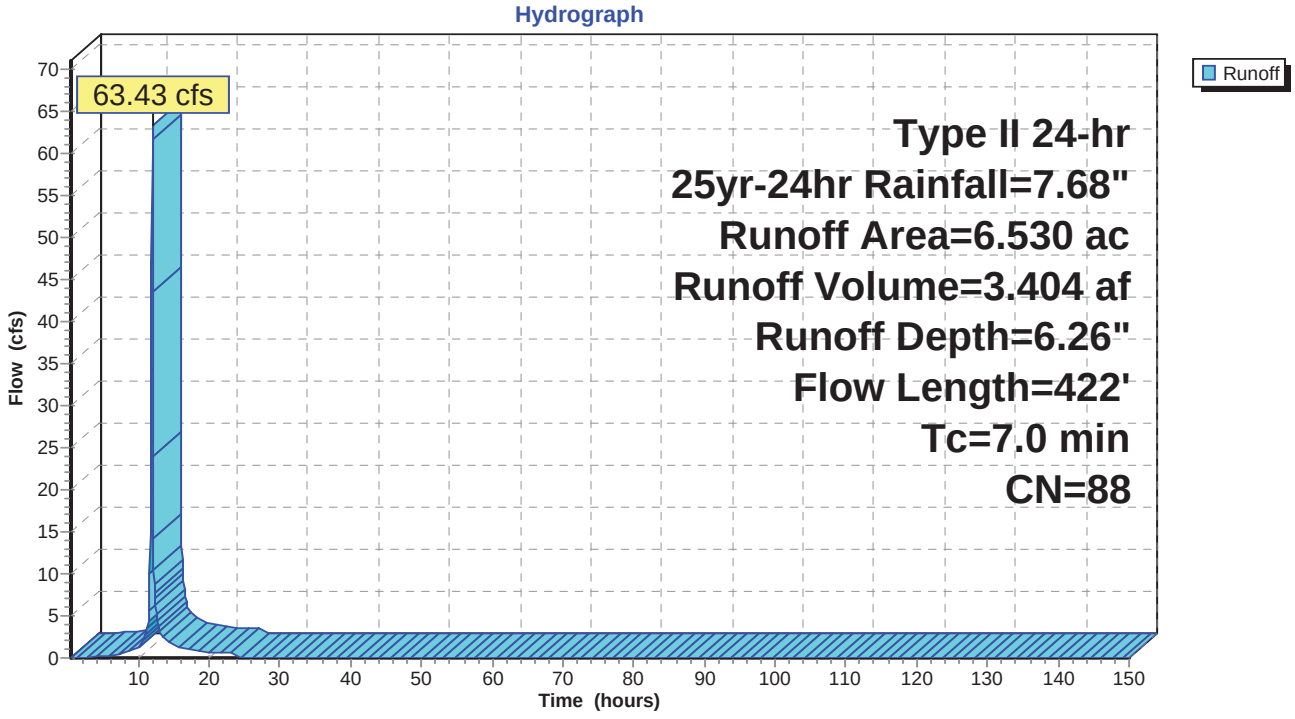
Runoff = 63.43 cfs @ 11.98 hrs, Volume= 3.404 af, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
*	5.450	98	Gravel surface, HSG A
	1.080	39	>75% Grass cover, Good, HSG A
	6.530	88	Weighted Average
	1.080		16.54% Pervious Area
	5.450		83.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	300	0.0040	1.07		**Sheet Flow, Overland Flow to Storm Inlet** Smooth surfaces n= 0.011 P2= 4.50"
2.3	122	0.0030	0.88		**Shallow Concentrated Flow, Overland Flow to Storm Inlet** Unpaved Kv= 16.1 fps
7.0	422	Total			

Subcatchment 3S: SB-2



Hydrograph for Subcatchment 3S: SB-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	4.84	2.16
0.75	0.06	0.00	0.00	14.00	6.30	4.91	1.91
1.00	0.08	0.00	0.00	14.25	6.37	4.98	1.76
1.25	0.10	0.00	0.00	14.50	6.43	5.04	1.68
1.50	0.12	0.00	0.00	14.75	6.50	5.10	1.59
1.75	0.15	0.00	0.00	15.00	6.55	5.16	1.51
2.00	0.17	0.00	0.00	15.25	6.61	5.22	1.42
2.25	0.19	0.00	0.00	15.50	6.66	5.27	1.34
2.50	0.22	0.00	0.00	15.75	6.71	5.31	1.25
2.75	0.24	0.00	0.00	16.00	6.76	5.36	1.16
3.00	0.26	0.00	0.00	16.25	6.80	5.40	1.11
3.25	0.29	0.00	0.01	16.50	6.84	5.44	1.08
3.50	0.32	0.00	0.03	16.75	6.89	5.48	1.05
3.75	0.34	0.00	0.06	17.00	6.93	5.52	1.02
4.00	0.37	0.01	0.08	17.25	6.96	5.56	0.99
4.25	0.40	0.01	0.10	17.50	7.00	5.60	0.96
4.50	0.42	0.02	0.13	17.75	7.04	5.63	0.93
4.75	0.45	0.02	0.16	18.00	7.07	5.66	0.90
5.00	0.48	0.03	0.19	18.25	7.11	5.70	0.87
5.25	0.52	0.04	0.22	18.50	7.14	5.73	0.84
5.50	0.55	0.05	0.25	18.75	7.17	5.76	0.81
5.75	0.58	0.06	0.28	19.00	7.20	5.79	0.78
6.00	0.61	0.07	0.31	19.25	7.23	5.82	0.75
6.25	0.65	0.08	0.35	19.50	7.26	5.85	0.71
6.50	0.69	0.10	0.38	19.75	7.29	5.87	0.68
6.75	0.72	0.11	0.41	20.00	7.31	5.90	0.65
7.00	0.76	0.13	0.45	20.25	7.34	5.92	0.64
7.25	0.80	0.15	0.48	20.50	7.36	5.94	0.63
7.50	0.84	0.17	0.52	20.75	7.39	5.97	0.62
7.75	0.88	0.19	0.55	21.00	7.41	5.99	0.62
8.00	0.92	0.21	0.59	21.25	7.43	6.01	0.61
8.25	0.97	0.23	0.65	21.50	7.46	6.04	0.61
8.50	1.02	0.26	0.75	21.75	7.48	6.06	0.60
8.75	1.07	0.29	0.85	22.00	7.50	6.08	0.59
9.00	1.13	0.33	0.96	22.25	7.53	6.11	0.59
9.25	1.19	0.37	1.03	22.50	7.55	6.13	0.58
9.50	1.25	0.41	1.06	22.75	7.57	6.15	0.58
9.75	1.32	0.45	1.16	23.00	7.59	6.17	0.57
10.00	1.39	0.50	1.34	23.25	7.62	6.19	0.56
10.25	1.47	0.56	1.56	23.50	7.64	6.21	0.56
10.50	1.57	0.63	1.82	23.75	7.66	6.23	0.55
10.75	1.68	0.71	2.18	24.00	**7.68**	**6.26**	0.54
11.00	1.80	0.81	2.63	24.25	7.68	6.26	0.01
11.25	1.97	0.94	3.43	24.50	7.68	6.26	0.00
11.50	2.17	1.11	4.52	24.75	7.68	6.26	0.00
11.75	2.97	1.79	19.89	25.00	7.68	6.26	0.00
12.00	5.09	3.76	**61.60**	25.25	7.68	6.26	0.00
12.25	5.42	4.07	8.70	25.50	7.68	6.26	0.00
12.50	5.64	4.28	5.41	25.75	7.68	6.26	0.00
12.75	5.80	4.43	3.87	26.00	7.68	6.26	0.00
13.00	5.93	4.56	3.24	26.25	7.68	6.26	0.00
13.25	6.04	4.66	2.78	26.50	7.68	6.26	0.00
13.50	6.14	4.76	2.44	26.75	7.68	6.26	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	6.26	0.00	40.25	7.68	6.26	0.00
27.25	7.68	6.26	0.00	40.50	7.68	6.26	0.00
27.50	7.68	6.26	0.00	40.75	7.68	6.26	0.00
27.75	7.68	6.26	0.00	41.00	7.68	6.26	0.00
28.00	7.68	6.26	0.00	41.25	7.68	6.26	0.00
28.25	7.68	6.26	0.00	41.50	7.68	6.26	0.00
28.50	7.68	6.26	0.00	41.75	7.68	6.26	0.00
28.75	7.68	6.26	0.00	42.00	7.68	6.26	0.00
29.00	7.68	6.26	0.00	42.25	7.68	6.26	0.00
29.25	7.68	6.26	0.00	42.50	7.68	6.26	0.00
29.50	7.68	6.26	0.00	42.75	7.68	6.26	0.00
29.75	7.68	6.26	0.00	43.00	7.68	6.26	0.00
30.00	7.68	6.26	0.00	43.25	7.68	6.26	0.00
30.25	7.68	6.26	0.00	43.50	7.68	6.26	0.00
30.50	7.68	6.26	0.00	43.75	7.68	6.26	0.00
30.75	7.68	6.26	0.00	44.00	7.68	6.26	0.00
31.00	7.68	6.26	0.00	44.25	7.68	6.26	0.00
31.25	7.68	6.26	0.00	44.50	7.68	6.26	0.00
31.50	7.68	6.26	0.00	44.75	7.68	6.26	0.00
31.75	7.68	6.26	0.00	45.00	7.68	6.26	0.00
32.00	7.68	6.26	0.00	45.25	7.68	6.26	0.00
32.25	7.68	6.26	0.00	45.50	7.68	6.26	0.00
32.50	7.68	6.26	0.00	45.75	7.68	6.26	0.00
32.75	7.68	6.26	0.00	46.00	7.68	6.26	0.00
33.00	7.68	6.26	0.00	46.25	7.68	6.26	0.00
33.25	7.68	6.26	0.00	46.50	7.68	6.26	0.00
33.50	7.68	6.26	0.00	46.75	7.68	6.26	0.00
33.75	7.68	6.26	0.00	47.00	7.68	6.26	0.00
34.00	7.68	6.26	0.00	47.25	7.68	6.26	0.00
34.25	7.68	6.26	0.00	47.50	7.68	6.26	0.00
34.50	7.68	6.26	0.00	47.75	7.68	6.26	0.00
34.75	7.68	6.26	0.00	48.00	7.68	6.26	0.00
35.00	7.68	6.26	0.00	48.25	7.68	6.26	0.00
35.25	7.68	6.26	0.00	48.50	7.68	6.26	0.00
35.50	7.68	6.26	0.00	48.75	7.68	6.26	0.00
35.75	7.68	6.26	0.00	49.00	7.68	6.26	0.00
36.00	7.68	6.26	0.00	49.25	7.68	6.26	0.00
36.25	7.68	6.26	0.00	49.50	7.68	6.26	0.00
36.50	7.68	6.26	0.00	49.75	7.68	6.26	0.00
36.75	7.68	6.26	0.00	50.00	7.68	6.26	0.00
37.00	7.68	6.26	0.00	50.25	7.68	6.26	0.00
37.25	7.68	6.26	0.00	50.50	7.68	6.26	0.00
37.50	7.68	6.26	0.00	50.75	7.68	6.26	0.00
37.75	7.68	6.26	0.00	51.00	7.68	6.26	0.00
38.00	7.68	6.26	0.00	51.25	7.68	6.26	0.00
38.25	7.68	6.26	0.00	51.50	7.68	6.26	0.00
38.50	7.68	6.26	0.00	51.75	7.68	6.26	0.00
38.75	7.68	6.26	0.00	52.00	7.68	6.26	0.00
39.00	7.68	6.26	0.00	52.25	7.68	6.26	0.00
39.25	7.68	6.26	0.00	52.50	7.68	6.26	0.00
39.50	7.68	6.26	0.00	52.75	7.68	6.26	0.00
39.75	7.68	6.26	0.00	53.00	7.68	6.26	0.00
40.00	7.68	6.26	0.00	53.25	7.68	6.26	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	6.26	0.00	66.75	7.68	6.26	0.00
53.75	7.68	6.26	0.00	67.00	7.68	6.26	0.00
54.00	7.68	6.26	0.00	67.25	7.68	6.26	0.00
54.25	7.68	6.26	0.00	67.50	7.68	6.26	0.00
54.50	7.68	6.26	0.00	67.75	7.68	6.26	0.00
54.75	7.68	6.26	0.00	68.00	7.68	6.26	0.00
55.00	7.68	6.26	0.00	68.25	7.68	6.26	0.00
55.25	7.68	6.26	0.00	68.50	7.68	6.26	0.00
55.50	7.68	6.26	0.00	68.75	7.68	6.26	0.00
55.75	7.68	6.26	0.00	69.00	7.68	6.26	0.00
56.00	7.68	6.26	0.00	69.25	7.68	6.26	0.00
56.25	7.68	6.26	0.00	69.50	7.68	6.26	0.00
56.50	7.68	6.26	0.00	69.75	7.68	6.26	0.00
56.75	7.68	6.26	0.00	70.00	7.68	6.26	0.00
57.00	7.68	6.26	0.00	70.25	7.68	6.26	0.00
57.25	7.68	6.26	0.00	70.50	7.68	6.26	0.00
57.50	7.68	6.26	0.00	70.75	7.68	6.26	0.00
57.75	7.68	6.26	0.00	71.00	7.68	6.26	0.00
58.00	7.68	6.26	0.00	71.25	7.68	6.26	0.00
58.25	7.68	6.26	0.00	71.50	7.68	6.26	0.00
58.50	7.68	6.26	0.00	71.75	7.68	6.26	0.00
58.75	7.68	6.26	0.00	72.00	7.68	6.26	0.00
59.00	7.68	6.26	0.00	72.25	7.68	6.26	0.00
59.25	7.68	6.26	0.00	72.50	7.68	6.26	0.00
59.50	7.68	6.26	0.00	72.75	7.68	6.26	0.00
59.75	7.68	6.26	0.00	73.00	7.68	6.26	0.00
60.00	7.68	6.26	0.00	73.25	7.68	6.26	0.00
60.25	7.68	6.26	0.00	73.50	7.68	6.26	0.00
60.50	7.68	6.26	0.00	73.75	7.68	6.26	0.00
60.75	7.68	6.26	0.00	74.00	7.68	6.26	0.00
61.00	7.68	6.26	0.00	74.25	7.68	6.26	0.00
61.25	7.68	6.26	0.00	74.50	7.68	6.26	0.00
61.50	7.68	6.26	0.00	74.75	7.68	6.26	0.00
61.75	7.68	6.26	0.00	75.00	7.68	6.26	0.00
62.00	7.68	6.26	0.00	75.25	7.68	6.26	0.00
62.25	7.68	6.26	0.00	75.50	7.68	6.26	0.00
62.50	7.68	6.26	0.00	75.75	7.68	6.26	0.00
62.75	7.68	6.26	0.00	76.00	7.68	6.26	0.00
63.00	7.68	6.26	0.00	76.25	7.68	6.26	0.00
63.25	7.68	6.26	0.00	76.50	7.68	6.26	0.00
63.50	7.68	6.26	0.00	76.75	7.68	6.26	0.00
63.75	7.68	6.26	0.00	77.00	7.68	6.26	0.00
64.00	7.68	6.26	0.00	77.25	7.68	6.26	0.00
64.25	7.68	6.26	0.00	77.50	7.68	6.26	0.00
64.50	7.68	6.26	0.00	77.75	7.68	6.26	0.00
64.75	7.68	6.26	0.00	78.00	7.68	6.26	0.00
65.00	7.68	6.26	0.00	78.25	7.68	6.26	0.00
65.25	7.68	6.26	0.00	78.50	7.68	6.26	0.00
65.50	7.68	6.26	0.00	78.75	7.68	6.26	0.00
65.75	7.68	6.26	0.00	79.00	7.68	6.26	0.00
66.00	7.68	6.26	0.00	79.25	7.68	6.26	0.00
66.25	7.68	6.26	0.00	79.50	7.68	6.26	0.00
66.50	7.68	6.26	0.00	79.75	7.68	6.26	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	6.26	0.00	93.25	7.68	6.26	0.00
80.25	7.68	6.26	0.00	93.50	7.68	6.26	0.00
80.50	7.68	6.26	0.00	93.75	7.68	6.26	0.00
80.75	7.68	6.26	0.00	94.00	7.68	6.26	0.00
81.00	7.68	6.26	0.00	94.25	7.68	6.26	0.00
81.25	7.68	6.26	0.00	94.50	7.68	6.26	0.00
81.50	7.68	6.26	0.00	94.75	7.68	6.26	0.00
81.75	7.68	6.26	0.00	95.00	7.68	6.26	0.00
82.00	7.68	6.26	0.00	95.25	7.68	6.26	0.00
82.25	7.68	6.26	0.00	95.50	7.68	6.26	0.00
82.50	7.68	6.26	0.00	95.75	7.68	6.26	0.00
82.75	7.68	6.26	0.00	96.00	7.68	6.26	0.00
83.00	7.68	6.26	0.00	96.25	7.68	6.26	0.00
83.25	7.68	6.26	0.00	96.50	7.68	6.26	0.00
83.50	7.68	6.26	0.00	96.75	7.68	6.26	0.00
83.75	7.68	6.26	0.00	97.00	7.68	6.26	0.00
84.00	7.68	6.26	0.00	97.25	7.68	6.26	0.00
84.25	7.68	6.26	0.00	97.50	7.68	6.26	0.00
84.50	7.68	6.26	0.00	97.75	7.68	6.26	0.00
84.75	7.68	6.26	0.00	98.00	7.68	6.26	0.00
85.00	7.68	6.26	0.00	98.25	7.68	6.26	0.00
85.25	7.68	6.26	0.00	98.50	7.68	6.26	0.00
85.50	7.68	6.26	0.00	98.75	7.68	6.26	0.00
85.75	7.68	6.26	0.00	99.00	7.68	6.26	0.00
86.00	7.68	6.26	0.00	99.25	7.68	6.26	0.00
86.25	7.68	6.26	0.00	99.50	7.68	6.26	0.00
86.50	7.68	6.26	0.00	99.75	7.68	6.26	0.00
86.75	7.68	6.26	0.00	100.00	7.68	6.26	0.00
87.00	7.68	6.26	0.00	100.25	7.68	6.26	0.00
87.25	7.68	6.26	0.00	100.50	7.68	6.26	0.00
87.50	7.68	6.26	0.00	100.75	7.68	6.26	0.00
87.75	7.68	6.26	0.00	101.00	7.68	6.26	0.00
88.00	7.68	6.26	0.00	101.25	7.68	6.26	0.00
88.25	7.68	6.26	0.00	101.50	7.68	6.26	0.00
88.50	7.68	6.26	0.00	101.75	7.68	6.26	0.00
88.75	7.68	6.26	0.00	102.00	7.68	6.26	0.00
89.00	7.68	6.26	0.00	102.25	7.68	6.26	0.00
89.25	7.68	6.26	0.00	102.50	7.68	6.26	0.00
89.50	7.68	6.26	0.00	102.75	7.68	6.26	0.00
89.75	7.68	6.26	0.00	103.00	7.68	6.26	0.00
90.00	7.68	6.26	0.00	103.25	7.68	6.26	0.00
90.25	7.68	6.26	0.00	103.50	7.68	6.26	0.00
90.50	7.68	6.26	0.00	103.75	7.68	6.26	0.00
90.75	7.68	6.26	0.00	104.00	7.68	6.26	0.00
91.00	7.68	6.26	0.00	104.25	7.68	6.26	0.00
91.25	7.68	6.26	0.00	104.50	7.68	6.26	0.00
91.50	7.68	6.26	0.00	104.75	7.68	6.26	0.00
91.75	7.68	6.26	0.00	105.00	7.68	6.26	0.00
92.00	7.68	6.26	0.00	105.25	7.68	6.26	0.00
92.25	7.68	6.26	0.00	105.50	7.68	6.26	0.00
92.50	7.68	6.26	0.00	105.75	7.68	6.26	0.00
92.75	7.68	6.26	0.00	106.00	7.68	6.26	0.00
93.00	7.68	6.26	0.00	106.25	7.68	6.26	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	6.26	0.00	119.75	7.68	6.26	0.00
106.75	7.68	6.26	0.00	120.00	7.68	6.26	0.00
107.00	7.68	6.26	0.00	120.25	7.68	6.26	0.00
107.25	7.68	6.26	0.00	120.50	7.68	6.26	0.00
107.50	7.68	6.26	0.00	120.75	7.68	6.26	0.00
107.75	7.68	6.26	0.00	121.00	7.68	6.26	0.00
108.00	7.68	6.26	0.00	121.25	7.68	6.26	0.00
108.25	7.68	6.26	0.00	121.50	7.68	6.26	0.00
108.50	7.68	6.26	0.00	121.75	7.68	6.26	0.00
108.75	7.68	6.26	0.00	122.00	7.68	6.26	0.00
109.00	7.68	6.26	0.00	122.25	7.68	6.26	0.00
109.25	7.68	6.26	0.00	122.50	7.68	6.26	0.00
109.50	7.68	6.26	0.00	122.75	7.68	6.26	0.00
109.75	7.68	6.26	0.00	123.00	7.68	6.26	0.00
110.00	7.68	6.26	0.00	123.25	7.68	6.26	0.00
110.25	7.68	6.26	0.00	123.50	7.68	6.26	0.00
110.50	7.68	6.26	0.00	123.75	7.68	6.26	0.00
110.75	7.68	6.26	0.00	124.00	7.68	6.26	0.00
111.00	7.68	6.26	0.00	124.25	7.68	6.26	0.00
111.25	7.68	6.26	0.00	124.50	7.68	6.26	0.00
111.50	7.68	6.26	0.00	124.75	7.68	6.26	0.00
111.75	7.68	6.26	0.00	125.00	7.68	6.26	0.00
112.00	7.68	6.26	0.00	125.25	7.68	6.26	0.00
112.25	7.68	6.26	0.00	125.50	7.68	6.26	0.00
112.50	7.68	6.26	0.00	125.75	7.68	6.26	0.00
112.75	7.68	6.26	0.00	126.00	7.68	6.26	0.00
113.00	7.68	6.26	0.00	126.25	7.68	6.26	0.00
113.25	7.68	6.26	0.00	126.50	7.68	6.26	0.00
113.50	7.68	6.26	0.00	126.75	7.68	6.26	0.00
113.75	7.68	6.26	0.00	127.00	7.68	6.26	0.00
114.00	7.68	6.26	0.00	127.25	7.68	6.26	0.00
114.25	7.68	6.26	0.00	127.50	7.68	6.26	0.00
114.50	7.68	6.26	0.00	127.75	7.68	6.26	0.00
114.75	7.68	6.26	0.00	128.00	7.68	6.26	0.00
115.00	7.68	6.26	0.00	128.25	7.68	6.26	0.00
115.25	7.68	6.26	0.00	128.50	7.68	6.26	0.00
115.50	7.68	6.26	0.00	128.75	7.68	6.26	0.00
115.75	7.68	6.26	0.00	129.00	7.68	6.26	0.00
116.00	7.68	6.26	0.00	129.25	7.68	6.26	0.00
116.25	7.68	6.26	0.00	129.50	7.68	6.26	0.00
116.50	7.68	6.26	0.00	129.75	7.68	6.26	0.00
116.75	7.68	6.26	0.00	130.00	7.68	6.26	0.00
117.00	7.68	6.26	0.00	130.25	7.68	6.26	0.00
117.25	7.68	6.26	0.00	130.50	7.68	6.26	0.00
117.50	7.68	6.26	0.00	130.75	7.68	6.26	0.00
117.75	7.68	6.26	0.00	131.00	7.68	6.26	0.00
118.00	7.68	6.26	0.00	131.25	7.68	6.26	0.00
118.25	7.68	6.26	0.00	131.50	7.68	6.26	0.00
118.50	7.68	6.26	0.00	131.75	7.68	6.26	0.00
118.75	7.68	6.26	0.00	132.00	7.68	6.26	0.00
119.00	7.68	6.26	0.00	132.25	7.68	6.26	0.00
119.25	7.68	6.26	0.00	132.50	7.68	6.26	0.00
119.50	7.68	6.26	0.00	132.75	7.68	6.26	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	6.26	0.00
133.25	7.68	6.26	0.00
133.50	7.68	6.26	0.00
133.75	7.68	6.26	0.00
134.00	7.68	6.26	0.00
134.25	7.68	6.26	0.00
134.50	7.68	6.26	0.00
134.75	7.68	6.26	0.00
135.00	7.68	6.26	0.00
135.25	7.68	6.26	0.00
135.50	7.68	6.26	0.00
135.75	7.68	6.26	0.00
136.00	7.68	6.26	0.00
136.25	7.68	6.26	0.00
136.50	7.68	6.26	0.00
136.75	7.68	6.26	0.00
137.00	7.68	6.26	0.00
137.25	7.68	6.26	0.00
137.50	7.68	6.26	0.00
137.75	7.68	6.26	0.00
138.00	7.68	6.26	0.00
138.25	7.68	6.26	0.00
138.50	7.68	6.26	0.00
138.75	7.68	6.26	0.00
139.00	7.68	6.26	0.00
139.25	7.68	6.26	0.00
139.50	7.68	6.26	0.00
139.75	7.68	6.26	0.00
140.00	7.68	6.26	0.00
140.25	7.68	6.26	0.00
140.50	7.68	6.26	0.00
140.75	7.68	6.26	0.00
141.00	7.68	6.26	0.00
141.25	7.68	6.26	0.00
141.50	7.68	6.26	0.00
141.75	7.68	6.26	0.00
142.00	7.68	6.26	0.00
142.25	7.68	6.26	0.00
142.50	7.68	6.26	0.00
142.75	7.68	6.26	0.00
143.00	7.68	6.26	0.00
143.25	7.68	6.26	0.00
143.50	7.68	6.26	0.00
143.75	7.68	6.26	0.00
144.00	7.68	6.26	0.00
144.25	7.68	6.26	0.00
144.50	7.68	6.26	0.00
144.75	7.68	6.26	0.00
145.00	7.68	6.26	0.00
145.25	7.68	6.26	0.00
145.50	7.68	6.26	0.00
145.75	7.68	6.26	0.00
146.00	7.68	6.26	0.00
146.25	7.68	6.26	0.00
146.50	7.68	6.26	0.00
146.75	7.68	6.26	0.00
147.00	7.68	6.26	0.00
147.25	7.68	6.26	0.00
147.50	7.68	6.26	0.00
147.75	7.68	6.26	0.00
148.00	7.68	6.26	0.00
148.25	7.68	6.26	0.00
148.50	7.68	6.26	0.00
148.75	7.68	6.26	0.00
149.00	7.68	6.26	0.00
149.25	7.68	6.26	0.00
149.50	7.68	6.26	0.00
149.75	7.68	6.26	0.00
150.00	7.68	6.26	0.00

Summary for Subcatchment 4S: SB-3

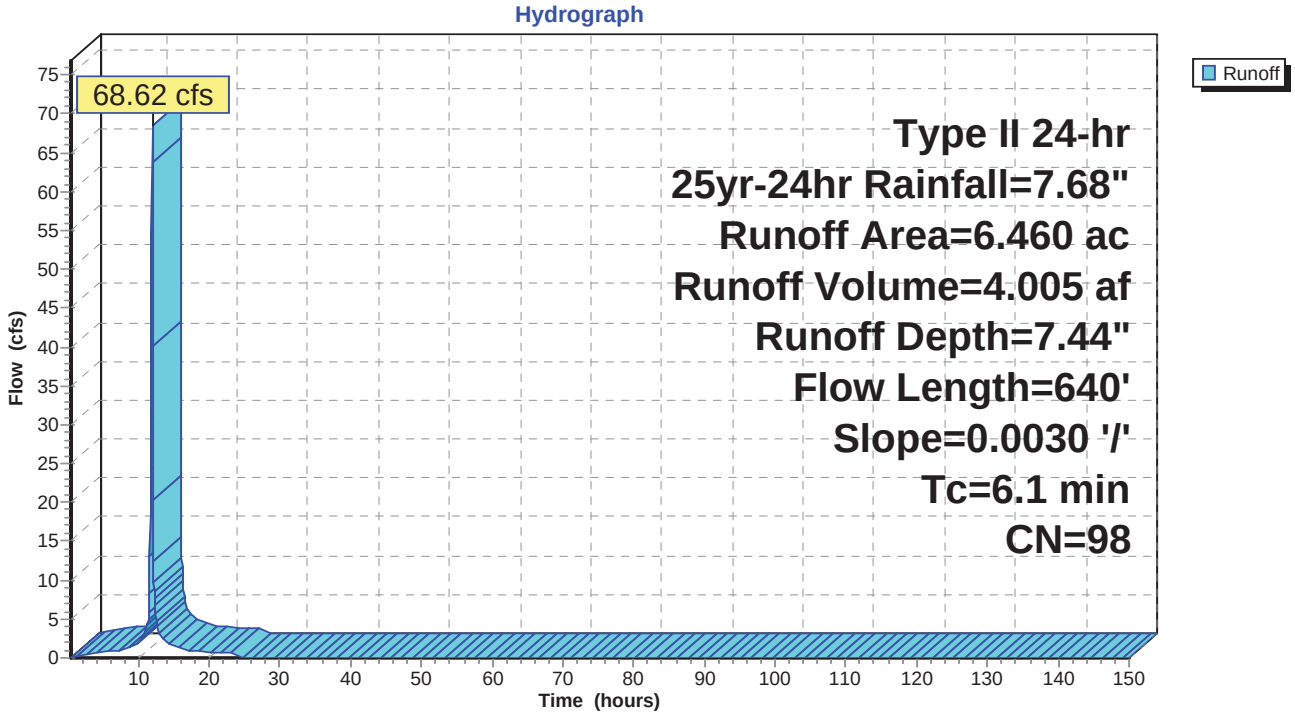
Runoff = 68.62 cfs @ 11.96 hrs, Volume= 4.005 af, Depth= 7.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
	1.510	98	Paved roads w/curbs & sewers, HSG A
*	4.950	98	Gravel surface, HSG A
	6.460	98	Weighted Average
	6.460		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	289	0.0030	0.94		**Sheet Flow, Overland Flow to Storm Inlet** Smooth surfaces n= 0.011 P2= 4.50"
1.0	351	0.0030	5.70	17.90	**Pipe Channel, Storm System to Pond** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.009 Corrugated PE, smooth interior
6.1	640	Total			

Subcatchment 4S: SB-3



Hydrograph for Subcatchment 4S: SB-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	5.98	2.19
0.75	0.06	0.00	0.05	14.00	6.30	6.06	1.94
1.00	0.08	0.01	0.14	14.25	6.37	6.13	1.79
1.25	0.10	0.01	0.21	14.50	6.43	6.19	1.71
1.50	0.12	0.02	0.26	14.75	6.50	6.26	1.62
1.75	0.15	0.04	0.31	15.00	6.55	6.32	1.53
2.00	0.17	0.05	0.36	15.25	6.61	6.37	1.45
2.25	0.19	0.06	0.40	15.50	6.66	6.42	1.36
2.50	0.22	0.08	0.43	15.75	6.71	6.47	1.27
2.75	0.24	0.10	0.46	16.00	6.76	6.52	1.18
3.00	0.26	0.12	0.49	16.25	6.80	6.56	1.13
3.25	0.29	0.14	0.52	16.50	6.84	6.61	1.10
3.50	0.32	0.16	0.54	16.75	6.89	6.65	1.07
3.75	0.34	0.18	0.57	17.00	6.93	6.69	1.04
4.00	0.37	0.20	0.59	17.25	6.96	6.73	1.01
4.25	0.40	0.23	0.62	17.50	7.00	6.76	0.97
4.50	0.42	0.25	0.65	17.75	7.04	6.80	0.94
4.75	0.45	0.28	0.68	18.00	7.07	6.83	0.91
5.00	0.48	0.30	0.71	18.25	7.11	6.87	0.88
5.25	0.52	0.33	0.74	18.50	7.14	6.90	0.85
5.50	0.55	0.36	0.77	18.75	7.17	6.93	0.82
5.75	0.58	0.39	0.80	19.00	7.20	6.96	0.79
6.00	0.61	0.42	0.83	19.25	7.23	6.99	0.76
6.25	0.65	0.46	0.86	19.50	7.26	7.02	0.72
6.50	0.69	0.49	0.88	19.75	7.29	7.05	0.69
6.75	0.72	0.52	0.91	20.00	7.31	7.07	0.66
7.00	0.76	0.56	0.94	20.25	7.34	7.10	0.65
7.25	0.80	0.60	0.97	20.50	7.36	7.12	0.64
7.50	0.84	0.64	1.00	20.75	7.39	7.15	0.63
7.75	0.88	0.67	1.02	21.00	7.41	7.17	0.63
8.00	0.92	0.72	1.05	21.25	7.43	7.19	0.62
8.25	0.97	0.76	1.14	21.50	7.46	7.22	0.61
8.50	1.02	0.81	1.26	21.75	7.48	7.24	0.61
8.75	1.07	0.86	1.39	22.00	7.50	7.26	0.60
9.00	1.13	0.92	1.51	22.25	7.53	7.29	0.60
9.25	1.19	0.98	1.56	22.50	7.55	7.31	0.59
9.50	1.25	1.04	1.57	22.75	7.57	7.33	0.58
9.75	1.32	1.10	1.69	23.00	7.59	7.35	0.58
10.00	1.39	1.17	1.89	23.25	7.62	7.38	0.57
10.25	1.47	1.25	2.15	23.50	7.64	7.40	0.56
10.50	1.57	1.35	2.45	23.75	7.66	7.42	0.56
10.75	1.68	1.45	2.88	24.00	**7.68**	**7.44**	0.55
11.00	1.80	1.58	3.37	24.25	7.68	7.44	0.01
11.25	1.97	1.74	4.31	24.50	7.68	7.44	0.00
11.50	2.17	1.95	5.51	24.75	7.68	7.44	0.00
11.75	2.97	2.74	**24.35**	25.00	7.68	7.44	0.00
12.00	5.09	4.85	**63.78**	25.25	7.68	7.44	0.00
12.25	5.42	5.19	8.47	25.50	7.68	7.44	0.00
12.50	5.64	5.41	5.42	25.75	7.68	7.44	0.00
12.75	5.80	5.56	3.94	26.00	7.68	7.44	0.00
13.00	5.93	5.69	3.29	26.25	7.68	7.44	0.00
13.25	6.04	5.80	2.83	26.50	7.68	7.44	0.00
13.50	6.14	5.90	2.48	26.75	7.68	7.44	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	7.44	0.00	40.25	7.68	7.44	0.00
27.25	7.68	7.44	0.00	40.50	7.68	7.44	0.00
27.50	7.68	7.44	0.00	40.75	7.68	7.44	0.00
27.75	7.68	7.44	0.00	41.00	7.68	7.44	0.00
28.00	7.68	7.44	0.00	41.25	7.68	7.44	0.00
28.25	7.68	7.44	0.00	41.50	7.68	7.44	0.00
28.50	7.68	7.44	0.00	41.75	7.68	7.44	0.00
28.75	7.68	7.44	0.00	42.00	7.68	7.44	0.00
29.00	7.68	7.44	0.00	42.25	7.68	7.44	0.00
29.25	7.68	7.44	0.00	42.50	7.68	7.44	0.00
29.50	7.68	7.44	0.00	42.75	7.68	7.44	0.00
29.75	7.68	7.44	0.00	43.00	7.68	7.44	0.00
30.00	7.68	7.44	0.00	43.25	7.68	7.44	0.00
30.25	7.68	7.44	0.00	43.50	7.68	7.44	0.00
30.50	7.68	7.44	0.00	43.75	7.68	7.44	0.00
30.75	7.68	7.44	0.00	44.00	7.68	7.44	0.00
31.00	7.68	7.44	0.00	44.25	7.68	7.44	0.00
31.25	7.68	7.44	0.00	44.50	7.68	7.44	0.00
31.50	7.68	7.44	0.00	44.75	7.68	7.44	0.00
31.75	7.68	7.44	0.00	45.00	7.68	7.44	0.00
32.00	7.68	7.44	0.00	45.25	7.68	7.44	0.00
32.25	7.68	7.44	0.00	45.50	7.68	7.44	0.00
32.50	7.68	7.44	0.00	45.75	7.68	7.44	0.00
32.75	7.68	7.44	0.00	46.00	7.68	7.44	0.00
33.00	7.68	7.44	0.00	46.25	7.68	7.44	0.00
33.25	7.68	7.44	0.00	46.50	7.68	7.44	0.00
33.50	7.68	7.44	0.00	46.75	7.68	7.44	0.00
33.75	7.68	7.44	0.00	47.00	7.68	7.44	0.00
34.00	7.68	7.44	0.00	47.25	7.68	7.44	0.00
34.25	7.68	7.44	0.00	47.50	7.68	7.44	0.00
34.50	7.68	7.44	0.00	47.75	7.68	7.44	0.00
34.75	7.68	7.44	0.00	48.00	7.68	7.44	0.00
35.00	7.68	7.44	0.00	48.25	7.68	7.44	0.00
35.25	7.68	7.44	0.00	48.50	7.68	7.44	0.00
35.50	7.68	7.44	0.00	48.75	7.68	7.44	0.00
35.75	7.68	7.44	0.00	49.00	7.68	7.44	0.00
36.00	7.68	7.44	0.00	49.25	7.68	7.44	0.00
36.25	7.68	7.44	0.00	49.50	7.68	7.44	0.00
36.50	7.68	7.44	0.00	49.75	7.68	7.44	0.00
36.75	7.68	7.44	0.00	50.00	7.68	7.44	0.00
37.00	7.68	7.44	0.00	50.25	7.68	7.44	0.00
37.25	7.68	7.44	0.00	50.50	7.68	7.44	0.00
37.50	7.68	7.44	0.00	50.75	7.68	7.44	0.00
37.75	7.68	7.44	0.00	51.00	7.68	7.44	0.00
38.00	7.68	7.44	0.00	51.25	7.68	7.44	0.00
38.25	7.68	7.44	0.00	51.50	7.68	7.44	0.00
38.50	7.68	7.44	0.00	51.75	7.68	7.44	0.00
38.75	7.68	7.44	0.00	52.00	7.68	7.44	0.00
39.00	7.68	7.44	0.00	52.25	7.68	7.44	0.00
39.25	7.68	7.44	0.00	52.50	7.68	7.44	0.00
39.50	7.68	7.44	0.00	52.75	7.68	7.44	0.00
39.75	7.68	7.44	0.00	53.00	7.68	7.44	0.00
40.00	7.68	7.44	0.00	53.25	7.68	7.44	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	7.44	0.00	66.75	7.68	7.44	0.00
53.75	7.68	7.44	0.00	67.00	7.68	7.44	0.00
54.00	7.68	7.44	0.00	67.25	7.68	7.44	0.00
54.25	7.68	7.44	0.00	67.50	7.68	7.44	0.00
54.50	7.68	7.44	0.00	67.75	7.68	7.44	0.00
54.75	7.68	7.44	0.00	68.00	7.68	7.44	0.00
55.00	7.68	7.44	0.00	68.25	7.68	7.44	0.00
55.25	7.68	7.44	0.00	68.50	7.68	7.44	0.00
55.50	7.68	7.44	0.00	68.75	7.68	7.44	0.00
55.75	7.68	7.44	0.00	69.00	7.68	7.44	0.00
56.00	7.68	7.44	0.00	69.25	7.68	7.44	0.00
56.25	7.68	7.44	0.00	69.50	7.68	7.44	0.00
56.50	7.68	7.44	0.00	69.75	7.68	7.44	0.00
56.75	7.68	7.44	0.00	70.00	7.68	7.44	0.00
57.00	7.68	7.44	0.00	70.25	7.68	7.44	0.00
57.25	7.68	7.44	0.00	70.50	7.68	7.44	0.00
57.50	7.68	7.44	0.00	70.75	7.68	7.44	0.00
57.75	7.68	7.44	0.00	71.00	7.68	7.44	0.00
58.00	7.68	7.44	0.00	71.25	7.68	7.44	0.00
58.25	7.68	7.44	0.00	71.50	7.68	7.44	0.00
58.50	7.68	7.44	0.00	71.75	7.68	7.44	0.00
58.75	7.68	7.44	0.00	72.00	7.68	7.44	0.00
59.00	7.68	7.44	0.00	72.25	7.68	7.44	0.00
59.25	7.68	7.44	0.00	72.50	7.68	7.44	0.00
59.50	7.68	7.44	0.00	72.75	7.68	7.44	0.00
59.75	7.68	7.44	0.00	73.00	7.68	7.44	0.00
60.00	7.68	7.44	0.00	73.25	7.68	7.44	0.00
60.25	7.68	7.44	0.00	73.50	7.68	7.44	0.00
60.50	7.68	7.44	0.00	73.75	7.68	7.44	0.00
60.75	7.68	7.44	0.00	74.00	7.68	7.44	0.00
61.00	7.68	7.44	0.00	74.25	7.68	7.44	0.00
61.25	7.68	7.44	0.00	74.50	7.68	7.44	0.00
61.50	7.68	7.44	0.00	74.75	7.68	7.44	0.00
61.75	7.68	7.44	0.00	75.00	7.68	7.44	0.00
62.00	7.68	7.44	0.00	75.25	7.68	7.44	0.00
62.25	7.68	7.44	0.00	75.50	7.68	7.44	0.00
62.50	7.68	7.44	0.00	75.75	7.68	7.44	0.00
62.75	7.68	7.44	0.00	76.00	7.68	7.44	0.00
63.00	7.68	7.44	0.00	76.25	7.68	7.44	0.00
63.25	7.68	7.44	0.00	76.50	7.68	7.44	0.00
63.50	7.68	7.44	0.00	76.75	7.68	7.44	0.00
63.75	7.68	7.44	0.00	77.00	7.68	7.44	0.00
64.00	7.68	7.44	0.00	77.25	7.68	7.44	0.00
64.25	7.68	7.44	0.00	77.50	7.68	7.44	0.00
64.50	7.68	7.44	0.00	77.75	7.68	7.44	0.00
64.75	7.68	7.44	0.00	78.00	7.68	7.44	0.00
65.00	7.68	7.44	0.00	78.25	7.68	7.44	0.00
65.25	7.68	7.44	0.00	78.50	7.68	7.44	0.00
65.50	7.68	7.44	0.00	78.75	7.68	7.44	0.00
65.75	7.68	7.44	0.00	79.00	7.68	7.44	0.00
66.00	7.68	7.44	0.00	79.25	7.68	7.44	0.00
66.25	7.68	7.44	0.00	79.50	7.68	7.44	0.00
66.50	7.68	7.44	0.00	79.75	7.68	7.44	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	7.44	0.00	93.25	7.68	7.44	0.00
80.25	7.68	7.44	0.00	93.50	7.68	7.44	0.00
80.50	7.68	7.44	0.00	93.75	7.68	7.44	0.00
80.75	7.68	7.44	0.00	94.00	7.68	7.44	0.00
81.00	7.68	7.44	0.00	94.25	7.68	7.44	0.00
81.25	7.68	7.44	0.00	94.50	7.68	7.44	0.00
81.50	7.68	7.44	0.00	94.75	7.68	7.44	0.00
81.75	7.68	7.44	0.00	95.00	7.68	7.44	0.00
82.00	7.68	7.44	0.00	95.25	7.68	7.44	0.00
82.25	7.68	7.44	0.00	95.50	7.68	7.44	0.00
82.50	7.68	7.44	0.00	95.75	7.68	7.44	0.00
82.75	7.68	7.44	0.00	96.00	7.68	7.44	0.00
83.00	7.68	7.44	0.00	96.25	7.68	7.44	0.00
83.25	7.68	7.44	0.00	96.50	7.68	7.44	0.00
83.50	7.68	7.44	0.00	96.75	7.68	7.44	0.00
83.75	7.68	7.44	0.00	97.00	7.68	7.44	0.00
84.00	7.68	7.44	0.00	97.25	7.68	7.44	0.00
84.25	7.68	7.44	0.00	97.50	7.68	7.44	0.00
84.50	7.68	7.44	0.00	97.75	7.68	7.44	0.00
84.75	7.68	7.44	0.00	98.00	7.68	7.44	0.00
85.00	7.68	7.44	0.00	98.25	7.68	7.44	0.00
85.25	7.68	7.44	0.00	98.50	7.68	7.44	0.00
85.50	7.68	7.44	0.00	98.75	7.68	7.44	0.00
85.75	7.68	7.44	0.00	99.00	7.68	7.44	0.00
86.00	7.68	7.44	0.00	99.25	7.68	7.44	0.00
86.25	7.68	7.44	0.00	99.50	7.68	7.44	0.00
86.50	7.68	7.44	0.00	99.75	7.68	7.44	0.00
86.75	7.68	7.44	0.00	100.00	7.68	7.44	0.00
87.00	7.68	7.44	0.00	100.25	7.68	7.44	0.00
87.25	7.68	7.44	0.00	100.50	7.68	7.44	0.00
87.50	7.68	7.44	0.00	100.75	7.68	7.44	0.00
87.75	7.68	7.44	0.00	101.00	7.68	7.44	0.00
88.00	7.68	7.44	0.00	101.25	7.68	7.44	0.00
88.25	7.68	7.44	0.00	101.50	7.68	7.44	0.00
88.50	7.68	7.44	0.00	101.75	7.68	7.44	0.00
88.75	7.68	7.44	0.00	102.00	7.68	7.44	0.00
89.00	7.68	7.44	0.00	102.25	7.68	7.44	0.00
89.25	7.68	7.44	0.00	102.50	7.68	7.44	0.00
89.50	7.68	7.44	0.00	102.75	7.68	7.44	0.00
89.75	7.68	7.44	0.00	103.00	7.68	7.44	0.00
90.00	7.68	7.44	0.00	103.25	7.68	7.44	0.00
90.25	7.68	7.44	0.00	103.50	7.68	7.44	0.00
90.50	7.68	7.44	0.00	103.75	7.68	7.44	0.00
90.75	7.68	7.44	0.00	104.00	7.68	7.44	0.00
91.00	7.68	7.44	0.00	104.25	7.68	7.44	0.00
91.25	7.68	7.44	0.00	104.50	7.68	7.44	0.00
91.50	7.68	7.44	0.00	104.75	7.68	7.44	0.00
91.75	7.68	7.44	0.00	105.00	7.68	7.44	0.00
92.00	7.68	7.44	0.00	105.25	7.68	7.44	0.00
92.25	7.68	7.44	0.00	105.50	7.68	7.44	0.00
92.50	7.68	7.44	0.00	105.75	7.68	7.44	0.00
92.75	7.68	7.44	0.00	106.00	7.68	7.44	0.00
93.00	7.68	7.44	0.00	106.25	7.68	7.44	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	7.44	0.00	119.75	7.68	7.44	0.00
106.75	7.68	7.44	0.00	120.00	7.68	7.44	0.00
107.00	7.68	7.44	0.00	120.25	7.68	7.44	0.00
107.25	7.68	7.44	0.00	120.50	7.68	7.44	0.00
107.50	7.68	7.44	0.00	120.75	7.68	7.44	0.00
107.75	7.68	7.44	0.00	121.00	7.68	7.44	0.00
108.00	7.68	7.44	0.00	121.25	7.68	7.44	0.00
108.25	7.68	7.44	0.00	121.50	7.68	7.44	0.00
108.50	7.68	7.44	0.00	121.75	7.68	7.44	0.00
108.75	7.68	7.44	0.00	122.00	7.68	7.44	0.00
109.00	7.68	7.44	0.00	122.25	7.68	7.44	0.00
109.25	7.68	7.44	0.00	122.50	7.68	7.44	0.00
109.50	7.68	7.44	0.00	122.75	7.68	7.44	0.00
109.75	7.68	7.44	0.00	123.00	7.68	7.44	0.00
110.00	7.68	7.44	0.00	123.25	7.68	7.44	0.00
110.25	7.68	7.44	0.00	123.50	7.68	7.44	0.00
110.50	7.68	7.44	0.00	123.75	7.68	7.44	0.00
110.75	7.68	7.44	0.00	124.00	7.68	7.44	0.00
111.00	7.68	7.44	0.00	124.25	7.68	7.44	0.00
111.25	7.68	7.44	0.00	124.50	7.68	7.44	0.00
111.50	7.68	7.44	0.00	124.75	7.68	7.44	0.00
111.75	7.68	7.44	0.00	125.00	7.68	7.44	0.00
112.00	7.68	7.44	0.00	125.25	7.68	7.44	0.00
112.25	7.68	7.44	0.00	125.50	7.68	7.44	0.00
112.50	7.68	7.44	0.00	125.75	7.68	7.44	0.00
112.75	7.68	7.44	0.00	126.00	7.68	7.44	0.00
113.00	7.68	7.44	0.00	126.25	7.68	7.44	0.00
113.25	7.68	7.44	0.00	126.50	7.68	7.44	0.00
113.50	7.68	7.44	0.00	126.75	7.68	7.44	0.00
113.75	7.68	7.44	0.00	127.00	7.68	7.44	0.00
114.00	7.68	7.44	0.00	127.25	7.68	7.44	0.00
114.25	7.68	7.44	0.00	127.50	7.68	7.44	0.00
114.50	7.68	7.44	0.00	127.75	7.68	7.44	0.00
114.75	7.68	7.44	0.00	128.00	7.68	7.44	0.00
115.00	7.68	7.44	0.00	128.25	7.68	7.44	0.00
115.25	7.68	7.44	0.00	128.50	7.68	7.44	0.00
115.50	7.68	7.44	0.00	128.75	7.68	7.44	0.00
115.75	7.68	7.44	0.00	129.00	7.68	7.44	0.00
116.00	7.68	7.44	0.00	129.25	7.68	7.44	0.00
116.25	7.68	7.44	0.00	129.50	7.68	7.44	0.00
116.50	7.68	7.44	0.00	129.75	7.68	7.44	0.00
116.75	7.68	7.44	0.00	130.00	7.68	7.44	0.00
117.00	7.68	7.44	0.00	130.25	7.68	7.44	0.00
117.25	7.68	7.44	0.00	130.50	7.68	7.44	0.00
117.50	7.68	7.44	0.00	130.75	7.68	7.44	0.00
117.75	7.68	7.44	0.00	131.00	7.68	7.44	0.00
118.00	7.68	7.44	0.00	131.25	7.68	7.44	0.00
118.25	7.68	7.44	0.00	131.50	7.68	7.44	0.00
118.50	7.68	7.44	0.00	131.75	7.68	7.44	0.00
118.75	7.68	7.44	0.00	132.00	7.68	7.44	0.00
119.00	7.68	7.44	0.00	132.25	7.68	7.44	0.00
119.25	7.68	7.44	0.00	132.50	7.68	7.44	0.00
119.50	7.68	7.44	0.00	132.75	7.68	7.44	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	7.44	0.00
133.25	7.68	7.44	0.00
133.50	7.68	7.44	0.00
133.75	7.68	7.44	0.00
134.00	7.68	7.44	0.00
134.25	7.68	7.44	0.00
134.50	7.68	7.44	0.00
134.75	7.68	7.44	0.00
135.00	7.68	7.44	0.00
135.25	7.68	7.44	0.00
135.50	7.68	7.44	0.00
135.75	7.68	7.44	0.00
136.00	7.68	7.44	0.00
136.25	7.68	7.44	0.00
136.50	7.68	7.44	0.00
136.75	7.68	7.44	0.00
137.00	7.68	7.44	0.00
137.25	7.68	7.44	0.00
137.50	7.68	7.44	0.00
137.75	7.68	7.44	0.00
138.00	7.68	7.44	0.00
138.25	7.68	7.44	0.00
138.50	7.68	7.44	0.00
138.75	7.68	7.44	0.00
139.00	7.68	7.44	0.00
139.25	7.68	7.44	0.00
139.50	7.68	7.44	0.00
139.75	7.68	7.44	0.00
140.00	7.68	7.44	0.00
140.25	7.68	7.44	0.00
140.50	7.68	7.44	0.00
140.75	7.68	7.44	0.00
141.00	7.68	7.44	0.00
141.25	7.68	7.44	0.00
141.50	7.68	7.44	0.00
141.75	7.68	7.44	0.00
142.00	7.68	7.44	0.00
142.25	7.68	7.44	0.00
142.50	7.68	7.44	0.00
142.75	7.68	7.44	0.00
143.00	7.68	7.44	0.00
143.25	7.68	7.44	0.00
143.50	7.68	7.44	0.00
143.75	7.68	7.44	0.00
144.00	7.68	7.44	0.00
144.25	7.68	7.44	0.00
144.50	7.68	7.44	0.00
144.75	7.68	7.44	0.00
145.00	7.68	7.44	0.00
145.25	7.68	7.44	0.00
145.50	7.68	7.44	0.00
145.75	7.68	7.44	0.00
146.00	7.68	7.44	0.00
146.25	7.68	7.44	0.00
146.50	7.68	7.44	0.00
146.75	7.68	7.44	0.00
147.00	7.68	7.44	0.00
147.25	7.68	7.44	0.00
147.50	7.68	7.44	0.00
147.75	7.68	7.44	0.00
148.00	7.68	7.44	0.00
148.25	7.68	7.44	0.00
148.50	7.68	7.44	0.00
148.75	7.68	7.44	0.00
149.00	7.68	7.44	0.00
149.25	7.68	7.44	0.00
149.50	7.68	7.44	0.00
149.75	7.68	7.44	0.00
150.00	7.68	7.44	0.00

Summary for Subcatchment 5S: SB-4

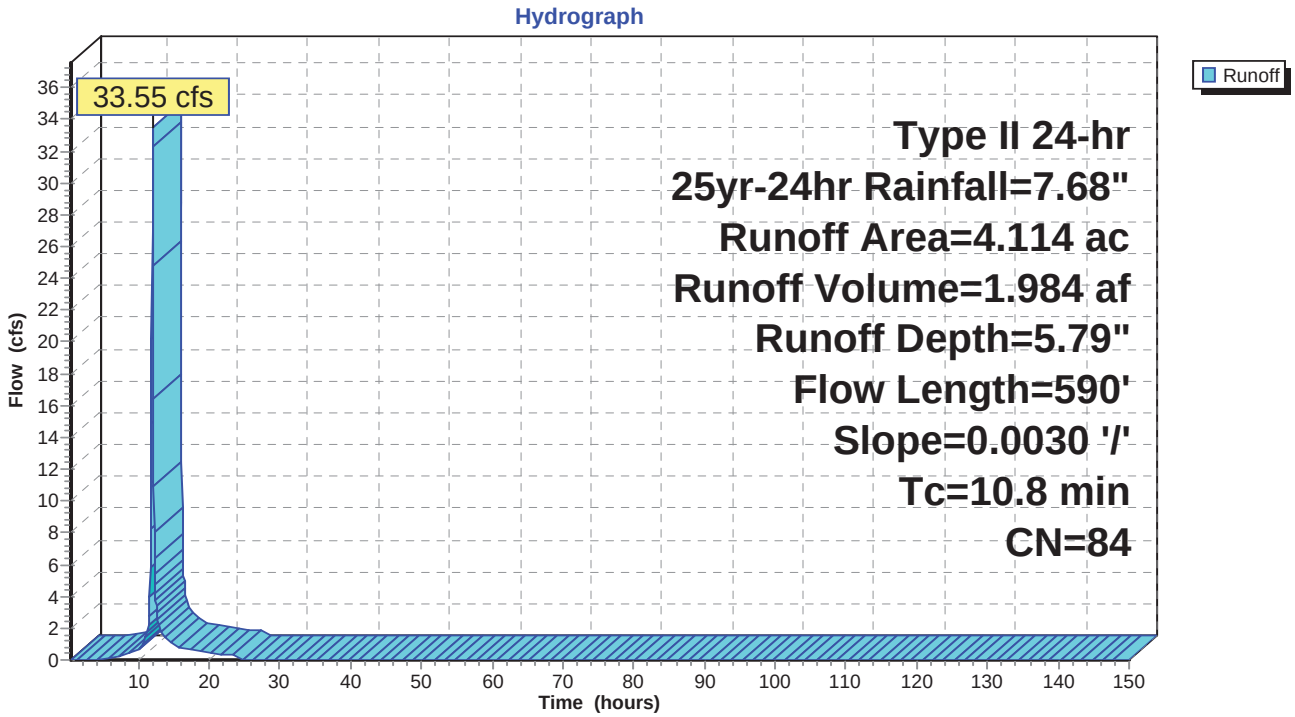
Runoff = 33.55 cfs @ 12.02 hrs, Volume= 1.984 af, Depth= 5.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
*	0.654	98	Gravel surface, HSG A
	0.100	98	Roofs, HSG A
	0.950	39	>75% Grass cover, Good, HSG A
	2.410	98	Paved roads w/curbs & sewers, HSG A
	4.114	84	Weighted Average
	0.950		23.09% Pervious Area
	3.164		76.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	300	0.0030	0.95		**Sheet Flow, Overland Flow to Storm System** Smooth surfaces n= 0.011 P2= 4.50"
5.5	290	0.0030	0.88		**Shallow Concentrated Flow, Overland Flow to Storm Inlet** Unpaved Kv= 16.1 fps
10.8	590	Total			

Subcatchment 5S: SB-4



Hydrograph for Subcatchment 5S: SB-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	4.40	1.36
0.75	0.06	0.00	0.00	14.00	6.30	4.48	1.21
1.00	0.08	0.00	0.00	14.25	6.37	4.54	1.10
1.25	0.10	0.00	0.00	14.50	6.43	4.60	1.04
1.50	0.12	0.00	0.00	14.75	6.50	4.66	0.99
1.75	0.15	0.00	0.00	15.00	6.55	4.72	0.94
2.00	0.17	0.00	0.00	15.25	6.61	4.77	0.89
2.25	0.19	0.00	0.00	15.50	6.66	4.82	0.83
2.50	0.22	0.00	0.00	15.75	6.71	4.87	0.78
2.75	0.24	0.00	0.00	16.00	6.76	4.91	0.73
3.00	0.26	0.00	0.00	16.25	6.80	4.95	0.69
3.25	0.29	0.00	0.00	16.50	6.84	4.99	0.67
3.50	0.32	0.00	0.00	16.75	6.89	5.03	0.65
3.75	0.34	0.00	0.00	17.00	6.93	5.07	0.63
4.00	0.37	0.00	0.00	17.25	6.96	5.11	0.61
4.25	0.40	0.00	0.00	17.50	7.00	5.14	0.60
4.50	0.42	0.00	0.01	17.75	7.04	5.18	0.58
4.75	0.45	0.00	0.03	18.00	7.07	5.21	0.56
5.00	0.48	0.01	0.04	18.25	7.11	5.24	0.54
5.25	0.52	0.01	0.06	18.50	7.14	5.27	0.52
5.50	0.55	0.01	0.07	18.75	7.17	5.30	0.50
5.75	0.58	0.02	0.09	19.00	7.20	5.33	0.48
6.00	0.61	0.03	0.11	19.25	7.23	5.36	0.46
6.25	0.65	0.03	0.12	19.50	7.26	5.39	0.45
6.50	0.69	0.04	0.14	19.75	7.29	5.41	0.43
6.75	0.72	0.05	0.16	20.00	7.31	5.44	0.41
7.00	0.76	0.06	0.18	20.25	7.34	5.46	0.39
7.25	0.80	0.08	0.20	20.50	7.36	5.48	0.39
7.50	0.84	0.09	0.22	20.75	7.39	5.51	0.39
7.75	0.88	0.10	0.24	21.00	7.41	5.53	0.38
8.00	0.92	0.12	0.26	21.25	7.43	5.55	0.38
8.25	0.97	0.14	0.29	21.50	7.46	5.58	0.38
8.50	1.02	0.16	0.34	21.75	7.48	5.60	0.37
8.75	1.07	0.18	0.39	22.00	7.50	5.62	0.37
9.00	1.13	0.21	0.45	22.25	7.53	5.64	0.36
9.25	1.19	0.24	0.50	22.50	7.55	5.66	0.36
9.50	1.25	0.27	0.52	22.75	7.57	5.68	0.36
9.75	1.32	0.31	0.57	23.00	7.59	5.71	0.35
10.00	1.39	0.35	0.66	23.25	7.62	5.73	0.35
10.25	1.47	0.40	0.78	23.50	7.64	5.75	0.35
10.50	1.57	0.45	0.92	23.75	7.66	5.77	0.34
10.75	1.68	0.52	1.11	24.00	**7.68**	**5.79**	0.34
11.00	1.80	0.61	1.36	24.25	7.68	5.79	0.05
11.25	1.97	0.72	1.75	24.50	7.68	5.79	0.00
11.50	2.17	0.87	2.36	24.75	7.68	5.79	0.00
11.75	2.97	1.49	8.28	25.00	7.68	5.79	0.00
12.00	5.09	3.35	**33.07**	25.25	7.68	5.79	0.00
12.25	5.42	3.66	8.02	25.50	7.68	5.79	0.00
12.50	5.64	3.87	3.74	25.75	7.68	5.79	0.00
12.75	5.80	4.01	2.50	26.00	7.68	5.79	0.00
13.00	5.93	4.13	2.07	26.25	7.68	5.79	0.00
13.25	6.04	4.23	1.76	26.50	7.68	5.79	0.00
13.50	6.14	4.32	1.54	26.75	7.68	5.79	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	5.79	0.00	40.25	7.68	5.79	0.00
27.25	7.68	5.79	0.00	40.50	7.68	5.79	0.00
27.50	7.68	5.79	0.00	40.75	7.68	5.79	0.00
27.75	7.68	5.79	0.00	41.00	7.68	5.79	0.00
28.00	7.68	5.79	0.00	41.25	7.68	5.79	0.00
28.25	7.68	5.79	0.00	41.50	7.68	5.79	0.00
28.50	7.68	5.79	0.00	41.75	7.68	5.79	0.00
28.75	7.68	5.79	0.00	42.00	7.68	5.79	0.00
29.00	7.68	5.79	0.00	42.25	7.68	5.79	0.00
29.25	7.68	5.79	0.00	42.50	7.68	5.79	0.00
29.50	7.68	5.79	0.00	42.75	7.68	5.79	0.00
29.75	7.68	5.79	0.00	43.00	7.68	5.79	0.00
30.00	7.68	5.79	0.00	43.25	7.68	5.79	0.00
30.25	7.68	5.79	0.00	43.50	7.68	5.79	0.00
30.50	7.68	5.79	0.00	43.75	7.68	5.79	0.00
30.75	7.68	5.79	0.00	44.00	7.68	5.79	0.00
31.00	7.68	5.79	0.00	44.25	7.68	5.79	0.00
31.25	7.68	5.79	0.00	44.50	7.68	5.79	0.00
31.50	7.68	5.79	0.00	44.75	7.68	5.79	0.00
31.75	7.68	5.79	0.00	45.00	7.68	5.79	0.00
32.00	7.68	5.79	0.00	45.25	7.68	5.79	0.00
32.25	7.68	5.79	0.00	45.50	7.68	5.79	0.00
32.50	7.68	5.79	0.00	45.75	7.68	5.79	0.00
32.75	7.68	5.79	0.00	46.00	7.68	5.79	0.00
33.00	7.68	5.79	0.00	46.25	7.68	5.79	0.00
33.25	7.68	5.79	0.00	46.50	7.68	5.79	0.00
33.50	7.68	5.79	0.00	46.75	7.68	5.79	0.00
33.75	7.68	5.79	0.00	47.00	7.68	5.79	0.00
34.00	7.68	5.79	0.00	47.25	7.68	5.79	0.00
34.25	7.68	5.79	0.00	47.50	7.68	5.79	0.00
34.50	7.68	5.79	0.00	47.75	7.68	5.79	0.00
34.75	7.68	5.79	0.00	48.00	7.68	5.79	0.00
35.00	7.68	5.79	0.00	48.25	7.68	5.79	0.00
35.25	7.68	5.79	0.00	48.50	7.68	5.79	0.00
35.50	7.68	5.79	0.00	48.75	7.68	5.79	0.00
35.75	7.68	5.79	0.00	49.00	7.68	5.79	0.00
36.00	7.68	5.79	0.00	49.25	7.68	5.79	0.00
36.25	7.68	5.79	0.00	49.50	7.68	5.79	0.00
36.50	7.68	5.79	0.00	49.75	7.68	5.79	0.00
36.75	7.68	5.79	0.00	50.00	7.68	5.79	0.00
37.00	7.68	5.79	0.00	50.25	7.68	5.79	0.00
37.25	7.68	5.79	0.00	50.50	7.68	5.79	0.00
37.50	7.68	5.79	0.00	50.75	7.68	5.79	0.00
37.75	7.68	5.79	0.00	51.00	7.68	5.79	0.00
38.00	7.68	5.79	0.00	51.25	7.68	5.79	0.00
38.25	7.68	5.79	0.00	51.50	7.68	5.79	0.00
38.50	7.68	5.79	0.00	51.75	7.68	5.79	0.00
38.75	7.68	5.79	0.00	52.00	7.68	5.79	0.00
39.00	7.68	5.79	0.00	52.25	7.68	5.79	0.00
39.25	7.68	5.79	0.00	52.50	7.68	5.79	0.00
39.50	7.68	5.79	0.00	52.75	7.68	5.79	0.00
39.75	7.68	5.79	0.00	53.00	7.68	5.79	0.00
40.00	7.68	5.79	0.00	53.25	7.68	5.79	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	5.79	0.00	66.75	7.68	5.79	0.00
53.75	7.68	5.79	0.00	67.00	7.68	5.79	0.00
54.00	7.68	5.79	0.00	67.25	7.68	5.79	0.00
54.25	7.68	5.79	0.00	67.50	7.68	5.79	0.00
54.50	7.68	5.79	0.00	67.75	7.68	5.79	0.00
54.75	7.68	5.79	0.00	68.00	7.68	5.79	0.00
55.00	7.68	5.79	0.00	68.25	7.68	5.79	0.00
55.25	7.68	5.79	0.00	68.50	7.68	5.79	0.00
55.50	7.68	5.79	0.00	68.75	7.68	5.79	0.00
55.75	7.68	5.79	0.00	69.00	7.68	5.79	0.00
56.00	7.68	5.79	0.00	69.25	7.68	5.79	0.00
56.25	7.68	5.79	0.00	69.50	7.68	5.79	0.00
56.50	7.68	5.79	0.00	69.75	7.68	5.79	0.00
56.75	7.68	5.79	0.00	70.00	7.68	5.79	0.00
57.00	7.68	5.79	0.00	70.25	7.68	5.79	0.00
57.25	7.68	5.79	0.00	70.50	7.68	5.79	0.00
57.50	7.68	5.79	0.00	70.75	7.68	5.79	0.00
57.75	7.68	5.79	0.00	71.00	7.68	5.79	0.00
58.00	7.68	5.79	0.00	71.25	7.68	5.79	0.00
58.25	7.68	5.79	0.00	71.50	7.68	5.79	0.00
58.50	7.68	5.79	0.00	71.75	7.68	5.79	0.00
58.75	7.68	5.79	0.00	72.00	7.68	5.79	0.00
59.00	7.68	5.79	0.00	72.25	7.68	5.79	0.00
59.25	7.68	5.79	0.00	72.50	7.68	5.79	0.00
59.50	7.68	5.79	0.00	72.75	7.68	5.79	0.00
59.75	7.68	5.79	0.00	73.00	7.68	5.79	0.00
60.00	7.68	5.79	0.00	73.25	7.68	5.79	0.00
60.25	7.68	5.79	0.00	73.50	7.68	5.79	0.00
60.50	7.68	5.79	0.00	73.75	7.68	5.79	0.00
60.75	7.68	5.79	0.00	74.00	7.68	5.79	0.00
61.00	7.68	5.79	0.00	74.25	7.68	5.79	0.00
61.25	7.68	5.79	0.00	74.50	7.68	5.79	0.00
61.50	7.68	5.79	0.00	74.75	7.68	5.79	0.00
61.75	7.68	5.79	0.00	75.00	7.68	5.79	0.00
62.00	7.68	5.79	0.00	75.25	7.68	5.79	0.00
62.25	7.68	5.79	0.00	75.50	7.68	5.79	0.00
62.50	7.68	5.79	0.00	75.75	7.68	5.79	0.00
62.75	7.68	5.79	0.00	76.00	7.68	5.79	0.00
63.00	7.68	5.79	0.00	76.25	7.68	5.79	0.00
63.25	7.68	5.79	0.00	76.50	7.68	5.79	0.00
63.50	7.68	5.79	0.00	76.75	7.68	5.79	0.00
63.75	7.68	5.79	0.00	77.00	7.68	5.79	0.00
64.00	7.68	5.79	0.00	77.25	7.68	5.79	0.00
64.25	7.68	5.79	0.00	77.50	7.68	5.79	0.00
64.50	7.68	5.79	0.00	77.75	7.68	5.79	0.00
64.75	7.68	5.79	0.00	78.00	7.68	5.79	0.00
65.00	7.68	5.79	0.00	78.25	7.68	5.79	0.00
65.25	7.68	5.79	0.00	78.50	7.68	5.79	0.00
65.50	7.68	5.79	0.00	78.75	7.68	5.79	0.00
65.75	7.68	5.79	0.00	79.00	7.68	5.79	0.00
66.00	7.68	5.79	0.00	79.25	7.68	5.79	0.00
66.25	7.68	5.79	0.00	79.50	7.68	5.79	0.00
66.50	7.68	5.79	0.00	79.75	7.68	5.79	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	5.79	0.00	93.25	7.68	5.79	0.00
80.25	7.68	5.79	0.00	93.50	7.68	5.79	0.00
80.50	7.68	5.79	0.00	93.75	7.68	5.79	0.00
80.75	7.68	5.79	0.00	94.00	7.68	5.79	0.00
81.00	7.68	5.79	0.00	94.25	7.68	5.79	0.00
81.25	7.68	5.79	0.00	94.50	7.68	5.79	0.00
81.50	7.68	5.79	0.00	94.75	7.68	5.79	0.00
81.75	7.68	5.79	0.00	95.00	7.68	5.79	0.00
82.00	7.68	5.79	0.00	95.25	7.68	5.79	0.00
82.25	7.68	5.79	0.00	95.50	7.68	5.79	0.00
82.50	7.68	5.79	0.00	95.75	7.68	5.79	0.00
82.75	7.68	5.79	0.00	96.00	7.68	5.79	0.00
83.00	7.68	5.79	0.00	96.25	7.68	5.79	0.00
83.25	7.68	5.79	0.00	96.50	7.68	5.79	0.00
83.50	7.68	5.79	0.00	96.75	7.68	5.79	0.00
83.75	7.68	5.79	0.00	97.00	7.68	5.79	0.00
84.00	7.68	5.79	0.00	97.25	7.68	5.79	0.00
84.25	7.68	5.79	0.00	97.50	7.68	5.79	0.00
84.50	7.68	5.79	0.00	97.75	7.68	5.79	0.00
84.75	7.68	5.79	0.00	98.00	7.68	5.79	0.00
85.00	7.68	5.79	0.00	98.25	7.68	5.79	0.00
85.25	7.68	5.79	0.00	98.50	7.68	5.79	0.00
85.50	7.68	5.79	0.00	98.75	7.68	5.79	0.00
85.75	7.68	5.79	0.00	99.00	7.68	5.79	0.00
86.00	7.68	5.79	0.00	99.25	7.68	5.79	0.00
86.25	7.68	5.79	0.00	99.50	7.68	5.79	0.00
86.50	7.68	5.79	0.00	99.75	7.68	5.79	0.00
86.75	7.68	5.79	0.00	100.00	7.68	5.79	0.00
87.00	7.68	5.79	0.00	100.25	7.68	5.79	0.00
87.25	7.68	5.79	0.00	100.50	7.68	5.79	0.00
87.50	7.68	5.79	0.00	100.75	7.68	5.79	0.00
87.75	7.68	5.79	0.00	101.00	7.68	5.79	0.00
88.00	7.68	5.79	0.00	101.25	7.68	5.79	0.00
88.25	7.68	5.79	0.00	101.50	7.68	5.79	0.00
88.50	7.68	5.79	0.00	101.75	7.68	5.79	0.00
88.75	7.68	5.79	0.00	102.00	7.68	5.79	0.00
89.00	7.68	5.79	0.00	102.25	7.68	5.79	0.00
89.25	7.68	5.79	0.00	102.50	7.68	5.79	0.00
89.50	7.68	5.79	0.00	102.75	7.68	5.79	0.00
89.75	7.68	5.79	0.00	103.00	7.68	5.79	0.00
90.00	7.68	5.79	0.00	103.25	7.68	5.79	0.00
90.25	7.68	5.79	0.00	103.50	7.68	5.79	0.00
90.50	7.68	5.79	0.00	103.75	7.68	5.79	0.00
90.75	7.68	5.79	0.00	104.00	7.68	5.79	0.00
91.00	7.68	5.79	0.00	104.25	7.68	5.79	0.00
91.25	7.68	5.79	0.00	104.50	7.68	5.79	0.00
91.50	7.68	5.79	0.00	104.75	7.68	5.79	0.00
91.75	7.68	5.79	0.00	105.00	7.68	5.79	0.00
92.00	7.68	5.79	0.00	105.25	7.68	5.79	0.00
92.25	7.68	5.79	0.00	105.50	7.68	5.79	0.00
92.50	7.68	5.79	0.00	105.75	7.68	5.79	0.00
92.75	7.68	5.79	0.00	106.00	7.68	5.79	0.00
93.00	7.68	5.79	0.00	106.25	7.68	5.79	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	5.79	0.00	119.75	7.68	5.79	0.00
106.75	7.68	5.79	0.00	120.00	7.68	5.79	0.00
107.00	7.68	5.79	0.00	120.25	7.68	5.79	0.00
107.25	7.68	5.79	0.00	120.50	7.68	5.79	0.00
107.50	7.68	5.79	0.00	120.75	7.68	5.79	0.00
107.75	7.68	5.79	0.00	121.00	7.68	5.79	0.00
108.00	7.68	5.79	0.00	121.25	7.68	5.79	0.00
108.25	7.68	5.79	0.00	121.50	7.68	5.79	0.00
108.50	7.68	5.79	0.00	121.75	7.68	5.79	0.00
108.75	7.68	5.79	0.00	122.00	7.68	5.79	0.00
109.00	7.68	5.79	0.00	122.25	7.68	5.79	0.00
109.25	7.68	5.79	0.00	122.50	7.68	5.79	0.00
109.50	7.68	5.79	0.00	122.75	7.68	5.79	0.00
109.75	7.68	5.79	0.00	123.00	7.68	5.79	0.00
110.00	7.68	5.79	0.00	123.25	7.68	5.79	0.00
110.25	7.68	5.79	0.00	123.50	7.68	5.79	0.00
110.50	7.68	5.79	0.00	123.75	7.68	5.79	0.00
110.75	7.68	5.79	0.00	124.00	7.68	5.79	0.00
111.00	7.68	5.79	0.00	124.25	7.68	5.79	0.00
111.25	7.68	5.79	0.00	124.50	7.68	5.79	0.00
111.50	7.68	5.79	0.00	124.75	7.68	5.79	0.00
111.75	7.68	5.79	0.00	125.00	7.68	5.79	0.00
112.00	7.68	5.79	0.00	125.25	7.68	5.79	0.00
112.25	7.68	5.79	0.00	125.50	7.68	5.79	0.00
112.50	7.68	5.79	0.00	125.75	7.68	5.79	0.00
112.75	7.68	5.79	0.00	126.00	7.68	5.79	0.00
113.00	7.68	5.79	0.00	126.25	7.68	5.79	0.00
113.25	7.68	5.79	0.00	126.50	7.68	5.79	0.00
113.50	7.68	5.79	0.00	126.75	7.68	5.79	0.00
113.75	7.68	5.79	0.00	127.00	7.68	5.79	0.00
114.00	7.68	5.79	0.00	127.25	7.68	5.79	0.00
114.25	7.68	5.79	0.00	127.50	7.68	5.79	0.00
114.50	7.68	5.79	0.00	127.75	7.68	5.79	0.00
114.75	7.68	5.79	0.00	128.00	7.68	5.79	0.00
115.00	7.68	5.79	0.00	128.25	7.68	5.79	0.00
115.25	7.68	5.79	0.00	128.50	7.68	5.79	0.00
115.50	7.68	5.79	0.00	128.75	7.68	5.79	0.00
115.75	7.68	5.79	0.00	129.00	7.68	5.79	0.00
116.00	7.68	5.79	0.00	129.25	7.68	5.79	0.00
116.25	7.68	5.79	0.00	129.50	7.68	5.79	0.00
116.50	7.68	5.79	0.00	129.75	7.68	5.79	0.00
116.75	7.68	5.79	0.00	130.00	7.68	5.79	0.00
117.00	7.68	5.79	0.00	130.25	7.68	5.79	0.00
117.25	7.68	5.79	0.00	130.50	7.68	5.79	0.00
117.50	7.68	5.79	0.00	130.75	7.68	5.79	0.00
117.75	7.68	5.79	0.00	131.00	7.68	5.79	0.00
118.00	7.68	5.79	0.00	131.25	7.68	5.79	0.00
118.25	7.68	5.79	0.00	131.50	7.68	5.79	0.00
118.50	7.68	5.79	0.00	131.75	7.68	5.79	0.00
118.75	7.68	5.79	0.00	132.00	7.68	5.79	0.00
119.00	7.68	5.79	0.00	132.25	7.68	5.79	0.00
119.25	7.68	5.79	0.00	132.50	7.68	5.79	0.00
119.50	7.68	5.79	0.00	132.75	7.68	5.79	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	5.79	0.00
133.25	7.68	5.79	0.00
133.50	7.68	5.79	0.00
133.75	7.68	5.79	0.00
134.00	7.68	5.79	0.00
134.25	7.68	5.79	0.00
134.50	7.68	5.79	0.00
134.75	7.68	5.79	0.00
135.00	7.68	5.79	0.00
135.25	7.68	5.79	0.00
135.50	7.68	5.79	0.00
135.75	7.68	5.79	0.00
136.00	7.68	5.79	0.00
136.25	7.68	5.79	0.00
136.50	7.68	5.79	0.00
136.75	7.68	5.79	0.00
137.00	7.68	5.79	0.00
137.25	7.68	5.79	0.00
137.50	7.68	5.79	0.00
137.75	7.68	5.79	0.00
138.00	7.68	5.79	0.00
138.25	7.68	5.79	0.00
138.50	7.68	5.79	0.00
138.75	7.68	5.79	0.00
139.00	7.68	5.79	0.00
139.25	7.68	5.79	0.00
139.50	7.68	5.79	0.00
139.75	7.68	5.79	0.00
140.00	7.68	5.79	0.00
140.25	7.68	5.79	0.00
140.50	7.68	5.79	0.00
140.75	7.68	5.79	0.00
141.00	7.68	5.79	0.00
141.25	7.68	5.79	0.00
141.50	7.68	5.79	0.00
141.75	7.68	5.79	0.00
142.00	7.68	5.79	0.00
142.25	7.68	5.79	0.00
142.50	7.68	5.79	0.00
142.75	7.68	5.79	0.00
143.00	7.68	5.79	0.00
143.25	7.68	5.79	0.00
143.50	7.68	5.79	0.00
143.75	7.68	5.79	0.00
144.00	7.68	5.79	0.00
144.25	7.68	5.79	0.00
144.50	7.68	5.79	0.00
144.75	7.68	5.79	0.00
145.00	7.68	5.79	0.00
145.25	7.68	5.79	0.00
145.50	7.68	5.79	0.00
145.75	7.68	5.79	0.00
146.00	7.68	5.79	0.00
146.25	7.68	5.79	0.00
146.50	7.68	5.79	0.00
146.75	7.68	5.79	0.00
147.00	7.68	5.79	0.00
147.25	7.68	5.79	0.00
147.50	7.68	5.79	0.00
147.75	7.68	5.79	0.00
148.00	7.68	5.79	0.00
148.25	7.68	5.79	0.00
148.50	7.68	5.79	0.00
148.75	7.68	5.79	0.00
149.00	7.68	5.79	0.00
149.25	7.68	5.79	0.00
149.50	7.68	5.79	0.00
149.75	7.68	5.79	0.00
150.00	7.68	5.79	0.00

Summary for Subcatchment 6S: SB-5

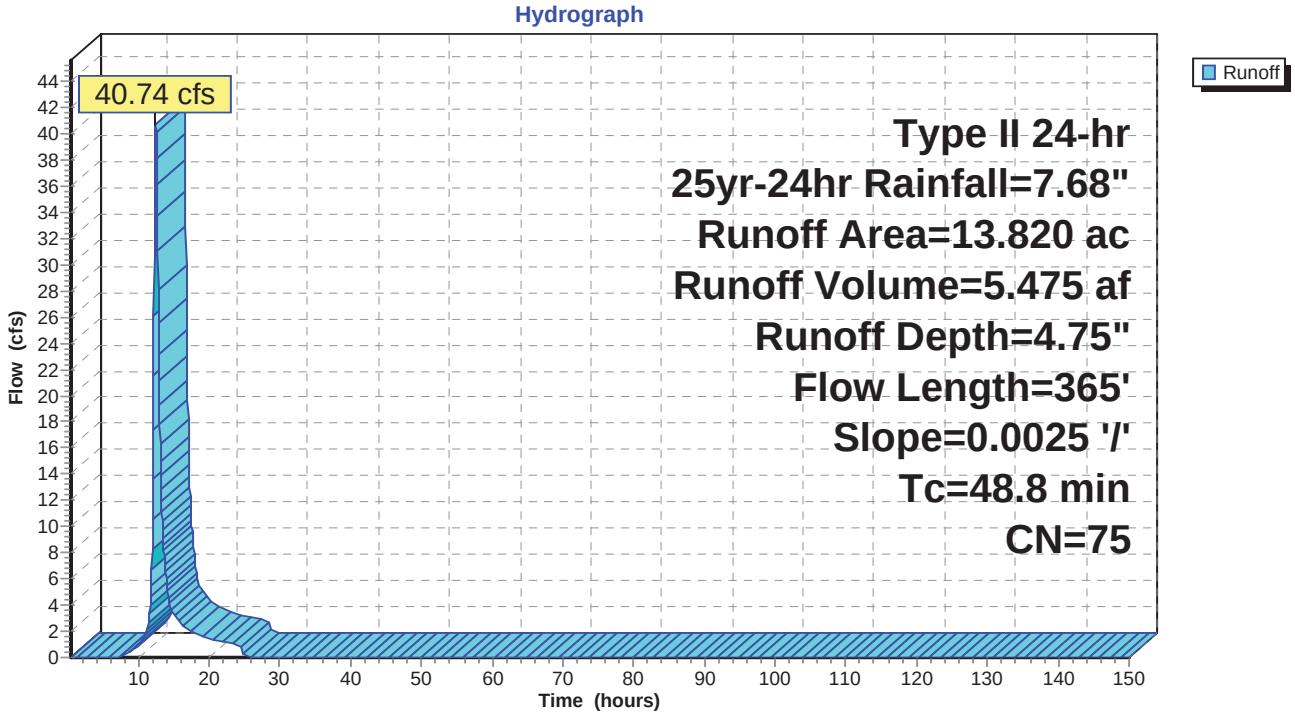
Runoff = 40.74 cfs @ 12.48 hrs, Volume= 5.475 af, Depth= 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
	4.100	98	Water Surface, HSG A
	0.470	98	Roofs, HSG A
	5.410	39	>75% Grass cover, Good, HSG A
*	2.200	98	Gravel surface, HSG A
	1.640	98	Paved roads w/curbs & sewers, HSG A
	13.820	75	Weighted Average
	5.410		39.15% Pervious Area
	8.410		60.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.7	300	0.0025	0.11		**Sheet Flow, Overland Flow to Pond** Grass: Short n= 0.150 P2= 4.50"
3.1	65	0.0025	0.35		**Shallow Concentrated Flow, Overland Flow to Pond** Short Grass Pasture Kv= 7.0 fps
48.8	365	Total			

Subcatchment 6S: SB-5



Hydrograph for Subcatchment 6S: SB-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	3.47	6.97
0.75	0.06	0.00	0.00	14.00	6.30	3.54	5.63
1.00	0.08	0.00	0.00	14.25	6.37	3.60	4.74
1.25	0.10	0.00	0.00	14.50	6.43	3.65	4.07
1.50	0.12	0.00	0.00	14.75	6.50	3.71	3.62
1.75	0.15	0.00	0.00	15.00	6.55	3.76	3.35
2.00	0.17	0.00	0.00	15.25	6.61	3.81	3.15
2.25	0.19	0.00	0.00	15.50	6.66	3.85	2.97
2.50	0.22	0.00	0.00	15.75	6.71	3.90	2.80
2.75	0.24	0.00	0.00	16.00	6.76	3.94	2.64
3.00	0.26	0.00	0.00	16.25	6.80	3.98	2.48
3.25	0.29	0.00	0.00	16.50	6.84	4.01	2.33
3.50	0.32	0.00	0.00	16.75	6.89	4.05	2.21
3.75	0.34	0.00	0.00	17.00	6.93	4.08	2.13
4.00	0.37	0.00	0.00	17.25	6.96	4.12	2.05
4.25	0.40	0.00	0.00	17.50	7.00	4.15	1.99
4.50	0.42	0.00	0.00	17.75	7.04	4.18	1.93
4.75	0.45	0.00	0.00	18.00	7.07	4.21	1.87
5.00	0.48	0.00	0.00	18.25	7.11	4.24	1.82
5.25	0.52	0.00	0.00	18.50	7.14	4.27	1.76
5.50	0.55	0.00	0.00	18.75	7.17	4.30	1.70
5.75	0.58	0.00	0.00	19.00	7.20	4.33	1.64
6.00	0.61	0.00	0.00	19.25	7.23	4.35	1.59
6.25	0.65	0.00	0.00	19.50	7.26	4.38	1.53
6.50	0.69	0.00	0.00	19.75	7.29	4.40	1.47
6.75	0.72	0.00	0.00	20.00	7.31	4.42	1.41
7.00	0.76	0.00	0.01	20.25	7.34	4.45	1.35
7.25	0.80	0.01	0.04	20.50	7.36	4.47	1.30
7.50	0.84	0.01	0.08	20.75	7.39	4.49	1.26
7.75	0.88	0.01	0.12	21.00	7.41	4.51	1.24
8.00	0.92	0.02	0.17	21.25	7.43	4.53	1.22
8.25	0.97	0.02	0.22	21.50	7.46	4.55	1.21
8.50	1.02	0.03	0.27	21.75	7.48	4.58	1.19
8.75	1.07	0.04	0.34	22.00	7.50	4.60	1.18
9.00	1.13	0.06	0.43	22.25	7.53	4.62	1.17
9.25	1.19	0.07	0.54	22.50	7.55	4.64	1.16
9.50	1.25	0.09	0.65	22.75	7.57	4.66	1.15
9.75	1.32	0.11	0.76	23.00	7.59	4.68	1.13
10.00	1.39	0.13	0.87	23.25	7.62	4.70	1.12
10.25	1.47	0.16	1.01	23.50	7.64	4.72	1.11
10.50	1.57	0.19	1.21	23.75	7.66	4.73	1.10
10.75	1.68	0.23	1.47	24.00	**7.68**	**4.75**	1.09
11.00	1.80	0.29	1.81	24.25	7.68	4.75	1.05
11.25	1.97	0.36	2.27	24.50	7.68	4.75	0.81
11.50	2.17	0.47	2.93	24.75	7.68	4.75	0.45
11.75	2.97	0.94	4.17	25.00	7.68	4.75	0.21
12.00	5.09	2.52	10.63	25.25	7.68	4.75	0.10
12.25	5.42	2.80	30.60	25.50	7.68	4.75	0.05
12.50	5.64	2.98	**40.63**	25.75	7.68	4.75	0.02
12.75	5.80	3.11	30.99	26.00	7.68	4.75	0.01
13.00	5.93	3.22	19.33	26.25	7.68	4.75	0.00
13.25	6.04	3.32	12.85	26.50	7.68	4.75	0.00
13.50	6.14	3.40	9.14	26.75	7.68	4.75	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	4.75	0.00	40.25	7.68	4.75	0.00
27.25	7.68	4.75	0.00	40.50	7.68	4.75	0.00
27.50	7.68	4.75	0.00	40.75	7.68	4.75	0.00
27.75	7.68	4.75	0.00	41.00	7.68	4.75	0.00
28.00	7.68	4.75	0.00	41.25	7.68	4.75	0.00
28.25	7.68	4.75	0.00	41.50	7.68	4.75	0.00
28.50	7.68	4.75	0.00	41.75	7.68	4.75	0.00
28.75	7.68	4.75	0.00	42.00	7.68	4.75	0.00
29.00	7.68	4.75	0.00	42.25	7.68	4.75	0.00
29.25	7.68	4.75	0.00	42.50	7.68	4.75	0.00
29.50	7.68	4.75	0.00	42.75	7.68	4.75	0.00
29.75	7.68	4.75	0.00	43.00	7.68	4.75	0.00
30.00	7.68	4.75	0.00	43.25	7.68	4.75	0.00
30.25	7.68	4.75	0.00	43.50	7.68	4.75	0.00
30.50	7.68	4.75	0.00	43.75	7.68	4.75	0.00
30.75	7.68	4.75	0.00	44.00	7.68	4.75	0.00
31.00	7.68	4.75	0.00	44.25	7.68	4.75	0.00
31.25	7.68	4.75	0.00	44.50	7.68	4.75	0.00
31.50	7.68	4.75	0.00	44.75	7.68	4.75	0.00
31.75	7.68	4.75	0.00	45.00	7.68	4.75	0.00
32.00	7.68	4.75	0.00	45.25	7.68	4.75	0.00
32.25	7.68	4.75	0.00	45.50	7.68	4.75	0.00
32.50	7.68	4.75	0.00	45.75	7.68	4.75	0.00
32.75	7.68	4.75	0.00	46.00	7.68	4.75	0.00
33.00	7.68	4.75	0.00	46.25	7.68	4.75	0.00
33.25	7.68	4.75	0.00	46.50	7.68	4.75	0.00
33.50	7.68	4.75	0.00	46.75	7.68	4.75	0.00
33.75	7.68	4.75	0.00	47.00	7.68	4.75	0.00
34.00	7.68	4.75	0.00	47.25	7.68	4.75	0.00
34.25	7.68	4.75	0.00	47.50	7.68	4.75	0.00
34.50	7.68	4.75	0.00	47.75	7.68	4.75	0.00
34.75	7.68	4.75	0.00	48.00	7.68	4.75	0.00
35.00	7.68	4.75	0.00	48.25	7.68	4.75	0.00
35.25	7.68	4.75	0.00	48.50	7.68	4.75	0.00
35.50	7.68	4.75	0.00	48.75	7.68	4.75	0.00
35.75	7.68	4.75	0.00	49.00	7.68	4.75	0.00
36.00	7.68	4.75	0.00	49.25	7.68	4.75	0.00
36.25	7.68	4.75	0.00	49.50	7.68	4.75	0.00
36.50	7.68	4.75	0.00	49.75	7.68	4.75	0.00
36.75	7.68	4.75	0.00	50.00	7.68	4.75	0.00
37.00	7.68	4.75	0.00	50.25	7.68	4.75	0.00
37.25	7.68	4.75	0.00	50.50	7.68	4.75	0.00
37.50	7.68	4.75	0.00	50.75	7.68	4.75	0.00
37.75	7.68	4.75	0.00	51.00	7.68	4.75	0.00
38.00	7.68	4.75	0.00	51.25	7.68	4.75	0.00
38.25	7.68	4.75	0.00	51.50	7.68	4.75	0.00
38.50	7.68	4.75	0.00	51.75	7.68	4.75	0.00
38.75	7.68	4.75	0.00	52.00	7.68	4.75	0.00
39.00	7.68	4.75	0.00	52.25	7.68	4.75	0.00
39.25	7.68	4.75	0.00	52.50	7.68	4.75	0.00
39.50	7.68	4.75	0.00	52.75	7.68	4.75	0.00
39.75	7.68	4.75	0.00	53.00	7.68	4.75	0.00
40.00	7.68	4.75	0.00	53.25	7.68	4.75	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	4.75	0.00	66.75	7.68	4.75	0.00
53.75	7.68	4.75	0.00	67.00	7.68	4.75	0.00
54.00	7.68	4.75	0.00	67.25	7.68	4.75	0.00
54.25	7.68	4.75	0.00	67.50	7.68	4.75	0.00
54.50	7.68	4.75	0.00	67.75	7.68	4.75	0.00
54.75	7.68	4.75	0.00	68.00	7.68	4.75	0.00
55.00	7.68	4.75	0.00	68.25	7.68	4.75	0.00
55.25	7.68	4.75	0.00	68.50	7.68	4.75	0.00
55.50	7.68	4.75	0.00	68.75	7.68	4.75	0.00
55.75	7.68	4.75	0.00	69.00	7.68	4.75	0.00
56.00	7.68	4.75	0.00	69.25	7.68	4.75	0.00
56.25	7.68	4.75	0.00	69.50	7.68	4.75	0.00
56.50	7.68	4.75	0.00	69.75	7.68	4.75	0.00
56.75	7.68	4.75	0.00	70.00	7.68	4.75	0.00
57.00	7.68	4.75	0.00	70.25	7.68	4.75	0.00
57.25	7.68	4.75	0.00	70.50	7.68	4.75	0.00
57.50	7.68	4.75	0.00	70.75	7.68	4.75	0.00
57.75	7.68	4.75	0.00	71.00	7.68	4.75	0.00
58.00	7.68	4.75	0.00	71.25	7.68	4.75	0.00
58.25	7.68	4.75	0.00	71.50	7.68	4.75	0.00
58.50	7.68	4.75	0.00	71.75	7.68	4.75	0.00
58.75	7.68	4.75	0.00	72.00	7.68	4.75	0.00
59.00	7.68	4.75	0.00	72.25	7.68	4.75	0.00
59.25	7.68	4.75	0.00	72.50	7.68	4.75	0.00
59.50	7.68	4.75	0.00	72.75	7.68	4.75	0.00
59.75	7.68	4.75	0.00	73.00	7.68	4.75	0.00
60.00	7.68	4.75	0.00	73.25	7.68	4.75	0.00
60.25	7.68	4.75	0.00	73.50	7.68	4.75	0.00
60.50	7.68	4.75	0.00	73.75	7.68	4.75	0.00
60.75	7.68	4.75	0.00	74.00	7.68	4.75	0.00
61.00	7.68	4.75	0.00	74.25	7.68	4.75	0.00
61.25	7.68	4.75	0.00	74.50	7.68	4.75	0.00
61.50	7.68	4.75	0.00	74.75	7.68	4.75	0.00
61.75	7.68	4.75	0.00	75.00	7.68	4.75	0.00
62.00	7.68	4.75	0.00	75.25	7.68	4.75	0.00
62.25	7.68	4.75	0.00	75.50	7.68	4.75	0.00
62.50	7.68	4.75	0.00	75.75	7.68	4.75	0.00
62.75	7.68	4.75	0.00	76.00	7.68	4.75	0.00
63.00	7.68	4.75	0.00	76.25	7.68	4.75	0.00
63.25	7.68	4.75	0.00	76.50	7.68	4.75	0.00
63.50	7.68	4.75	0.00	76.75	7.68	4.75	0.00
63.75	7.68	4.75	0.00	77.00	7.68	4.75	0.00
64.00	7.68	4.75	0.00	77.25	7.68	4.75	0.00
64.25	7.68	4.75	0.00	77.50	7.68	4.75	0.00
64.50	7.68	4.75	0.00	77.75	7.68	4.75	0.00
64.75	7.68	4.75	0.00	78.00	7.68	4.75	0.00
65.00	7.68	4.75	0.00	78.25	7.68	4.75	0.00
65.25	7.68	4.75	0.00	78.50	7.68	4.75	0.00
65.50	7.68	4.75	0.00	78.75	7.68	4.75	0.00
65.75	7.68	4.75	0.00	79.00	7.68	4.75	0.00
66.00	7.68	4.75	0.00	79.25	7.68	4.75	0.00
66.25	7.68	4.75	0.00	79.50	7.68	4.75	0.00
66.50	7.68	4.75	0.00	79.75	7.68	4.75	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	4.75	0.00	93.25	7.68	4.75	0.00
80.25	7.68	4.75	0.00	93.50	7.68	4.75	0.00
80.50	7.68	4.75	0.00	93.75	7.68	4.75	0.00
80.75	7.68	4.75	0.00	94.00	7.68	4.75	0.00
81.00	7.68	4.75	0.00	94.25	7.68	4.75	0.00
81.25	7.68	4.75	0.00	94.50	7.68	4.75	0.00
81.50	7.68	4.75	0.00	94.75	7.68	4.75	0.00
81.75	7.68	4.75	0.00	95.00	7.68	4.75	0.00
82.00	7.68	4.75	0.00	95.25	7.68	4.75	0.00
82.25	7.68	4.75	0.00	95.50	7.68	4.75	0.00
82.50	7.68	4.75	0.00	95.75	7.68	4.75	0.00
82.75	7.68	4.75	0.00	96.00	7.68	4.75	0.00
83.00	7.68	4.75	0.00	96.25	7.68	4.75	0.00
83.25	7.68	4.75	0.00	96.50	7.68	4.75	0.00
83.50	7.68	4.75	0.00	96.75	7.68	4.75	0.00
83.75	7.68	4.75	0.00	97.00	7.68	4.75	0.00
84.00	7.68	4.75	0.00	97.25	7.68	4.75	0.00
84.25	7.68	4.75	0.00	97.50	7.68	4.75	0.00
84.50	7.68	4.75	0.00	97.75	7.68	4.75	0.00
84.75	7.68	4.75	0.00	98.00	7.68	4.75	0.00
85.00	7.68	4.75	0.00	98.25	7.68	4.75	0.00
85.25	7.68	4.75	0.00	98.50	7.68	4.75	0.00
85.50	7.68	4.75	0.00	98.75	7.68	4.75	0.00
85.75	7.68	4.75	0.00	99.00	7.68	4.75	0.00
86.00	7.68	4.75	0.00	99.25	7.68	4.75	0.00
86.25	7.68	4.75	0.00	99.50	7.68	4.75	0.00
86.50	7.68	4.75	0.00	99.75	7.68	4.75	0.00
86.75	7.68	4.75	0.00	100.00	7.68	4.75	0.00
87.00	7.68	4.75	0.00	100.25	7.68	4.75	0.00
87.25	7.68	4.75	0.00	100.50	7.68	4.75	0.00
87.50	7.68	4.75	0.00	100.75	7.68	4.75	0.00
87.75	7.68	4.75	0.00	101.00	7.68	4.75	0.00
88.00	7.68	4.75	0.00	101.25	7.68	4.75	0.00
88.25	7.68	4.75	0.00	101.50	7.68	4.75	0.00
88.50	7.68	4.75	0.00	101.75	7.68	4.75	0.00
88.75	7.68	4.75	0.00	102.00	7.68	4.75	0.00
89.00	7.68	4.75	0.00	102.25	7.68	4.75	0.00
89.25	7.68	4.75	0.00	102.50	7.68	4.75	0.00
89.50	7.68	4.75	0.00	102.75	7.68	4.75	0.00
89.75	7.68	4.75	0.00	103.00	7.68	4.75	0.00
90.00	7.68	4.75	0.00	103.25	7.68	4.75	0.00
90.25	7.68	4.75	0.00	103.50	7.68	4.75	0.00
90.50	7.68	4.75	0.00	103.75	7.68	4.75	0.00
90.75	7.68	4.75	0.00	104.00	7.68	4.75	0.00
91.00	7.68	4.75	0.00	104.25	7.68	4.75	0.00
91.25	7.68	4.75	0.00	104.50	7.68	4.75	0.00
91.50	7.68	4.75	0.00	104.75	7.68	4.75	0.00
91.75	7.68	4.75	0.00	105.00	7.68	4.75	0.00
92.00	7.68	4.75	0.00	105.25	7.68	4.75	0.00
92.25	7.68	4.75	0.00	105.50	7.68	4.75	0.00
92.50	7.68	4.75	0.00	105.75	7.68	4.75	0.00
92.75	7.68	4.75	0.00	106.00	7.68	4.75	0.00
93.00	7.68	4.75	0.00	106.25	7.68	4.75	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	4.75	0.00	119.75	7.68	4.75	0.00
106.75	7.68	4.75	0.00	120.00	7.68	4.75	0.00
107.00	7.68	4.75	0.00	120.25	7.68	4.75	0.00
107.25	7.68	4.75	0.00	120.50	7.68	4.75	0.00
107.50	7.68	4.75	0.00	120.75	7.68	4.75	0.00
107.75	7.68	4.75	0.00	121.00	7.68	4.75	0.00
108.00	7.68	4.75	0.00	121.25	7.68	4.75	0.00
108.25	7.68	4.75	0.00	121.50	7.68	4.75	0.00
108.50	7.68	4.75	0.00	121.75	7.68	4.75	0.00
108.75	7.68	4.75	0.00	122.00	7.68	4.75	0.00
109.00	7.68	4.75	0.00	122.25	7.68	4.75	0.00
109.25	7.68	4.75	0.00	122.50	7.68	4.75	0.00
109.50	7.68	4.75	0.00	122.75	7.68	4.75	0.00
109.75	7.68	4.75	0.00	123.00	7.68	4.75	0.00
110.00	7.68	4.75	0.00	123.25	7.68	4.75	0.00
110.25	7.68	4.75	0.00	123.50	7.68	4.75	0.00
110.50	7.68	4.75	0.00	123.75	7.68	4.75	0.00
110.75	7.68	4.75	0.00	124.00	7.68	4.75	0.00
111.00	7.68	4.75	0.00	124.25	7.68	4.75	0.00
111.25	7.68	4.75	0.00	124.50	7.68	4.75	0.00
111.50	7.68	4.75	0.00	124.75	7.68	4.75	0.00
111.75	7.68	4.75	0.00	125.00	7.68	4.75	0.00
112.00	7.68	4.75	0.00	125.25	7.68	4.75	0.00
112.25	7.68	4.75	0.00	125.50	7.68	4.75	0.00
112.50	7.68	4.75	0.00	125.75	7.68	4.75	0.00
112.75	7.68	4.75	0.00	126.00	7.68	4.75	0.00
113.00	7.68	4.75	0.00	126.25	7.68	4.75	0.00
113.25	7.68	4.75	0.00	126.50	7.68	4.75	0.00
113.50	7.68	4.75	0.00	126.75	7.68	4.75	0.00
113.75	7.68	4.75	0.00	127.00	7.68	4.75	0.00
114.00	7.68	4.75	0.00	127.25	7.68	4.75	0.00
114.25	7.68	4.75	0.00	127.50	7.68	4.75	0.00
114.50	7.68	4.75	0.00	127.75	7.68	4.75	0.00
114.75	7.68	4.75	0.00	128.00	7.68	4.75	0.00
115.00	7.68	4.75	0.00	128.25	7.68	4.75	0.00
115.25	7.68	4.75	0.00	128.50	7.68	4.75	0.00
115.50	7.68	4.75	0.00	128.75	7.68	4.75	0.00
115.75	7.68	4.75	0.00	129.00	7.68	4.75	0.00
116.00	7.68	4.75	0.00	129.25	7.68	4.75	0.00
116.25	7.68	4.75	0.00	129.50	7.68	4.75	0.00
116.50	7.68	4.75	0.00	129.75	7.68	4.75	0.00
116.75	7.68	4.75	0.00	130.00	7.68	4.75	0.00
117.00	7.68	4.75	0.00	130.25	7.68	4.75	0.00
117.25	7.68	4.75	0.00	130.50	7.68	4.75	0.00
117.50	7.68	4.75	0.00	130.75	7.68	4.75	0.00
117.75	7.68	4.75	0.00	131.00	7.68	4.75	0.00
118.00	7.68	4.75	0.00	131.25	7.68	4.75	0.00
118.25	7.68	4.75	0.00	131.50	7.68	4.75	0.00
118.50	7.68	4.75	0.00	131.75	7.68	4.75	0.00
118.75	7.68	4.75	0.00	132.00	7.68	4.75	0.00
119.00	7.68	4.75	0.00	132.25	7.68	4.75	0.00
119.25	7.68	4.75	0.00	132.50	7.68	4.75	0.00
119.50	7.68	4.75	0.00	132.75	7.68	4.75	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	4.75	0.00
133.25	7.68	4.75	0.00
133.50	7.68	4.75	0.00
133.75	7.68	4.75	0.00
134.00	7.68	4.75	0.00
134.25	7.68	4.75	0.00
134.50	7.68	4.75	0.00
134.75	7.68	4.75	0.00
135.00	7.68	4.75	0.00
135.25	7.68	4.75	0.00
135.50	7.68	4.75	0.00
135.75	7.68	4.75	0.00
136.00	7.68	4.75	0.00
136.25	7.68	4.75	0.00
136.50	7.68	4.75	0.00
136.75	7.68	4.75	0.00
137.00	7.68	4.75	0.00
137.25	7.68	4.75	0.00
137.50	7.68	4.75	0.00
137.75	7.68	4.75	0.00
138.00	7.68	4.75	0.00
138.25	7.68	4.75	0.00
138.50	7.68	4.75	0.00
138.75	7.68	4.75	0.00
139.00	7.68	4.75	0.00
139.25	7.68	4.75	0.00
139.50	7.68	4.75	0.00
139.75	7.68	4.75	0.00
140.00	7.68	4.75	0.00
140.25	7.68	4.75	0.00
140.50	7.68	4.75	0.00
140.75	7.68	4.75	0.00
141.00	7.68	4.75	0.00
141.25	7.68	4.75	0.00
141.50	7.68	4.75	0.00
141.75	7.68	4.75	0.00
142.00	7.68	4.75	0.00
142.25	7.68	4.75	0.00
142.50	7.68	4.75	0.00
142.75	7.68	4.75	0.00
143.00	7.68	4.75	0.00
143.25	7.68	4.75	0.00
143.50	7.68	4.75	0.00
143.75	7.68	4.75	0.00
144.00	7.68	4.75	0.00
144.25	7.68	4.75	0.00
144.50	7.68	4.75	0.00
144.75	7.68	4.75	0.00
145.00	7.68	4.75	0.00
145.25	7.68	4.75	0.00
145.50	7.68	4.75	0.00
145.75	7.68	4.75	0.00
146.00	7.68	4.75	0.00
146.25	7.68	4.75	0.00
146.50	7.68	4.75	0.00
146.75	7.68	4.75	0.00
147.00	7.68	4.75	0.00
147.25	7.68	4.75	0.00
147.50	7.68	4.75	0.00
147.75	7.68	4.75	0.00
148.00	7.68	4.75	0.00
148.25	7.68	4.75	0.00
148.50	7.68	4.75	0.00
148.75	7.68	4.75	0.00
149.00	7.68	4.75	0.00
149.25	7.68	4.75	0.00
149.50	7.68	4.75	0.00
149.75	7.68	4.75	0.00
150.00	7.68	4.75	0.00

Summary for Subcatchment 9S: SB-6

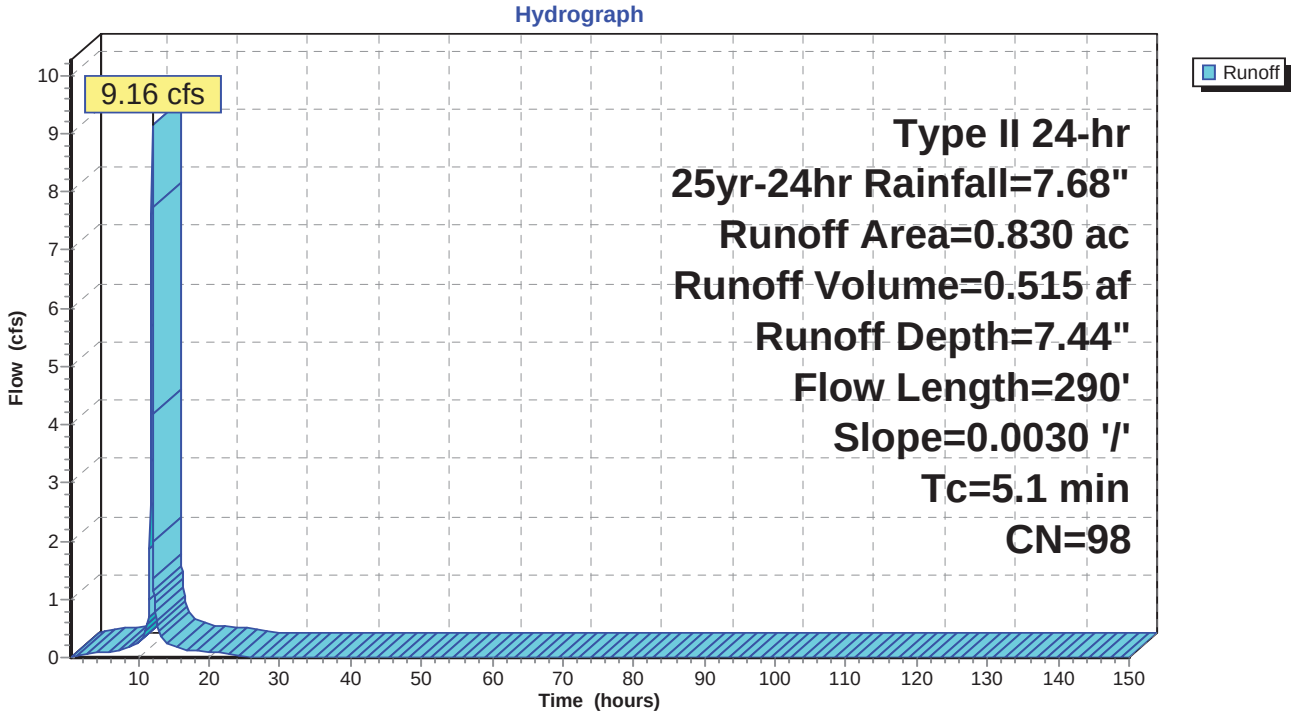
Runoff = 9.16 cfs @ 11.95 hrs, Volume= 0.515 af, Depth= 7.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
*	0.830	98	Gravel surface, HSG A
	0.830		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	290	0.0030	0.94		**Sheet Flow, Overland Flow** Smooth surfaces n= 0.011 P2= 4.50"

Subcatchment 9S: SB-6



Hydrograph for Subcatchment 9S: SB-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	5.98	0.28
0.75	0.06	0.00	0.01	14.00	6.30	6.06	0.25
1.00	0.08	0.01	0.02	14.25	6.37	6.13	0.23
1.25	0.10	0.01	0.03	14.50	6.43	6.19	0.22
1.50	0.12	0.02	0.03	14.75	6.50	6.26	0.21
1.75	0.15	0.04	0.04	15.00	6.55	6.32	0.20
2.00	0.17	0.05	0.05	15.25	6.61	6.37	0.18
2.25	0.19	0.06	0.05	15.50	6.66	6.42	0.17
2.50	0.22	0.08	0.06	15.75	6.71	6.47	0.16
2.75	0.24	0.10	0.06	16.00	6.76	6.52	0.15
3.00	0.26	0.12	0.06	16.25	6.80	6.56	0.14
3.25	0.29	0.14	0.07	16.50	6.84	6.61	0.14
3.50	0.32	0.16	0.07	16.75	6.89	6.65	0.14
3.75	0.34	0.18	0.07	17.00	6.93	6.69	0.13
4.00	0.37	0.20	0.08	17.25	6.96	6.73	0.13
4.25	0.40	0.23	0.08	17.50	7.00	6.76	0.12
4.50	0.42	0.25	0.08	17.75	7.04	6.80	0.12
4.75	0.45	0.28	0.09	18.00	7.07	6.83	0.12
5.00	0.48	0.30	0.09	18.25	7.11	6.87	0.11
5.25	0.52	0.33	0.10	18.50	7.14	6.90	0.11
5.50	0.55	0.36	0.10	18.75	7.17	6.93	0.10
5.75	0.58	0.39	0.10	19.00	7.20	6.96	0.10
6.00	0.61	0.42	0.11	19.25	7.23	6.99	0.10
6.25	0.65	0.46	0.11	19.50	7.26	7.02	0.09
6.50	0.69	0.49	0.11	19.75	7.29	7.05	0.09
6.75	0.72	0.52	0.12	20.00	7.31	7.07	0.08
7.00	0.76	0.56	0.12	20.25	7.34	7.10	0.08
7.25	0.80	0.60	0.12	20.50	7.36	7.12	0.08
7.50	0.84	0.64	0.13	20.75	7.39	7.15	0.08
7.75	0.88	0.67	0.13	21.00	7.41	7.17	0.08
8.00	0.92	0.72	0.14	21.25	7.43	7.19	0.08
8.25	0.97	0.76	0.15	21.50	7.46	7.22	0.08
8.50	1.02	0.81	0.16	21.75	7.48	7.24	0.08
8.75	1.07	0.86	0.18	22.00	7.50	7.26	0.08
9.00	1.13	0.92	0.20	22.25	7.53	7.29	0.08
9.25	1.19	0.98	0.20	22.50	7.55	7.31	0.08
9.50	1.25	1.04	0.20	22.75	7.57	7.33	0.07
9.75	1.32	1.10	0.22	23.00	7.59	7.35	0.07
10.00	1.39	1.17	0.24	23.25	7.62	7.38	0.07
10.25	1.47	1.25	0.28	23.50	7.64	7.40	0.07
10.50	1.57	1.35	0.32	23.75	7.66	7.42	0.07
10.75	1.68	1.45	0.37	24.00	**7.68**	**7.44**	0.07
11.00	1.80	1.58	0.44	24.25	7.68	7.44	0.00
11.25	1.97	1.74	0.56	24.50	7.68	7.44	0.00
11.50	2.17	1.95	0.72	24.75	7.68	7.44	0.00
11.75	2.97	2.74	**3.36**	25.00	7.68	7.44	0.00
12.00	5.09	4.85	**7.72**	25.25	7.68	7.44	0.00
12.25	5.42	5.19	1.04	25.50	7.68	7.44	0.00
12.50	5.64	5.41	0.67	25.75	7.68	7.44	0.00
12.75	5.80	5.56	0.50	26.00	7.68	7.44	0.00
13.00	5.93	5.69	0.42	26.25	7.68	7.44	0.00
13.25	6.04	5.80	0.36	26.50	7.68	7.44	0.00
13.50	6.14	5.90	0.32	26.75	7.68	7.44	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	7.44	0.00	40.25	7.68	7.44	0.00
27.25	7.68	7.44	0.00	40.50	7.68	7.44	0.00
27.50	7.68	7.44	0.00	40.75	7.68	7.44	0.00
27.75	7.68	7.44	0.00	41.00	7.68	7.44	0.00
28.00	7.68	7.44	0.00	41.25	7.68	7.44	0.00
28.25	7.68	7.44	0.00	41.50	7.68	7.44	0.00
28.50	7.68	7.44	0.00	41.75	7.68	7.44	0.00
28.75	7.68	7.44	0.00	42.00	7.68	7.44	0.00
29.00	7.68	7.44	0.00	42.25	7.68	7.44	0.00
29.25	7.68	7.44	0.00	42.50	7.68	7.44	0.00
29.50	7.68	7.44	0.00	42.75	7.68	7.44	0.00
29.75	7.68	7.44	0.00	43.00	7.68	7.44	0.00
30.00	7.68	7.44	0.00	43.25	7.68	7.44	0.00
30.25	7.68	7.44	0.00	43.50	7.68	7.44	0.00
30.50	7.68	7.44	0.00	43.75	7.68	7.44	0.00
30.75	7.68	7.44	0.00	44.00	7.68	7.44	0.00
31.00	7.68	7.44	0.00	44.25	7.68	7.44	0.00
31.25	7.68	7.44	0.00	44.50	7.68	7.44	0.00
31.50	7.68	7.44	0.00	44.75	7.68	7.44	0.00
31.75	7.68	7.44	0.00	45.00	7.68	7.44	0.00
32.00	7.68	7.44	0.00	45.25	7.68	7.44	0.00
32.25	7.68	7.44	0.00	45.50	7.68	7.44	0.00
32.50	7.68	7.44	0.00	45.75	7.68	7.44	0.00
32.75	7.68	7.44	0.00	46.00	7.68	7.44	0.00
33.00	7.68	7.44	0.00	46.25	7.68	7.44	0.00
33.25	7.68	7.44	0.00	46.50	7.68	7.44	0.00
33.50	7.68	7.44	0.00	46.75	7.68	7.44	0.00
33.75	7.68	7.44	0.00	47.00	7.68	7.44	0.00
34.00	7.68	7.44	0.00	47.25	7.68	7.44	0.00
34.25	7.68	7.44	0.00	47.50	7.68	7.44	0.00
34.50	7.68	7.44	0.00	47.75	7.68	7.44	0.00
34.75	7.68	7.44	0.00	48.00	7.68	7.44	0.00
35.00	7.68	7.44	0.00	48.25	7.68	7.44	0.00
35.25	7.68	7.44	0.00	48.50	7.68	7.44	0.00
35.50	7.68	7.44	0.00	48.75	7.68	7.44	0.00
35.75	7.68	7.44	0.00	49.00	7.68	7.44	0.00
36.00	7.68	7.44	0.00	49.25	7.68	7.44	0.00
36.25	7.68	7.44	0.00	49.50	7.68	7.44	0.00
36.50	7.68	7.44	0.00	49.75	7.68	7.44	0.00
36.75	7.68	7.44	0.00	50.00	7.68	7.44	0.00
37.00	7.68	7.44	0.00	50.25	7.68	7.44	0.00
37.25	7.68	7.44	0.00	50.50	7.68	7.44	0.00
37.50	7.68	7.44	0.00	50.75	7.68	7.44	0.00
37.75	7.68	7.44	0.00	51.00	7.68	7.44	0.00
38.00	7.68	7.44	0.00	51.25	7.68	7.44	0.00
38.25	7.68	7.44	0.00	51.50	7.68	7.44	0.00
38.50	7.68	7.44	0.00	51.75	7.68	7.44	0.00
38.75	7.68	7.44	0.00	52.00	7.68	7.44	0.00
39.00	7.68	7.44	0.00	52.25	7.68	7.44	0.00
39.25	7.68	7.44	0.00	52.50	7.68	7.44	0.00
39.50	7.68	7.44	0.00	52.75	7.68	7.44	0.00
39.75	7.68	7.44	0.00	53.00	7.68	7.44	0.00
40.00	7.68	7.44	0.00	53.25	7.68	7.44	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	7.44	0.00	66.75	7.68	7.44	0.00
53.75	7.68	7.44	0.00	67.00	7.68	7.44	0.00
54.00	7.68	7.44	0.00	67.25	7.68	7.44	0.00
54.25	7.68	7.44	0.00	67.50	7.68	7.44	0.00
54.50	7.68	7.44	0.00	67.75	7.68	7.44	0.00
54.75	7.68	7.44	0.00	68.00	7.68	7.44	0.00
55.00	7.68	7.44	0.00	68.25	7.68	7.44	0.00
55.25	7.68	7.44	0.00	68.50	7.68	7.44	0.00
55.50	7.68	7.44	0.00	68.75	7.68	7.44	0.00
55.75	7.68	7.44	0.00	69.00	7.68	7.44	0.00
56.00	7.68	7.44	0.00	69.25	7.68	7.44	0.00
56.25	7.68	7.44	0.00	69.50	7.68	7.44	0.00
56.50	7.68	7.44	0.00	69.75	7.68	7.44	0.00
56.75	7.68	7.44	0.00	70.00	7.68	7.44	0.00
57.00	7.68	7.44	0.00	70.25	7.68	7.44	0.00
57.25	7.68	7.44	0.00	70.50	7.68	7.44	0.00
57.50	7.68	7.44	0.00	70.75	7.68	7.44	0.00
57.75	7.68	7.44	0.00	71.00	7.68	7.44	0.00
58.00	7.68	7.44	0.00	71.25	7.68	7.44	0.00
58.25	7.68	7.44	0.00	71.50	7.68	7.44	0.00
58.50	7.68	7.44	0.00	71.75	7.68	7.44	0.00
58.75	7.68	7.44	0.00	72.00	7.68	7.44	0.00
59.00	7.68	7.44	0.00	72.25	7.68	7.44	0.00
59.25	7.68	7.44	0.00	72.50	7.68	7.44	0.00
59.50	7.68	7.44	0.00	72.75	7.68	7.44	0.00
59.75	7.68	7.44	0.00	73.00	7.68	7.44	0.00
60.00	7.68	7.44	0.00	73.25	7.68	7.44	0.00
60.25	7.68	7.44	0.00	73.50	7.68	7.44	0.00
60.50	7.68	7.44	0.00	73.75	7.68	7.44	0.00
60.75	7.68	7.44	0.00	74.00	7.68	7.44	0.00
61.00	7.68	7.44	0.00	74.25	7.68	7.44	0.00
61.25	7.68	7.44	0.00	74.50	7.68	7.44	0.00
61.50	7.68	7.44	0.00	74.75	7.68	7.44	0.00
61.75	7.68	7.44	0.00	75.00	7.68	7.44	0.00
62.00	7.68	7.44	0.00	75.25	7.68	7.44	0.00
62.25	7.68	7.44	0.00	75.50	7.68	7.44	0.00
62.50	7.68	7.44	0.00	75.75	7.68	7.44	0.00
62.75	7.68	7.44	0.00	76.00	7.68	7.44	0.00
63.00	7.68	7.44	0.00	76.25	7.68	7.44	0.00
63.25	7.68	7.44	0.00	76.50	7.68	7.44	0.00
63.50	7.68	7.44	0.00	76.75	7.68	7.44	0.00
63.75	7.68	7.44	0.00	77.00	7.68	7.44	0.00
64.00	7.68	7.44	0.00	77.25	7.68	7.44	0.00
64.25	7.68	7.44	0.00	77.50	7.68	7.44	0.00
64.50	7.68	7.44	0.00	77.75	7.68	7.44	0.00
64.75	7.68	7.44	0.00	78.00	7.68	7.44	0.00
65.00	7.68	7.44	0.00	78.25	7.68	7.44	0.00
65.25	7.68	7.44	0.00	78.50	7.68	7.44	0.00
65.50	7.68	7.44	0.00	78.75	7.68	7.44	0.00
65.75	7.68	7.44	0.00	79.00	7.68	7.44	0.00
66.00	7.68	7.44	0.00	79.25	7.68	7.44	0.00
66.25	7.68	7.44	0.00	79.50	7.68	7.44	0.00
66.50	7.68	7.44	0.00	79.75	7.68	7.44	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	7.44	0.00	93.25	7.68	7.44	0.00
80.25	7.68	7.44	0.00	93.50	7.68	7.44	0.00
80.50	7.68	7.44	0.00	93.75	7.68	7.44	0.00
80.75	7.68	7.44	0.00	94.00	7.68	7.44	0.00
81.00	7.68	7.44	0.00	94.25	7.68	7.44	0.00
81.25	7.68	7.44	0.00	94.50	7.68	7.44	0.00
81.50	7.68	7.44	0.00	94.75	7.68	7.44	0.00
81.75	7.68	7.44	0.00	95.00	7.68	7.44	0.00
82.00	7.68	7.44	0.00	95.25	7.68	7.44	0.00
82.25	7.68	7.44	0.00	95.50	7.68	7.44	0.00
82.50	7.68	7.44	0.00	95.75	7.68	7.44	0.00
82.75	7.68	7.44	0.00	96.00	7.68	7.44	0.00
83.00	7.68	7.44	0.00	96.25	7.68	7.44	0.00
83.25	7.68	7.44	0.00	96.50	7.68	7.44	0.00
83.50	7.68	7.44	0.00	96.75	7.68	7.44	0.00
83.75	7.68	7.44	0.00	97.00	7.68	7.44	0.00
84.00	7.68	7.44	0.00	97.25	7.68	7.44	0.00
84.25	7.68	7.44	0.00	97.50	7.68	7.44	0.00
84.50	7.68	7.44	0.00	97.75	7.68	7.44	0.00
84.75	7.68	7.44	0.00	98.00	7.68	7.44	0.00
85.00	7.68	7.44	0.00	98.25	7.68	7.44	0.00
85.25	7.68	7.44	0.00	98.50	7.68	7.44	0.00
85.50	7.68	7.44	0.00	98.75	7.68	7.44	0.00
85.75	7.68	7.44	0.00	99.00	7.68	7.44	0.00
86.00	7.68	7.44	0.00	99.25	7.68	7.44	0.00
86.25	7.68	7.44	0.00	99.50	7.68	7.44	0.00
86.50	7.68	7.44	0.00	99.75	7.68	7.44	0.00
86.75	7.68	7.44	0.00	100.00	7.68	7.44	0.00
87.00	7.68	7.44	0.00	100.25	7.68	7.44	0.00
87.25	7.68	7.44	0.00	100.50	7.68	7.44	0.00
87.50	7.68	7.44	0.00	100.75	7.68	7.44	0.00
87.75	7.68	7.44	0.00	101.00	7.68	7.44	0.00
88.00	7.68	7.44	0.00	101.25	7.68	7.44	0.00
88.25	7.68	7.44	0.00	101.50	7.68	7.44	0.00
88.50	7.68	7.44	0.00	101.75	7.68	7.44	0.00
88.75	7.68	7.44	0.00	102.00	7.68	7.44	0.00
89.00	7.68	7.44	0.00	102.25	7.68	7.44	0.00
89.25	7.68	7.44	0.00	102.50	7.68	7.44	0.00
89.50	7.68	7.44	0.00	102.75	7.68	7.44	0.00
89.75	7.68	7.44	0.00	103.00	7.68	7.44	0.00
90.00	7.68	7.44	0.00	103.25	7.68	7.44	0.00
90.25	7.68	7.44	0.00	103.50	7.68	7.44	0.00
90.50	7.68	7.44	0.00	103.75	7.68	7.44	0.00
90.75	7.68	7.44	0.00	104.00	7.68	7.44	0.00
91.00	7.68	7.44	0.00	104.25	7.68	7.44	0.00
91.25	7.68	7.44	0.00	104.50	7.68	7.44	0.00
91.50	7.68	7.44	0.00	104.75	7.68	7.44	0.00
91.75	7.68	7.44	0.00	105.00	7.68	7.44	0.00
92.00	7.68	7.44	0.00	105.25	7.68	7.44	0.00
92.25	7.68	7.44	0.00	105.50	7.68	7.44	0.00
92.50	7.68	7.44	0.00	105.75	7.68	7.44	0.00
92.75	7.68	7.44	0.00	106.00	7.68	7.44	0.00
93.00	7.68	7.44	0.00	106.25	7.68	7.44	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	7.44	0.00	119.75	7.68	7.44	0.00
106.75	7.68	7.44	0.00	120.00	7.68	7.44	0.00
107.00	7.68	7.44	0.00	120.25	7.68	7.44	0.00
107.25	7.68	7.44	0.00	120.50	7.68	7.44	0.00
107.50	7.68	7.44	0.00	120.75	7.68	7.44	0.00
107.75	7.68	7.44	0.00	121.00	7.68	7.44	0.00
108.00	7.68	7.44	0.00	121.25	7.68	7.44	0.00
108.25	7.68	7.44	0.00	121.50	7.68	7.44	0.00
108.50	7.68	7.44	0.00	121.75	7.68	7.44	0.00
108.75	7.68	7.44	0.00	122.00	7.68	7.44	0.00
109.00	7.68	7.44	0.00	122.25	7.68	7.44	0.00
109.25	7.68	7.44	0.00	122.50	7.68	7.44	0.00
109.50	7.68	7.44	0.00	122.75	7.68	7.44	0.00
109.75	7.68	7.44	0.00	123.00	7.68	7.44	0.00
110.00	7.68	7.44	0.00	123.25	7.68	7.44	0.00
110.25	7.68	7.44	0.00	123.50	7.68	7.44	0.00
110.50	7.68	7.44	0.00	123.75	7.68	7.44	0.00
110.75	7.68	7.44	0.00	124.00	7.68	7.44	0.00
111.00	7.68	7.44	0.00	124.25	7.68	7.44	0.00
111.25	7.68	7.44	0.00	124.50	7.68	7.44	0.00
111.50	7.68	7.44	0.00	124.75	7.68	7.44	0.00
111.75	7.68	7.44	0.00	125.00	7.68	7.44	0.00
112.00	7.68	7.44	0.00	125.25	7.68	7.44	0.00
112.25	7.68	7.44	0.00	125.50	7.68	7.44	0.00
112.50	7.68	7.44	0.00	125.75	7.68	7.44	0.00
112.75	7.68	7.44	0.00	126.00	7.68	7.44	0.00
113.00	7.68	7.44	0.00	126.25	7.68	7.44	0.00
113.25	7.68	7.44	0.00	126.50	7.68	7.44	0.00
113.50	7.68	7.44	0.00	126.75	7.68	7.44	0.00
113.75	7.68	7.44	0.00	127.00	7.68	7.44	0.00
114.00	7.68	7.44	0.00	127.25	7.68	7.44	0.00
114.25	7.68	7.44	0.00	127.50	7.68	7.44	0.00
114.50	7.68	7.44	0.00	127.75	7.68	7.44	0.00
114.75	7.68	7.44	0.00	128.00	7.68	7.44	0.00
115.00	7.68	7.44	0.00	128.25	7.68	7.44	0.00
115.25	7.68	7.44	0.00	128.50	7.68	7.44	0.00
115.50	7.68	7.44	0.00	128.75	7.68	7.44	0.00
115.75	7.68	7.44	0.00	129.00	7.68	7.44	0.00
116.00	7.68	7.44	0.00	129.25	7.68	7.44	0.00
116.25	7.68	7.44	0.00	129.50	7.68	7.44	0.00
116.50	7.68	7.44	0.00	129.75	7.68	7.44	0.00
116.75	7.68	7.44	0.00	130.00	7.68	7.44	0.00
117.00	7.68	7.44	0.00	130.25	7.68	7.44	0.00
117.25	7.68	7.44	0.00	130.50	7.68	7.44	0.00
117.50	7.68	7.44	0.00	130.75	7.68	7.44	0.00
117.75	7.68	7.44	0.00	131.00	7.68	7.44	0.00
118.00	7.68	7.44	0.00	131.25	7.68	7.44	0.00
118.25	7.68	7.44	0.00	131.50	7.68	7.44	0.00
118.50	7.68	7.44	0.00	131.75	7.68	7.44	0.00
118.75	7.68	7.44	0.00	132.00	7.68	7.44	0.00
119.00	7.68	7.44	0.00	132.25	7.68	7.44	0.00
119.25	7.68	7.44	0.00	132.50	7.68	7.44	0.00
119.50	7.68	7.44	0.00	132.75	7.68	7.44	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	7.44	0.00
133.25	7.68	7.44	0.00
133.50	7.68	7.44	0.00
133.75	7.68	7.44	0.00
134.00	7.68	7.44	0.00
134.25	7.68	7.44	0.00
134.50	7.68	7.44	0.00
134.75	7.68	7.44	0.00
135.00	7.68	7.44	0.00
135.25	7.68	7.44	0.00
135.50	7.68	7.44	0.00
135.75	7.68	7.44	0.00
136.00	7.68	7.44	0.00
136.25	7.68	7.44	0.00
136.50	7.68	7.44	0.00
136.75	7.68	7.44	0.00
137.00	7.68	7.44	0.00
137.25	7.68	7.44	0.00
137.50	7.68	7.44	0.00
137.75	7.68	7.44	0.00
138.00	7.68	7.44	0.00
138.25	7.68	7.44	0.00
138.50	7.68	7.44	0.00
138.75	7.68	7.44	0.00
139.00	7.68	7.44	0.00
139.25	7.68	7.44	0.00
139.50	7.68	7.44	0.00
139.75	7.68	7.44	0.00
140.00	7.68	7.44	0.00
140.25	7.68	7.44	0.00
140.50	7.68	7.44	0.00
140.75	7.68	7.44	0.00
141.00	7.68	7.44	0.00
141.25	7.68	7.44	0.00
141.50	7.68	7.44	0.00
141.75	7.68	7.44	0.00
142.00	7.68	7.44	0.00
142.25	7.68	7.44	0.00
142.50	7.68	7.44	0.00
142.75	7.68	7.44	0.00
143.00	7.68	7.44	0.00
143.25	7.68	7.44	0.00
143.50	7.68	7.44	0.00
143.75	7.68	7.44	0.00
144.00	7.68	7.44	0.00
144.25	7.68	7.44	0.00
144.50	7.68	7.44	0.00
144.75	7.68	7.44	0.00
145.00	7.68	7.44	0.00
145.25	7.68	7.44	0.00
145.50	7.68	7.44	0.00
145.75	7.68	7.44	0.00
146.00	7.68	7.44	0.00
146.25	7.68	7.44	0.00
146.50	7.68	7.44	0.00
146.75	7.68	7.44	0.00
147.00	7.68	7.44	0.00
147.25	7.68	7.44	0.00
147.50	7.68	7.44	0.00
147.75	7.68	7.44	0.00
148.00	7.68	7.44	0.00
148.25	7.68	7.44	0.00
148.50	7.68	7.44	0.00
148.75	7.68	7.44	0.00
149.00	7.68	7.44	0.00
149.25	7.68	7.44	0.00
149.50	7.68	7.44	0.00
149.75	7.68	7.44	0.00
150.00	7.68	7.44	0.00

Summary for Subcatchment 11S: OSB-1

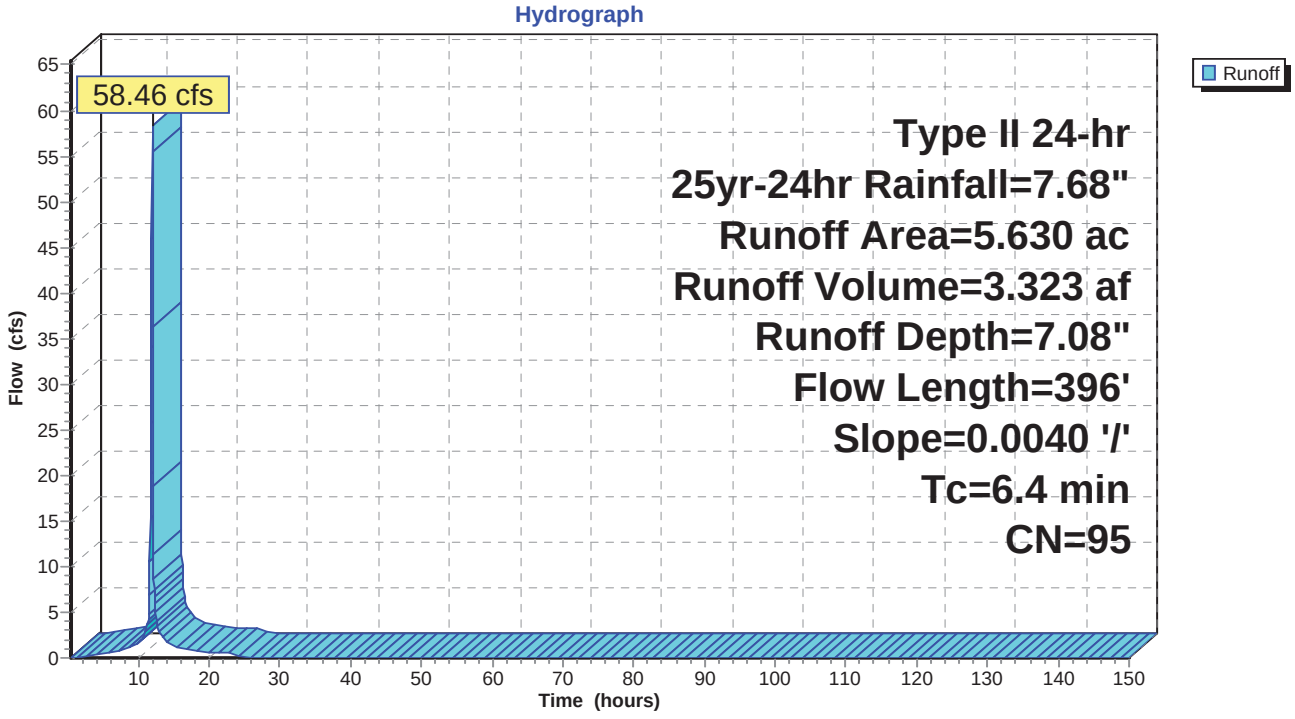
Runoff = 58.46 cfs @ 11.97 hrs, Volume= 3.323 af, Depth= 7.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

	Area (ac)	CN	Description
	0.280	39	>75% Grass cover, Good, HSG A
*	5.350	98	Gravel surface, HSG A
	5.630	95	Weighted Average
	0.280		4.97% Pervious Area
	5.350		95.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	264	0.0040	1.04		**Sheet Flow, Overland Flow** Smooth surfaces n= 0.011 P2= 4.50"
2.2	132	0.0040	1.02		**Shallow Concentrated Flow, Overland Flow** Unpaved Kv= 16.1 fps
6.4	396	Total			

Subcatchment 11S: OSB-1



Hydrograph for Subcatchment 11S: OSB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.04	0.00	0.00	13.75	6.22	5.63	1.91
0.75	0.06	0.00	0.00	14.00	6.30	5.71	1.69
1.00	0.08	0.00	0.00	14.25	6.37	5.78	1.56
1.25	0.10	0.00	0.00	14.50	6.43	5.84	1.48
1.50	0.12	0.00	0.02	14.75	6.50	5.90	1.41
1.75	0.15	0.00	0.06	15.00	6.55	5.96	1.33
2.00	0.17	0.01	0.09	15.25	6.61	6.02	1.25
2.25	0.19	0.01	0.13	15.50	6.66	6.07	1.18
2.50	0.22	0.02	0.16	15.75	6.71	6.12	1.10
2.75	0.24	0.03	0.19	16.00	6.76	6.17	1.03
3.00	0.26	0.04	0.22	16.25	6.80	6.21	0.98
3.25	0.29	0.05	0.25	16.50	6.84	6.25	0.95
3.50	0.32	0.06	0.28	16.75	6.89	6.29	0.93
3.75	0.34	0.07	0.30	17.00	6.93	6.33	0.90
4.00	0.37	0.09	0.33	17.25	6.96	6.37	0.87
4.25	0.40	0.10	0.36	17.50	7.00	6.41	0.85
4.50	0.42	0.12	0.39	17.75	7.04	6.44	0.82
4.75	0.45	0.14	0.42	18.00	7.07	6.48	0.79
5.00	0.48	0.16	0.45	18.25	7.11	6.51	0.76
5.25	0.52	0.18	0.48	18.50	7.14	6.55	0.74
5.50	0.55	0.20	0.51	18.75	7.17	6.58	0.71
5.75	0.58	0.23	0.54	19.00	7.20	6.61	0.68
6.00	0.61	0.25	0.57	19.25	7.23	6.64	0.66
6.25	0.65	0.28	0.60	19.50	7.26	6.66	0.63
6.50	0.69	0.30	0.63	19.75	7.29	6.69	0.60
6.75	0.72	0.33	0.66	20.00	7.31	6.72	0.57
7.00	0.76	0.36	0.69	20.25	7.34	6.74	0.56
7.25	0.80	0.39	0.72	20.50	7.36	6.76	0.56
7.50	0.84	0.43	0.74	20.75	7.39	6.79	0.55
7.75	0.88	0.46	0.77	21.00	7.41	6.81	0.54
8.00	0.92	0.50	0.80	21.25	7.43	6.84	0.54
8.25	0.97	0.53	0.87	21.50	7.46	6.86	0.53
8.50	1.02	0.58	0.98	21.75	7.48	6.88	0.53
8.75	1.07	0.62	1.08	22.00	7.50	6.91	0.52
9.00	1.13	0.68	1.19	22.25	7.53	6.93	0.52
9.25	1.19	0.73	1.24	22.50	7.55	6.95	0.51
9.50	1.25	0.79	1.25	22.75	7.57	6.97	0.51
9.75	1.32	0.84	1.36	23.00	7.59	7.00	0.50
10.00	1.39	0.91	1.53	23.25	7.62	7.02	0.50
10.25	1.47	0.99	1.75	23.50	7.64	7.04	0.49
10.50	1.57	1.07	2.01	23.75	7.66	7.06	0.49
10.75	1.68	1.18	2.36	24.00	**7.68**	**7.08**	0.48
11.00	1.80	1.30	2.79	24.25	7.68	7.08	0.01
11.25	1.97	1.45	3.58	24.50	7.68	7.08	0.00
11.50	2.17	1.65	4.61	24.75	7.68	7.08	0.00
11.75	2.97	2.42	**20.23**	25.00	7.68	7.08	0.00
12.00	5.09	4.51	**55.55**	25.25	7.68	7.08	0.00
12.25	5.42	4.84	7.47	25.50	7.68	7.08	0.00
12.50	5.64	5.06	4.74	25.75	7.68	7.08	0.00
12.75	5.80	5.21	3.43	26.00	7.68	7.08	0.00
13.00	5.93	5.34	2.86	26.25	7.68	7.08	0.00
13.25	6.04	5.45	2.46	26.50	7.68	7.08	0.00
13.50	6.14	5.55	2.16	26.75	7.68	7.08	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	7.68	7.08	0.00	40.25	7.68	7.08	0.00
27.25	7.68	7.08	0.00	40.50	7.68	7.08	0.00
27.50	7.68	7.08	0.00	40.75	7.68	7.08	0.00
27.75	7.68	7.08	0.00	41.00	7.68	7.08	0.00
28.00	7.68	7.08	0.00	41.25	7.68	7.08	0.00
28.25	7.68	7.08	0.00	41.50	7.68	7.08	0.00
28.50	7.68	7.08	0.00	41.75	7.68	7.08	0.00
28.75	7.68	7.08	0.00	42.00	7.68	7.08	0.00
29.00	7.68	7.08	0.00	42.25	7.68	7.08	0.00
29.25	7.68	7.08	0.00	42.50	7.68	7.08	0.00
29.50	7.68	7.08	0.00	42.75	7.68	7.08	0.00
29.75	7.68	7.08	0.00	43.00	7.68	7.08	0.00
30.00	7.68	7.08	0.00	43.25	7.68	7.08	0.00
30.25	7.68	7.08	0.00	43.50	7.68	7.08	0.00
30.50	7.68	7.08	0.00	43.75	7.68	7.08	0.00
30.75	7.68	7.08	0.00	44.00	7.68	7.08	0.00
31.00	7.68	7.08	0.00	44.25	7.68	7.08	0.00
31.25	7.68	7.08	0.00	44.50	7.68	7.08	0.00
31.50	7.68	7.08	0.00	44.75	7.68	7.08	0.00
31.75	7.68	7.08	0.00	45.00	7.68	7.08	0.00
32.00	7.68	7.08	0.00	45.25	7.68	7.08	0.00
32.25	7.68	7.08	0.00	45.50	7.68	7.08	0.00
32.50	7.68	7.08	0.00	45.75	7.68	7.08	0.00
32.75	7.68	7.08	0.00	46.00	7.68	7.08	0.00
33.00	7.68	7.08	0.00	46.25	7.68	7.08	0.00
33.25	7.68	7.08	0.00	46.50	7.68	7.08	0.00
33.50	7.68	7.08	0.00	46.75	7.68	7.08	0.00
33.75	7.68	7.08	0.00	47.00	7.68	7.08	0.00
34.00	7.68	7.08	0.00	47.25	7.68	7.08	0.00
34.25	7.68	7.08	0.00	47.50	7.68	7.08	0.00
34.50	7.68	7.08	0.00	47.75	7.68	7.08	0.00
34.75	7.68	7.08	0.00	48.00	7.68	7.08	0.00
35.00	7.68	7.08	0.00	48.25	7.68	7.08	0.00
35.25	7.68	7.08	0.00	48.50	7.68	7.08	0.00
35.50	7.68	7.08	0.00	48.75	7.68	7.08	0.00
35.75	7.68	7.08	0.00	49.00	7.68	7.08	0.00
36.00	7.68	7.08	0.00	49.25	7.68	7.08	0.00
36.25	7.68	7.08	0.00	49.50	7.68	7.08	0.00
36.50	7.68	7.08	0.00	49.75	7.68	7.08	0.00
36.75	7.68	7.08	0.00	50.00	7.68	7.08	0.00
37.00	7.68	7.08	0.00	50.25	7.68	7.08	0.00
37.25	7.68	7.08	0.00	50.50	7.68	7.08	0.00
37.50	7.68	7.08	0.00	50.75	7.68	7.08	0.00
37.75	7.68	7.08	0.00	51.00	7.68	7.08	0.00
38.00	7.68	7.08	0.00	51.25	7.68	7.08	0.00
38.25	7.68	7.08	0.00	51.50	7.68	7.08	0.00
38.50	7.68	7.08	0.00	51.75	7.68	7.08	0.00
38.75	7.68	7.08	0.00	52.00	7.68	7.08	0.00
39.00	7.68	7.08	0.00	52.25	7.68	7.08	0.00
39.25	7.68	7.08	0.00	52.50	7.68	7.08	0.00
39.50	7.68	7.08	0.00	52.75	7.68	7.08	0.00
39.75	7.68	7.08	0.00	53.00	7.68	7.08	0.00
40.00	7.68	7.08	0.00	53.25	7.68	7.08	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	7.68	7.08	0.00	66.75	7.68	7.08	0.00
53.75	7.68	7.08	0.00	67.00	7.68	7.08	0.00
54.00	7.68	7.08	0.00	67.25	7.68	7.08	0.00
54.25	7.68	7.08	0.00	67.50	7.68	7.08	0.00
54.50	7.68	7.08	0.00	67.75	7.68	7.08	0.00
54.75	7.68	7.08	0.00	68.00	7.68	7.08	0.00
55.00	7.68	7.08	0.00	68.25	7.68	7.08	0.00
55.25	7.68	7.08	0.00	68.50	7.68	7.08	0.00
55.50	7.68	7.08	0.00	68.75	7.68	7.08	0.00
55.75	7.68	7.08	0.00	69.00	7.68	7.08	0.00
56.00	7.68	7.08	0.00	69.25	7.68	7.08	0.00
56.25	7.68	7.08	0.00	69.50	7.68	7.08	0.00
56.50	7.68	7.08	0.00	69.75	7.68	7.08	0.00
56.75	7.68	7.08	0.00	70.00	7.68	7.08	0.00
57.00	7.68	7.08	0.00	70.25	7.68	7.08	0.00
57.25	7.68	7.08	0.00	70.50	7.68	7.08	0.00
57.50	7.68	7.08	0.00	70.75	7.68	7.08	0.00
57.75	7.68	7.08	0.00	71.00	7.68	7.08	0.00
58.00	7.68	7.08	0.00	71.25	7.68	7.08	0.00
58.25	7.68	7.08	0.00	71.50	7.68	7.08	0.00
58.50	7.68	7.08	0.00	71.75	7.68	7.08	0.00
58.75	7.68	7.08	0.00	72.00	7.68	7.08	0.00
59.00	7.68	7.08	0.00	72.25	7.68	7.08	0.00
59.25	7.68	7.08	0.00	72.50	7.68	7.08	0.00
59.50	7.68	7.08	0.00	72.75	7.68	7.08	0.00
59.75	7.68	7.08	0.00	73.00	7.68	7.08	0.00
60.00	7.68	7.08	0.00	73.25	7.68	7.08	0.00
60.25	7.68	7.08	0.00	73.50	7.68	7.08	0.00
60.50	7.68	7.08	0.00	73.75	7.68	7.08	0.00
60.75	7.68	7.08	0.00	74.00	7.68	7.08	0.00
61.00	7.68	7.08	0.00	74.25	7.68	7.08	0.00
61.25	7.68	7.08	0.00	74.50	7.68	7.08	0.00
61.50	7.68	7.08	0.00	74.75	7.68	7.08	0.00
61.75	7.68	7.08	0.00	75.00	7.68	7.08	0.00
62.00	7.68	7.08	0.00	75.25	7.68	7.08	0.00
62.25	7.68	7.08	0.00	75.50	7.68	7.08	0.00
62.50	7.68	7.08	0.00	75.75	7.68	7.08	0.00
62.75	7.68	7.08	0.00	76.00	7.68	7.08	0.00
63.00	7.68	7.08	0.00	76.25	7.68	7.08	0.00
63.25	7.68	7.08	0.00	76.50	7.68	7.08	0.00
63.50	7.68	7.08	0.00	76.75	7.68	7.08	0.00
63.75	7.68	7.08	0.00	77.00	7.68	7.08	0.00
64.00	7.68	7.08	0.00	77.25	7.68	7.08	0.00
64.25	7.68	7.08	0.00	77.50	7.68	7.08	0.00
64.50	7.68	7.08	0.00	77.75	7.68	7.08	0.00
64.75	7.68	7.08	0.00	78.00	7.68	7.08	0.00
65.00	7.68	7.08	0.00	78.25	7.68	7.08	0.00
65.25	7.68	7.08	0.00	78.50	7.68	7.08	0.00
65.50	7.68	7.08	0.00	78.75	7.68	7.08	0.00
65.75	7.68	7.08	0.00	79.00	7.68	7.08	0.00
66.00	7.68	7.08	0.00	79.25	7.68	7.08	0.00
66.25	7.68	7.08	0.00	79.50	7.68	7.08	0.00
66.50	7.68	7.08	0.00	79.75	7.68	7.08	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	7.68	7.08	0.00	93.25	7.68	7.08	0.00
80.25	7.68	7.08	0.00	93.50	7.68	7.08	0.00
80.50	7.68	7.08	0.00	93.75	7.68	7.08	0.00
80.75	7.68	7.08	0.00	94.00	7.68	7.08	0.00
81.00	7.68	7.08	0.00	94.25	7.68	7.08	0.00
81.25	7.68	7.08	0.00	94.50	7.68	7.08	0.00
81.50	7.68	7.08	0.00	94.75	7.68	7.08	0.00
81.75	7.68	7.08	0.00	95.00	7.68	7.08	0.00
82.00	7.68	7.08	0.00	95.25	7.68	7.08	0.00
82.25	7.68	7.08	0.00	95.50	7.68	7.08	0.00
82.50	7.68	7.08	0.00	95.75	7.68	7.08	0.00
82.75	7.68	7.08	0.00	96.00	7.68	7.08	0.00
83.00	7.68	7.08	0.00	96.25	7.68	7.08	0.00
83.25	7.68	7.08	0.00	96.50	7.68	7.08	0.00
83.50	7.68	7.08	0.00	96.75	7.68	7.08	0.00
83.75	7.68	7.08	0.00	97.00	7.68	7.08	0.00
84.00	7.68	7.08	0.00	97.25	7.68	7.08	0.00
84.25	7.68	7.08	0.00	97.50	7.68	7.08	0.00
84.50	7.68	7.08	0.00	97.75	7.68	7.08	0.00
84.75	7.68	7.08	0.00	98.00	7.68	7.08	0.00
85.00	7.68	7.08	0.00	98.25	7.68	7.08	0.00
85.25	7.68	7.08	0.00	98.50	7.68	7.08	0.00
85.50	7.68	7.08	0.00	98.75	7.68	7.08	0.00
85.75	7.68	7.08	0.00	99.00	7.68	7.08	0.00
86.00	7.68	7.08	0.00	99.25	7.68	7.08	0.00
86.25	7.68	7.08	0.00	99.50	7.68	7.08	0.00
86.50	7.68	7.08	0.00	99.75	7.68	7.08	0.00
86.75	7.68	7.08	0.00	100.00	7.68	7.08	0.00
87.00	7.68	7.08	0.00	100.25	7.68	7.08	0.00
87.25	7.68	7.08	0.00	100.50	7.68	7.08	0.00
87.50	7.68	7.08	0.00	100.75	7.68	7.08	0.00
87.75	7.68	7.08	0.00	101.00	7.68	7.08	0.00
88.00	7.68	7.08	0.00	101.25	7.68	7.08	0.00
88.25	7.68	7.08	0.00	101.50	7.68	7.08	0.00
88.50	7.68	7.08	0.00	101.75	7.68	7.08	0.00
88.75	7.68	7.08	0.00	102.00	7.68	7.08	0.00
89.00	7.68	7.08	0.00	102.25	7.68	7.08	0.00
89.25	7.68	7.08	0.00	102.50	7.68	7.08	0.00
89.50	7.68	7.08	0.00	102.75	7.68	7.08	0.00
89.75	7.68	7.08	0.00	103.00	7.68	7.08	0.00
90.00	7.68	7.08	0.00	103.25	7.68	7.08	0.00
90.25	7.68	7.08	0.00	103.50	7.68	7.08	0.00
90.50	7.68	7.08	0.00	103.75	7.68	7.08	0.00
90.75	7.68	7.08	0.00	104.00	7.68	7.08	0.00
91.00	7.68	7.08	0.00	104.25	7.68	7.08	0.00
91.25	7.68	7.08	0.00	104.50	7.68	7.08	0.00
91.50	7.68	7.08	0.00	104.75	7.68	7.08	0.00
91.75	7.68	7.08	0.00	105.00	7.68	7.08	0.00
92.00	7.68	7.08	0.00	105.25	7.68	7.08	0.00
92.25	7.68	7.08	0.00	105.50	7.68	7.08	0.00
92.50	7.68	7.08	0.00	105.75	7.68	7.08	0.00
92.75	7.68	7.08	0.00	106.00	7.68	7.08	0.00
93.00	7.68	7.08	0.00	106.25	7.68	7.08	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	7.68	7.08	0.00	119.75	7.68	7.08	0.00
106.75	7.68	7.08	0.00	120.00	7.68	7.08	0.00
107.00	7.68	7.08	0.00	120.25	7.68	7.08	0.00
107.25	7.68	7.08	0.00	120.50	7.68	7.08	0.00
107.50	7.68	7.08	0.00	120.75	7.68	7.08	0.00
107.75	7.68	7.08	0.00	121.00	7.68	7.08	0.00
108.00	7.68	7.08	0.00	121.25	7.68	7.08	0.00
108.25	7.68	7.08	0.00	121.50	7.68	7.08	0.00
108.50	7.68	7.08	0.00	121.75	7.68	7.08	0.00
108.75	7.68	7.08	0.00	122.00	7.68	7.08	0.00
109.00	7.68	7.08	0.00	122.25	7.68	7.08	0.00
109.25	7.68	7.08	0.00	122.50	7.68	7.08	0.00
109.50	7.68	7.08	0.00	122.75	7.68	7.08	0.00
109.75	7.68	7.08	0.00	123.00	7.68	7.08	0.00
110.00	7.68	7.08	0.00	123.25	7.68	7.08	0.00
110.25	7.68	7.08	0.00	123.50	7.68	7.08	0.00
110.50	7.68	7.08	0.00	123.75	7.68	7.08	0.00
110.75	7.68	7.08	0.00	124.00	7.68	7.08	0.00
111.00	7.68	7.08	0.00	124.25	7.68	7.08	0.00
111.25	7.68	7.08	0.00	124.50	7.68	7.08	0.00
111.50	7.68	7.08	0.00	124.75	7.68	7.08	0.00
111.75	7.68	7.08	0.00	125.00	7.68	7.08	0.00
112.00	7.68	7.08	0.00	125.25	7.68	7.08	0.00
112.25	7.68	7.08	0.00	125.50	7.68	7.08	0.00
112.50	7.68	7.08	0.00	125.75	7.68	7.08	0.00
112.75	7.68	7.08	0.00	126.00	7.68	7.08	0.00
113.00	7.68	7.08	0.00	126.25	7.68	7.08	0.00
113.25	7.68	7.08	0.00	126.50	7.68	7.08	0.00
113.50	7.68	7.08	0.00	126.75	7.68	7.08	0.00
113.75	7.68	7.08	0.00	127.00	7.68	7.08	0.00
114.00	7.68	7.08	0.00	127.25	7.68	7.08	0.00
114.25	7.68	7.08	0.00	127.50	7.68	7.08	0.00
114.50	7.68	7.08	0.00	127.75	7.68	7.08	0.00
114.75	7.68	7.08	0.00	128.00	7.68	7.08	0.00
115.00	7.68	7.08	0.00	128.25	7.68	7.08	0.00
115.25	7.68	7.08	0.00	128.50	7.68	7.08	0.00
115.50	7.68	7.08	0.00	128.75	7.68	7.08	0.00
115.75	7.68	7.08	0.00	129.00	7.68	7.08	0.00
116.00	7.68	7.08	0.00	129.25	7.68	7.08	0.00
116.25	7.68	7.08	0.00	129.50	7.68	7.08	0.00
116.50	7.68	7.08	0.00	129.75	7.68	7.08	0.00
116.75	7.68	7.08	0.00	130.00	7.68	7.08	0.00
117.00	7.68	7.08	0.00	130.25	7.68	7.08	0.00
117.25	7.68	7.08	0.00	130.50	7.68	7.08	0.00
117.50	7.68	7.08	0.00	130.75	7.68	7.08	0.00
117.75	7.68	7.08	0.00	131.00	7.68	7.08	0.00
118.00	7.68	7.08	0.00	131.25	7.68	7.08	0.00
118.25	7.68	7.08	0.00	131.50	7.68	7.08	0.00
118.50	7.68	7.08	0.00	131.75	7.68	7.08	0.00
118.75	7.68	7.08	0.00	132.00	7.68	7.08	0.00
119.00	7.68	7.08	0.00	132.25	7.68	7.08	0.00
119.25	7.68	7.08	0.00	132.50	7.68	7.08	0.00
119.50	7.68	7.08	0.00	132.75	7.68	7.08	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	7.68	7.08	0.00
133.25	7.68	7.08	0.00
133.50	7.68	7.08	0.00
133.75	7.68	7.08	0.00
134.00	7.68	7.08	0.00
134.25	7.68	7.08	0.00
134.50	7.68	7.08	0.00
134.75	7.68	7.08	0.00
135.00	7.68	7.08	0.00
135.25	7.68	7.08	0.00
135.50	7.68	7.08	0.00
135.75	7.68	7.08	0.00
136.00	7.68	7.08	0.00
136.25	7.68	7.08	0.00
136.50	7.68	7.08	0.00
136.75	7.68	7.08	0.00
137.00	7.68	7.08	0.00
137.25	7.68	7.08	0.00
137.50	7.68	7.08	0.00
137.75	7.68	7.08	0.00
138.00	7.68	7.08	0.00
138.25	7.68	7.08	0.00
138.50	7.68	7.08	0.00
138.75	7.68	7.08	0.00
139.00	7.68	7.08	0.00
139.25	7.68	7.08	0.00
139.50	7.68	7.08	0.00
139.75	7.68	7.08	0.00
140.00	7.68	7.08	0.00
140.25	7.68	7.08	0.00
140.50	7.68	7.08	0.00
140.75	7.68	7.08	0.00
141.00	7.68	7.08	0.00
141.25	7.68	7.08	0.00
141.50	7.68	7.08	0.00
141.75	7.68	7.08	0.00
142.00	7.68	7.08	0.00
142.25	7.68	7.08	0.00
142.50	7.68	7.08	0.00
142.75	7.68	7.08	0.00
143.00	7.68	7.08	0.00
143.25	7.68	7.08	0.00
143.50	7.68	7.08	0.00
143.75	7.68	7.08	0.00
144.00	7.68	7.08	0.00
144.25	7.68	7.08	0.00
144.50	7.68	7.08	0.00
144.75	7.68	7.08	0.00
145.00	7.68	7.08	0.00
145.25	7.68	7.08	0.00
145.50	7.68	7.08	0.00
145.75	7.68	7.08	0.00
146.00	7.68	7.08	0.00
146.25	7.68	7.08	0.00
146.50	7.68	7.08	0.00
146.75	7.68	7.08	0.00
147.00	7.68	7.08	0.00
147.25	7.68	7.08	0.00
147.50	7.68	7.08	0.00
147.75	7.68	7.08	0.00
148.00	7.68	7.08	0.00
148.25	7.68	7.08	0.00
148.50	7.68	7.08	0.00
148.75	7.68	7.08	0.00
149.00	7.68	7.08	0.00
149.25	7.68	7.08	0.00
149.50	7.68	7.08	0.00
149.75	7.68	7.08	0.00
150.00	7.68	7.08	0.00

Summary for Pond 7P: Stormwater Pond

Inflow Area = 55.694 ac, 70.23% Impervious, Inflow Depth = 5.37" for 25yr-24hr event
Inflow = 194.82 cfs @ 11.99 hrs, Volume= 24.930 af
Outflow = 30.65 cfs @ 14.30 hrs, Volume= 24.930 af, Atten= 84%, Lag= 138.5 min
Discarded = 30.65 cfs @ 14.30 hrs, Volume= 24.930 af
Secondary = 0.00 cfs @ 0.50 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Peak Elev= 71.69' @ 14.30 hrs Surf.Area= 3.783 ac Storage= 7.872 af

Plug-Flow detention time= 109.3 min calculated for 24.930 af (100% of inflow)
Center-of-Mass det. time= 109.3 min (951.0 - 841.7)

Volume	Invert	Avail.Storage	Storage Description
#1	69.50'	15.020 af	**Custom Stage Data (Prismatic)**Listed below

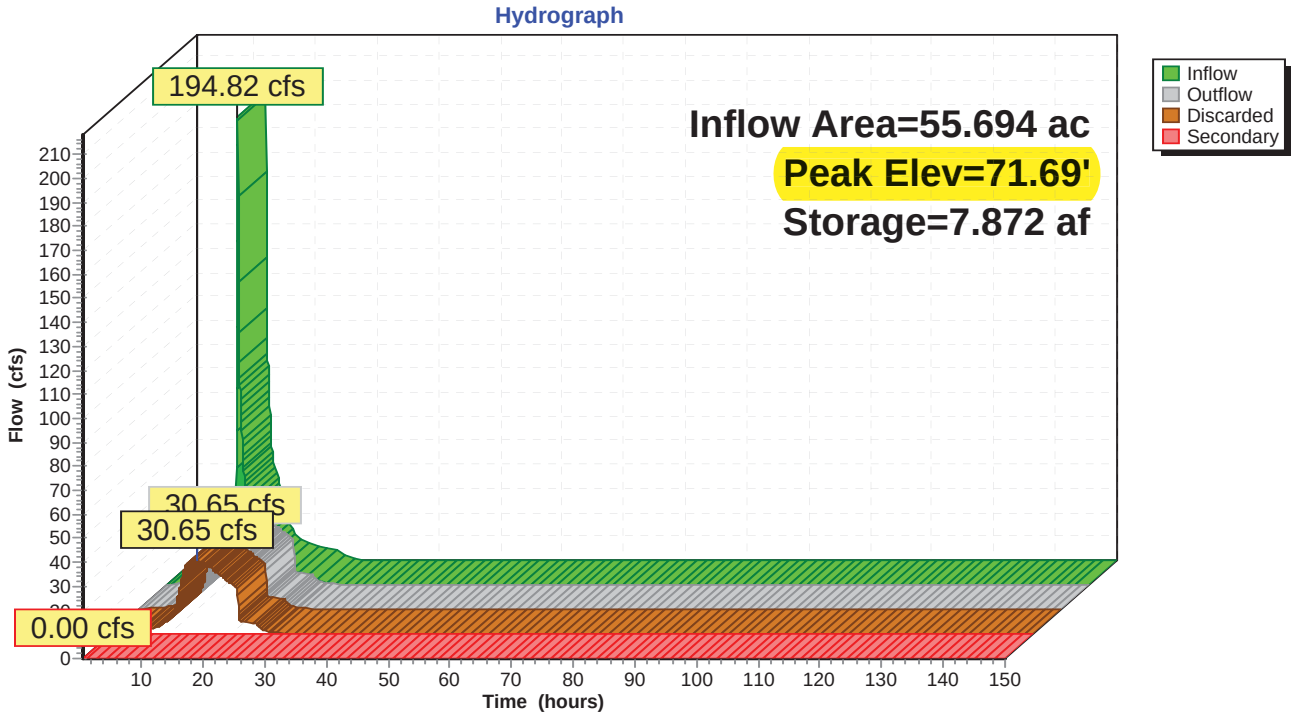
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
69.50	3.410	0.000	0.000
70.50	3.580	3.495	3.495
71.50	3.750	3.665	7.160
72.50	3.930	3.840	11.000
73.50	4.110	4.020	15.020

Device	Routing	Invert	Outlet Devices
#1	Discarded	69.50'	**5.510 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 65.00'
#2	Secondary	72.50'	**10.0' long x 11.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

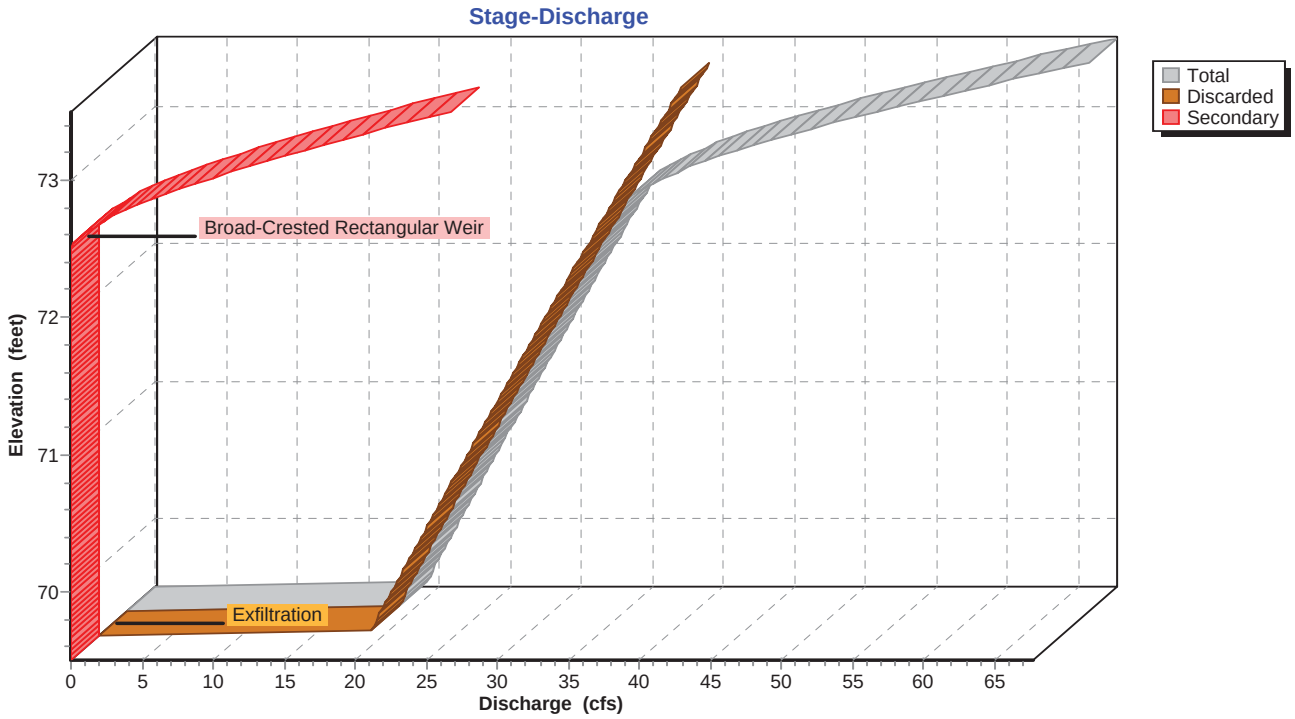
Discarded OutFlow Max=30.65 cfs @ 14.30 hrs HW=71.69' (Free Discharge)
└**1=Exfiltration** (Controls 30.65 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.50 hrs HW=69.50' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

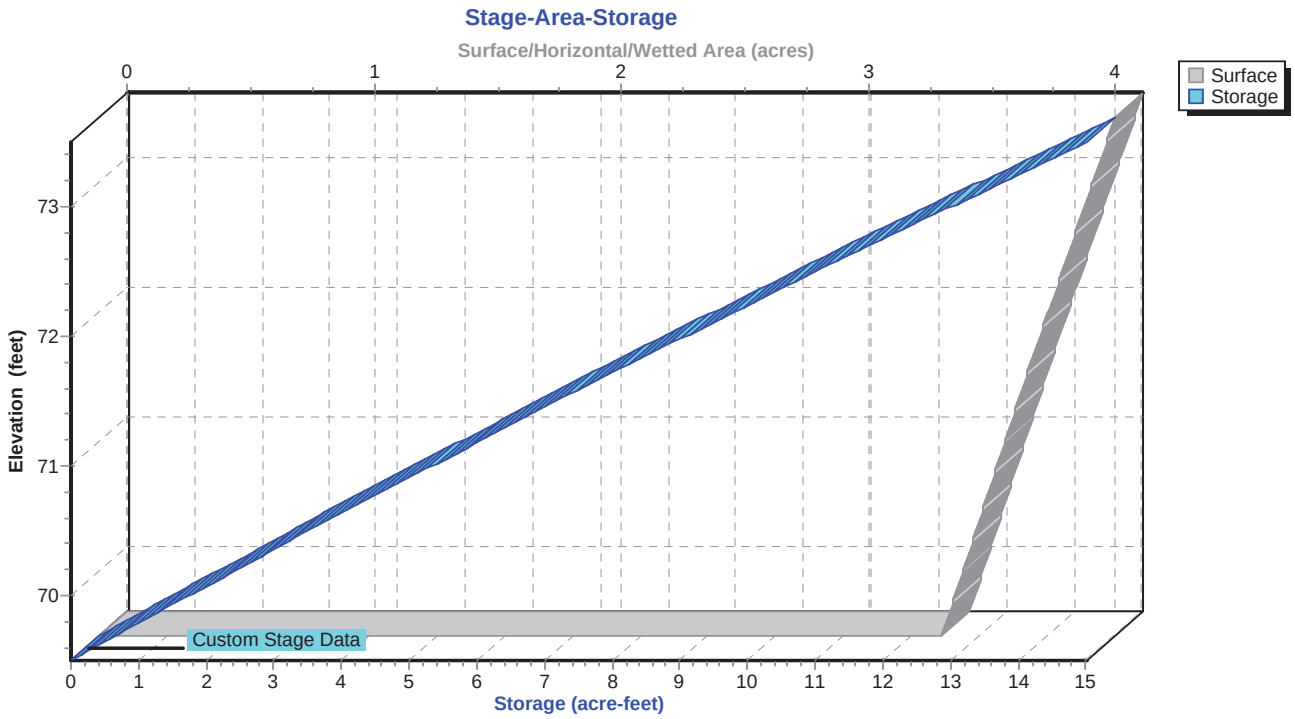
Pond 7P: Stormwater Pond



Pond 7P: Stormwater Pond



Pond 7P: Stormwater Pond



Hydrograph for Pond 7P: Stormwater Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
0.50	0.00	0.000	69.50	0.00	0.00	**0.00**
1.00	0.16	0.001	69.50	0.12	0.12	0.00
1.50	0.30	0.002	69.50	0.28	0.28	0.00
2.00	0.41	0.003	69.50	0.39	0.39	0.00
2.50	0.49	0.003	69.50	0.48	0.48	0.00
3.00	0.57	0.004	69.50	0.55	0.55	0.00
3.50	0.68	0.005	69.50	0.66	0.66	0.00
4.00	0.82	0.006	69.50	0.79	0.79	0.00
4.50	1.00	0.007	69.50	0.96	0.96	0.00
5.00	1.23	0.009	69.50	1.18	1.18	0.00
5.50	1.46	0.010	69.50	1.42	1.42	0.00
6.00	1.71	0.012	69.50	1.67	1.67	0.00
6.50	1.97	0.014	69.50	1.92	1.92	0.00
7.00	2.23	0.016	69.50	2.18	2.18	0.00
7.50	2.54	0.018	69.51	2.48	2.48	0.00
8.00	2.87	0.021	69.51	2.81	2.81	0.00
8.50	3.54	0.025	69.51	3.40	3.40	0.00
9.00	4.45	0.031	69.51	4.28	4.28	0.00
9.50	5.08	0.036	69.51	4.99	4.99	0.00
10.00	6.27	0.044	69.51	6.01	6.01	0.00
10.50	8.37	0.058	69.52	7.95	7.95	0.00
11.00	11.93	0.082	69.52	11.21	11.21	0.00
11.50	19.63	0.131	69.54	18.00	18.00	0.00
12.00	**193.53**	2.680	70.27	22.95	22.95	0.00
12.50	74.51	5.861	71.15	27.68	27.68	0.00
13.00	45.58	7.085	71.48	29.50	29.50	0.00
13.50	38.82	7.561	71.60	30.20	30.20	0.00
14.00	34.39	**7.824**	**71.67**	**30.58**	**30.58**	0.00
14.50	27.56	**7.846**	**71.68**	**30.61**	**30.61**	0.00
15.00	21.53	7.594	71.61	30.24	30.24	0.00
15.50	17.32	7.155	71.50	29.61	29.61	0.00
16.00	14.20	6.596	71.35	28.77	28.77	0.00
16.50	12.06	5.966	71.17	27.83	27.83	0.00
17.00	10.46	5.300	70.99	26.84	26.84	0.00
17.50	9.34	4.620	70.81	25.84	25.84	0.00
18.00	8.48	3.940	70.62	24.84	24.84	0.00
18.50	7.79	3.270	70.44	23.85	23.85	0.00
19.00	7.17	2.614	70.25	22.85	22.85	0.00
19.50	6.61	1.974	70.06	21.89	21.89	0.00
20.00	6.10	1.351	69.89	20.95	20.95	0.00
20.50	5.72	0.748	69.71	20.05	20.05	0.00
21.00	5.46	0.168	69.55	19.19	19.19	0.00
21.50	5.24	0.039	69.51	5.33	5.33	0.00
22.00	5.06	0.037	69.51	5.09	5.09	0.00
22.50	4.91	0.036	69.51	4.93	4.93	0.00
23.00	4.78	0.035	69.51	4.80	4.80	0.00
23.50	4.66	0.034	69.51	4.68	4.68	0.00
24.00	4.55	0.033	69.51	4.57	4.57	0.00
24.50	2.50	0.020	69.51	2.69	2.69	0.00
25.00	1.69	0.013	69.50	1.80	1.80	0.00
25.50	1.29	0.010	69.50	1.35	1.35	0.00
26.00	0.97	0.007	69.50	1.03	1.03	0.00
26.50	0.70	0.005	69.50	0.75	0.75	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
27.00	0.50	0.004	69.50	0.53	0.53	0.00
27.50	0.36	0.003	69.50	0.38	0.38	0.00
28.00	0.26	0.002	69.50	0.28	0.28	0.00
28.50	0.20	0.002	69.50	0.21	0.21	0.00
29.00	0.15	0.001	69.50	0.16	0.16	0.00
29.50	0.12	0.001	69.50	0.13	0.13	0.00
30.00	0.10	0.001	69.50	0.10	0.10	0.00
30.50	0.08	0.001	69.50	0.08	0.08	0.00
31.00	0.07	0.001	69.50	0.07	0.07	0.00
31.50	0.06	0.000	69.50	0.06	0.06	0.00
32.00	0.05	0.000	69.50	0.05	0.05	0.00
32.50	0.04	0.000	69.50	0.04	0.04	0.00
33.00	0.04	0.000	69.50	0.04	0.04	0.00
33.50	0.03	0.000	69.50	0.03	0.03	0.00
34.00	0.03	0.000	69.50	0.03	0.03	0.00
34.50	0.03	0.000	69.50	0.03	0.03	0.00
35.00	0.02	0.000	69.50	0.02	0.02	0.00
35.50	0.02	0.000	69.50	0.02	0.02	0.00
36.00	0.02	0.000	69.50	0.02	0.02	0.00
36.50	0.02	0.000	69.50	0.02	0.02	0.00
37.00	0.02	0.000	69.50	0.02	0.02	0.00
37.50	0.02	0.000	69.50	0.02	0.02	0.00
38.00	0.01	0.000	69.50	0.01	0.01	0.00
38.50	0.01	0.000	69.50	0.01	0.01	0.00
39.00	0.01	0.000	69.50	0.01	0.01	0.00
39.50	0.01	0.000	69.50	0.01	0.01	0.00
40.00	0.01	0.000	69.50	0.01	0.01	0.00
40.50	0.01	0.000	69.50	0.01	0.01	0.00
41.00	0.01	0.000	69.50	0.01	0.01	0.00
41.50	0.01	0.000	69.50	0.01	0.01	0.00
42.00	0.01	0.000	69.50	0.01	0.01	0.00
42.50	0.01	0.000	69.50	0.01	0.01	0.00
43.00	0.01	0.000	69.50	0.01	0.01	0.00
43.50	0.01	0.000	69.50	0.01	0.01	0.00
44.00	0.01	0.000	69.50	0.01	0.01	0.00
44.50	0.01	0.000	69.50	0.01	0.01	0.00
45.00	0.01	0.000	69.50	0.01	0.01	0.00
45.50	0.01	0.000	69.50	0.01	0.01	0.00
46.00	0.01	0.000	69.50	0.01	0.01	0.00
46.50	0.01	0.000	69.50	0.01	0.01	0.00
47.00	0.01	0.000	69.50	0.01	0.01	0.00
47.50	0.01	0.000	69.50	0.01	0.01	0.00
48.00	0.01	0.000	69.50	0.01	0.01	0.00
48.50	0.01	0.000	69.50	0.01	0.01	0.00
49.00	0.01	0.000	69.50	0.01	0.01	0.00
49.50	0.01	0.000	69.50	0.01	0.01	0.00
50.00	0.00	0.000	69.50	0.01	0.01	0.00
50.50	0.00	0.000	69.50	0.00	0.00	0.00
51.00	0.00	0.000	69.50	0.00	0.00	0.00
51.50	0.00	0.000	69.50	0.00	0.00	0.00
52.00	0.00	0.000	69.50	0.00	0.00	0.00
52.50	0.00	0.000	69.50	0.00	0.00	0.00
53.00	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
53.50	0.00	0.000	69.50	0.00	0.00	0.00
54.00	0.00	0.000	69.50	0.00	0.00	0.00
54.50	0.00	0.000	69.50	0.00	0.00	0.00
55.00	0.00	0.000	69.50	0.00	0.00	0.00
55.50	0.00	0.000	69.50	0.00	0.00	0.00
56.00	0.00	0.000	69.50	0.00	0.00	0.00
56.50	0.00	0.000	69.50	0.00	0.00	0.00
57.00	0.00	0.000	69.50	0.00	0.00	0.00
57.50	0.00	0.000	69.50	0.00	0.00	0.00
58.00	0.00	0.000	69.50	0.00	0.00	0.00
58.50	0.00	0.000	69.50	0.00	0.00	0.00
59.00	0.00	0.000	69.50	0.00	0.00	0.00
59.50	0.00	0.000	69.50	0.00	0.00	0.00
60.00	0.00	0.000	69.50	0.00	0.00	0.00
60.50	0.00	0.000	69.50	0.00	0.00	0.00
61.00	0.00	0.000	69.50	0.00	0.00	0.00
61.50	0.00	0.000	69.50	0.00	0.00	0.00
62.00	0.00	0.000	69.50	0.00	0.00	0.00
62.50	0.00	0.000	69.50	0.00	0.00	0.00
63.00	0.00	0.000	69.50	0.00	0.00	0.00
63.50	0.00	0.000	69.50	0.00	0.00	0.00
64.00	0.00	0.000	69.50	0.00	0.00	0.00
64.50	0.00	0.000	69.50	0.00	0.00	0.00
65.00	0.00	0.000	69.50	0.00	0.00	0.00
65.50	0.00	0.000	69.50	0.00	0.00	0.00
66.00	0.00	0.000	69.50	0.00	0.00	0.00
66.50	0.00	0.000	69.50	0.00	0.00	0.00
67.00	0.00	0.000	69.50	0.00	0.00	0.00
67.50	0.00	0.000	69.50	0.00	0.00	0.00
68.00	0.00	0.000	69.50	0.00	0.00	0.00
68.50	0.00	0.000	69.50	0.00	0.00	0.00
69.00	0.00	0.000	69.50	0.00	0.00	0.00
69.50	0.00	0.000	69.50	0.00	0.00	0.00
70.00	0.00	0.000	69.50	0.00	0.00	0.00
70.50	0.00	0.000	69.50	0.00	0.00	0.00
71.00	0.00	0.000	69.50	0.00	0.00	0.00
71.50	0.00	0.000	69.50	0.00	0.00	0.00
72.00	0.00	0.000	69.50	0.00	0.00	0.00
72.50	0.00	0.000	69.50	0.00	0.00	0.00
73.00	0.00	0.000	69.50	0.00	0.00	0.00
73.50	0.00	0.000	69.50	0.00	0.00	0.00
74.00	0.00	0.000	69.50	0.00	0.00	0.00
74.50	0.00	0.000	69.50	0.00	0.00	0.00
75.00	0.00	0.000	69.50	0.00	0.00	0.00
75.50	0.00	0.000	69.50	0.00	0.00	0.00
76.00	0.00	0.000	69.50	0.00	0.00	0.00
76.50	0.00	0.000	69.50	0.00	0.00	0.00
77.00	0.00	0.000	69.50	0.00	0.00	0.00
77.50	0.00	0.000	69.50	0.00	0.00	0.00
78.00	0.00	0.000	69.50	0.00	0.00	0.00
78.50	0.00	0.000	69.50	0.00	0.00	0.00
79.00	0.00	0.000	69.50	0.00	0.00	0.00
79.50	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
80.00	0.00	0.000	69.50	0.00	0.00	0.00
80.50	0.00	0.000	69.50	0.00	0.00	0.00
81.00	0.00	0.000	69.50	0.00	0.00	0.00
81.50	0.00	0.000	69.50	0.00	0.00	0.00
82.00	0.00	0.000	69.50	0.00	0.00	0.00
82.50	0.00	0.000	69.50	0.00	0.00	0.00
83.00	0.00	0.000	69.50	0.00	0.00	0.00
83.50	0.00	0.000	69.50	0.00	0.00	0.00
84.00	0.00	0.000	69.50	0.00	0.00	0.00
84.50	0.00	0.000	69.50	0.00	0.00	0.00
85.00	0.00	0.000	69.50	0.00	0.00	0.00
85.50	0.00	0.000	69.50	0.00	0.00	0.00
86.00	0.00	0.000	69.50	0.00	0.00	0.00
86.50	0.00	0.000	69.50	0.00	0.00	0.00
87.00	0.00	0.000	69.50	0.00	0.00	0.00
87.50	0.00	0.000	69.50	0.00	0.00	0.00
88.00	0.00	0.000	69.50	0.00	0.00	0.00
88.50	0.00	0.000	69.50	0.00	0.00	0.00
89.00	0.00	0.000	69.50	0.00	0.00	0.00
89.50	0.00	0.000	69.50	0.00	0.00	0.00
90.00	0.00	0.000	69.50	0.00	0.00	0.00
90.50	0.00	0.000	69.50	0.00	0.00	0.00
91.00	0.00	0.000	69.50	0.00	0.00	0.00
91.50	0.00	0.000	69.50	0.00	0.00	0.00
92.00	0.00	0.000	69.50	0.00	0.00	0.00
92.50	0.00	0.000	69.50	0.00	0.00	0.00
93.00	0.00	0.000	69.50	0.00	0.00	0.00
93.50	0.00	0.000	69.50	0.00	0.00	0.00
94.00	0.00	0.000	69.50	0.00	0.00	0.00
94.50	0.00	0.000	69.50	0.00	0.00	0.00
95.00	0.00	0.000	69.50	0.00	0.00	0.00
95.50	0.00	0.000	69.50	0.00	0.00	0.00
96.00	0.00	0.000	69.50	0.00	0.00	0.00
96.50	0.00	0.000	69.50	0.00	0.00	0.00
97.00	0.00	0.000	69.50	0.00	0.00	0.00
97.50	0.00	0.000	69.50	0.00	0.00	0.00
98.00	0.00	0.000	69.50	0.00	0.00	0.00
98.50	0.00	0.000	69.50	0.00	0.00	0.00
99.00	0.00	0.000	69.50	0.00	0.00	0.00
99.50	0.00	0.000	69.50	0.00	0.00	0.00
100.00	0.00	0.000	69.50	0.00	0.00	0.00
100.50	0.00	0.000	69.50	0.00	0.00	0.00
101.00	0.00	0.000	69.50	0.00	0.00	0.00
101.50	0.00	0.000	69.50	0.00	0.00	0.00
102.00	0.00	0.000	69.50	0.00	0.00	0.00
102.50	0.00	0.000	69.50	0.00	0.00	0.00
103.00	0.00	0.000	69.50	0.00	0.00	0.00
103.50	0.00	0.000	69.50	0.00	0.00	0.00
104.00	0.00	0.000	69.50	0.00	0.00	0.00
104.50	0.00	0.000	69.50	0.00	0.00	0.00
105.00	0.00	0.000	69.50	0.00	0.00	0.00
105.50	0.00	0.000	69.50	0.00	0.00	0.00
106.00	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
106.50	0.00	0.000	69.50	0.00	0.00	0.00
107.00	0.00	0.000	69.50	0.00	0.00	0.00
107.50	0.00	0.000	69.50	0.00	0.00	0.00
108.00	0.00	0.000	69.50	0.00	0.00	0.00
108.50	0.00	0.000	69.50	0.00	0.00	0.00
109.00	0.00	0.000	69.50	0.00	0.00	0.00
109.50	0.00	0.000	69.50	0.00	0.00	0.00
110.00	0.00	0.000	69.50	0.00	0.00	0.00
110.50	0.00	0.000	69.50	0.00	0.00	0.00
111.00	0.00	0.000	69.50	0.00	0.00	0.00
111.50	0.00	0.000	69.50	0.00	0.00	0.00
112.00	0.00	0.000	69.50	0.00	0.00	0.00
112.50	0.00	0.000	69.50	0.00	0.00	0.00
113.00	0.00	0.000	69.50	0.00	0.00	0.00
113.50	0.00	0.000	69.50	0.00	0.00	0.00
114.00	0.00	0.000	69.50	0.00	0.00	0.00
114.50	0.00	0.000	69.50	0.00	0.00	0.00
115.00	0.00	0.000	69.50	0.00	0.00	0.00
115.50	0.00	0.000	69.50	0.00	0.00	0.00
116.00	0.00	0.000	69.50	0.00	0.00	0.00
116.50	0.00	0.000	69.50	0.00	0.00	0.00
117.00	0.00	0.000	69.50	0.00	0.00	0.00
117.50	0.00	0.000	69.50	0.00	0.00	0.00
118.00	0.00	0.000	69.50	0.00	0.00	0.00
118.50	0.00	0.000	69.50	0.00	0.00	0.00
119.00	0.00	0.000	69.50	0.00	0.00	0.00
119.50	0.00	0.000	69.50	0.00	0.00	0.00
120.00	0.00	0.000	69.50	0.00	0.00	0.00
120.50	0.00	0.000	69.50	0.00	0.00	0.00
121.00	0.00	0.000	69.50	0.00	0.00	0.00
121.50	0.00	0.000	69.50	0.00	0.00	0.00
122.00	0.00	0.000	69.50	0.00	0.00	0.00
122.50	0.00	0.000	69.50	0.00	0.00	0.00
123.00	0.00	0.000	69.50	0.00	0.00	0.00
123.50	0.00	0.000	69.50	0.00	0.00	0.00
124.00	0.00	0.000	69.50	0.00	0.00	0.00
124.50	0.00	0.000	69.50	0.00	0.00	0.00
125.00	0.00	0.000	69.50	0.00	0.00	0.00
125.50	0.00	0.000	69.50	0.00	0.00	0.00
126.00	0.00	0.000	69.50	0.00	0.00	0.00
126.50	0.00	0.000	69.50	0.00	0.00	0.00
127.00	0.00	0.000	69.50	0.00	0.00	0.00
127.50	0.00	0.000	69.50	0.00	0.00	0.00
128.00	0.00	0.000	69.50	0.00	0.00	0.00
128.50	0.00	0.000	69.50	0.00	0.00	0.00
129.00	0.00	0.000	69.50	0.00	0.00	0.00
129.50	0.00	0.000	69.50	0.00	0.00	0.00
130.00	0.00	0.000	69.50	0.00	0.00	0.00
130.50	0.00	0.000	69.50	0.00	0.00	0.00
131.00	0.00	0.000	69.50	0.00	0.00	0.00
131.50	0.00	0.000	69.50	0.00	0.00	0.00
132.00	0.00	0.000	69.50	0.00	0.00	0.00
132.50	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
133.00	0.00	0.000	69.50	0.00	0.00	0.00
133.50	0.00	0.000	69.50	0.00	0.00	0.00
134.00	0.00	0.000	69.50	0.00	0.00	0.00
134.50	0.00	0.000	69.50	0.00	0.00	0.00
135.00	0.00	0.000	69.50	0.00	0.00	0.00
135.50	0.00	0.000	69.50	0.00	0.00	0.00
136.00	0.00	0.000	69.50	0.00	0.00	0.00
136.50	0.00	0.000	69.50	0.00	0.00	0.00
137.00	0.00	0.000	69.50	0.00	0.00	0.00
137.50	0.00	0.000	69.50	0.00	0.00	0.00
138.00	0.00	0.000	69.50	0.00	0.00	0.00
138.50	0.00	0.000	69.50	0.00	0.00	0.00
139.00	0.00	0.000	69.50	0.00	0.00	0.00
139.50	0.00	0.000	69.50	0.00	0.00	0.00
140.00	0.00	0.000	69.50	0.00	0.00	0.00
140.50	0.00	0.000	69.50	0.00	0.00	0.00
141.00	0.00	0.000	69.50	0.00	0.00	0.00
141.50	0.00	0.000	69.50	0.00	0.00	0.00
142.00	0.00	0.000	69.50	0.00	0.00	0.00
142.50	0.00	0.000	69.50	0.00	0.00	0.00
143.00	0.00	0.000	69.50	0.00	0.00	0.00
143.50	0.00	0.000	69.50	0.00	0.00	0.00
144.00	0.00	0.000	69.50	0.00	0.00	0.00
144.50	0.00	0.000	69.50	0.00	0.00	0.00
145.00	0.00	0.000	69.50	0.00	0.00	0.00
145.50	0.00	0.000	69.50	0.00	0.00	0.00
146.00	0.00	0.000	69.50	0.00	0.00	0.00
146.50	0.00	0.000	69.50	0.00	0.00	0.00
147.00	0.00	0.000	69.50	0.00	0.00	0.00
147.50	0.00	0.000	69.50	0.00	0.00	0.00
148.00	0.00	0.000	69.50	0.00	0.00	0.00
148.50	0.00	0.000	69.50	0.00	0.00	0.00
149.00	0.00	0.000	69.50	0.00	0.00	0.00
149.50	0.00	0.000	69.50	0.00	0.00	0.00
150.00	0.00	0.000	69.50	0.00	0.00	0.00

Stage-Discharge for Pond 7P: Stormwater Pond

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
69.50	0.00	0.00	0.00	70.03	21.70	21.70	0.00
69.51	19.00	19.00	0.00	70.04	21.76	21.76	0.00
69.52	19.05	19.05	0.00	70.05	21.81	21.81	0.00
69.53	19.10	19.10	0.00	70.06	21.86	21.86	0.00
69.54	19.15	19.15	0.00	70.07	21.91	21.91	0.00
69.55	19.20	19.20	0.00	70.08	21.97	21.97	0.00
69.56	19.26	19.26	0.00	70.09	22.02	22.02	0.00
69.57	19.31	19.31	0.00	70.10	22.07	22.07	0.00
69.58	19.36	19.36	0.00	70.11	22.12	22.12	0.00
69.59	19.41	19.41	0.00	70.12	22.18	22.18	0.00
69.60	19.46	19.46	0.00	70.13	22.23	22.23	0.00
69.61	19.51	19.51	0.00	70.14	22.28	22.28	0.00
69.62	19.57	19.57	0.00	70.15	22.34	22.34	0.00
69.63	19.62	19.62	0.00	70.16	22.39	22.39	0.00
69.64	19.67	19.67	0.00	70.17	22.44	22.44	0.00
69.65	19.72	19.72	0.00	70.18	22.49	22.49	0.00
69.66	19.77	19.77	0.00	70.19	22.55	22.55	0.00
69.67	19.82	19.82	0.00	70.20	22.60	22.60	0.00
69.68	19.88	19.88	0.00	70.21	22.65	22.65	0.00
69.69	19.93	19.93	0.00	70.22	22.71	22.71	0.00
69.70	19.98	19.98	0.00	70.23	22.76	22.76	0.00
69.71	20.03	20.03	0.00	70.24	22.81	22.81	0.00
69.72	20.08	20.08	0.00	70.25	22.86	22.86	0.00
69.73	20.14	20.14	0.00	70.26	22.92	22.92	0.00
69.74	20.19	20.19	0.00	70.27	22.97	22.97	0.00
69.75	20.24	20.24	0.00	70.28	23.02	23.02	0.00
69.76	20.29	20.29	0.00	70.29	23.08	23.08	0.00
69.77	20.34	20.34	0.00	70.30	23.13	23.13	0.00
69.78	20.40	20.40	0.00	70.31	23.18	23.18	0.00
69.79	20.45	20.45	0.00	70.32	23.24	23.24	0.00
69.80	20.50	20.50	0.00	70.33	23.29	23.29	0.00
69.81	20.55	20.55	0.00	70.34	23.34	23.34	0.00
69.82	20.60	20.60	0.00	70.35	23.40	23.40	0.00
69.83	20.66	20.66	0.00	70.36	23.45	23.45	0.00
69.84	20.71	20.71	0.00	70.37	23.50	23.50	0.00
69.85	20.76	20.76	0.00	70.38	23.55	23.55	0.00
69.86	20.81	20.81	0.00	70.39	23.61	23.61	0.00
69.87	20.87	20.87	0.00	70.40	23.66	23.66	0.00
69.88	20.92	20.92	0.00	70.41	23.71	23.71	0.00
69.89	20.97	20.97	0.00	70.42	23.77	23.77	0.00
69.90	21.02	21.02	0.00	70.43	23.82	23.82	0.00
69.91	21.07	21.07	0.00	70.44	23.87	23.87	0.00
69.92	21.13	21.13	0.00	70.45	23.93	23.93	0.00
69.93	21.18	21.18	0.00	70.46	23.98	23.98	0.00
69.94	21.23	21.23	0.00	70.47	24.03	24.03	0.00
69.95	21.28	21.28	0.00	70.48	24.09	24.09	0.00
69.96	21.34	21.34	0.00	70.49	24.14	24.14	0.00
69.97	21.39	21.39	0.00	70.50	24.19	24.19	0.00
69.98	21.44	21.44	0.00	70.51	24.25	24.25	0.00
69.99	21.49	21.49	0.00	70.52	24.30	24.30	0.00
70.00	21.55	21.55	0.00	70.53	24.35	24.35	0.00
70.01	21.60	21.60	0.00	70.54	24.41	24.41	0.00
70.02	21.65	21.65	0.00	70.55	24.46	24.46	0.00

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
70.56	24.51	24.51	0.00
70.57	24.57	24.57	0.00
70.58	24.62	24.62	0.00
70.59	24.68	24.68	0.00
70.60	24.73	24.73	0.00
70.61	24.78	24.78	0.00
70.62	24.84	24.84	0.00
70.63	24.89	24.89	0.00
70.64	24.94	24.94	0.00
70.65	25.00	25.00	0.00
70.66	25.05	25.05	0.00
70.67	25.10	25.10	0.00
70.68	25.16	25.16	0.00
70.69	25.21	25.21	0.00
70.70	25.27	25.27	0.00
70.71	25.32	25.32	0.00
70.72	25.37	25.37	0.00
70.73	25.43	25.43	0.00
70.74	25.48	25.48	0.00
70.75	25.53	25.53	0.00
70.76	25.59	25.59	0.00
70.77	25.64	25.64	0.00
70.78	25.70	25.70	0.00
70.79	25.75	25.75	0.00
70.80	25.80	25.80	0.00
70.81	25.86	25.86	0.00
70.82	25.91	25.91	0.00
70.83	25.97	25.97	0.00
70.84	26.02	26.02	0.00
70.85	26.07	26.07	0.00
70.86	26.13	26.13	0.00
70.87	26.18	26.18	0.00
70.88	26.24	26.24	0.00
70.89	26.29	26.29	0.00
70.90	26.34	26.34	0.00
70.91	26.40	26.40	0.00
70.92	26.45	26.45	0.00
70.93	26.51	26.51	0.00
70.94	26.56	26.56	0.00
70.95	26.61	26.61	0.00
70.96	26.67	26.67	0.00
70.97	26.72	26.72	0.00
70.98	26.78	26.78	0.00
70.99	26.83	26.83	0.00
71.00	26.88	26.88	0.00
71.01	26.94	26.94	0.00
71.02	26.99	26.99	0.00
71.03	27.05	27.05	0.00
71.04	27.10	27.10	0.00
71.05	27.16	27.16	0.00
71.06	27.21	27.21	0.00
71.07	27.26	27.26	0.00
71.08	27.32	27.32	0.00
71.09	27.37	27.37	0.00
71.10	27.43	27.43	0.00
71.11	27.48	27.48	0.00
71.12	27.54	27.54	0.00
71.13	27.59	27.59	0.00
71.14	27.65	27.65	0.00
71.15	27.70	27.70	0.00
71.16	27.75	27.75	0.00
71.17	27.81	27.81	0.00
71.18	27.86	27.86	0.00
71.19	27.92	27.92	0.00
71.20	27.97	27.97	0.00
71.21	28.03	28.03	0.00
71.22	28.08	28.08	0.00
71.23	28.14	28.14	0.00
71.24	28.19	28.19	0.00
71.25	28.25	28.25	0.00
71.26	28.30	28.30	0.00
71.27	28.35	28.35	0.00
71.28	28.41	28.41	0.00
71.29	28.46	28.46	0.00
71.30	28.52	28.52	0.00
71.31	28.57	28.57	0.00
71.32	28.63	28.63	0.00
71.33	28.68	28.68	0.00
71.34	28.74	28.74	0.00
71.35	28.79	28.79	0.00
71.36	28.85	28.85	0.00
71.37	28.90	28.90	0.00
71.38	28.96	28.96	0.00
71.39	29.01	29.01	0.00
71.40	29.07	29.07	0.00
71.41	29.12	29.12	0.00
71.42	29.18	29.18	0.00
71.43	29.23	29.23	0.00
71.44	29.29	29.29	0.00
71.45	29.34	29.34	0.00
71.46	29.40	29.40	0.00
71.47	29.45	29.45	0.00
71.48	29.51	29.51	0.00
71.49	29.56	29.56	0.00
71.50	29.62	29.62	0.00
71.51	29.67	29.67	0.00
71.52	29.73	29.73	0.00
71.53	29.78	29.78	0.00
71.54	29.84	29.84	0.00
71.55	29.89	29.89	0.00
71.56	29.95	29.95	0.00
71.57	30.00	30.00	0.00
71.58	30.06	30.06	0.00
71.59	30.12	30.12	0.00
71.60	30.17	30.17	0.00
71.61	30.23	30.23	0.00

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
71.62	30.28	30.28	0.00	72.15	33.26	33.26	0.00
71.63	30.34	30.34	0.00	72.16	33.31	33.31	0.00
71.64	30.39	30.39	0.00	72.17	33.37	33.37	0.00
71.65	30.45	30.45	0.00	72.18	33.43	33.43	0.00
71.66	30.51	30.51	0.00	72.19	33.48	33.48	0.00
71.67	30.56	30.56	0.00	72.20	33.54	33.54	0.00
71.68	30.62	30.62	0.00	72.21	33.60	33.60	0.00
71.69	30.67	30.67	0.00	72.22	33.65	33.65	0.00
71.70	30.73	30.73	0.00	72.23	33.71	33.71	0.00
71.71	30.78	30.78	0.00	72.24	33.77	33.77	0.00
71.72	30.84	30.84	0.00	72.25	33.82	33.82	0.00
71.73	30.90	30.90	0.00	72.26	33.88	33.88	0.00
71.74	30.95	30.95	0.00	72.27	33.94	33.94	0.00
71.75	31.01	31.01	0.00	72.28	33.99	33.99	0.00
71.76	31.06	31.06	0.00	72.29	34.05	34.05	0.00
71.77	31.12	31.12	0.00	72.30	34.11	34.11	0.00
71.78	31.18	31.18	0.00	72.31	34.16	34.16	0.00
71.79	31.23	31.23	0.00	72.32	34.22	34.22	0.00
71.80	31.29	31.29	0.00	72.33	34.28	34.28	0.00
71.81	31.34	31.34	0.00	72.34	34.33	34.33	0.00
71.82	31.40	31.40	0.00	72.35	34.39	34.39	0.00
71.83	31.46	31.46	0.00	72.36	34.45	34.45	0.00
71.84	31.51	31.51	0.00	72.37	34.50	34.50	0.00
71.85	31.57	31.57	0.00	72.38	34.56	34.56	0.00
71.86	31.62	31.62	0.00	72.39	34.62	34.62	0.00
71.87	31.68	31.68	0.00	72.40	34.67	34.67	0.00
71.88	31.74	31.74	0.00	72.41	34.73	34.73	0.00
71.89	31.79	31.79	0.00	72.42	34.79	34.79	0.00
71.90	31.85	31.85	0.00	72.43	34.84	34.84	0.00
71.91	31.90	31.90	0.00	72.44	34.90	34.90	0.00
71.92	31.96	31.96	0.00	72.45	34.96	34.96	0.00
71.93	32.02	32.02	0.00	72.46	35.01	35.01	0.00
71.94	32.07	32.07	0.00	72.47	35.07	35.07	0.00
71.95	32.13	32.13	0.00	72.48	35.13	35.13	0.00
71.96	32.19	32.19	0.00	72.49	35.18	35.18	0.00
71.97	32.24	32.24	0.00	72.50	35.24	35.24	0.00
71.98	32.30	32.30	0.00	72.51	35.32	35.30	0.03
71.99	32.35	32.35	0.00	72.52	35.43	35.36	0.07
72.00	32.41	32.41	0.00	72.53	35.54	35.41	0.13
72.01	32.47	32.47	0.00	72.54	35.67	35.47	0.20
72.02	32.52	32.52	0.00	72.55	35.81	35.53	0.28
72.03	32.58	32.58	0.00	72.56	35.96	35.58	0.37
72.04	32.64	32.64	0.00	72.57	36.11	35.64	0.47
72.05	32.69	32.69	0.00	72.58	36.27	35.70	0.57
72.06	32.75	32.75	0.00	72.59	36.44	35.75	0.68
72.07	32.80	32.80	0.00	72.60	36.61	35.81	0.80
72.08	32.86	32.86	0.00	72.61	36.79	35.87	0.92
72.09	32.92	32.92	0.00	72.62	36.98	35.93	1.05
72.10	32.97	32.97	0.00	72.63	37.17	35.98	1.19
72.11	33.03	33.03	0.00	72.64	37.37	36.04	1.33
72.12	33.09	33.09	0.00	72.65	37.57	36.10	1.47
72.13	33.14	33.14	0.00	72.66	37.77	36.15	1.62
72.14	33.20	33.20	0.00	72.67	37.99	36.21	1.77

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
72.68	38.20	36.27	1.93
72.69	38.42	36.33	2.10
72.70	38.65	36.38	2.26
72.71	38.88	36.44	2.44
72.72	39.11	36.50	2.62
72.73	39.36	36.56	2.80
72.74	39.60	36.61	2.99
72.75	39.85	36.67	3.18
72.76	40.11	36.73	3.38
72.77	40.36	36.78	3.58
72.78	40.63	36.84	3.78
72.79	40.89	36.90	3.99
72.80	41.16	36.96	4.21
72.81	41.44	37.01	4.42
72.82	41.72	37.07	4.64
72.83	42.00	37.13	4.87
72.84	42.29	37.19	5.10
72.85	42.58	37.24	5.33
72.86	42.87	37.30	5.57
72.87	43.17	37.36	5.81
72.88	43.47	37.42	6.05
72.89	43.77	37.47	6.30
72.90	44.08	37.53	6.55
72.91	44.40	37.59	6.81
72.92	44.73	37.65	7.08
72.93	45.05	37.70	7.35
72.94	45.38	37.76	7.62
72.95	45.72	37.82	7.90
72.96	46.06	37.88	8.18
72.97	46.40	37.93	8.47
72.98	46.75	37.99	8.76
72.99	47.10	38.05	9.05
73.00	47.46	38.11	9.35
73.01	47.82	38.16	9.65
73.02	48.18	38.22	9.96
73.03	48.55	38.28	10.27
73.04	48.92	38.34	10.58
73.05	49.30	38.39	10.90
73.06	49.67	38.45	11.22
73.07	50.06	38.51	11.55
73.08	50.45	38.57	11.88
73.09	50.84	38.63	12.21
73.10	51.23	38.68	12.55
73.11	51.60	38.74	12.86
73.12	51.97	38.80	13.17
73.13	52.34	38.86	13.49
73.14	52.72	38.91	13.80
73.15	53.09	38.97	14.12
73.16	53.47	39.03	14.44
73.17	53.86	39.09	14.77
73.18	54.24	39.15	15.10
73.19	54.63	39.20	15.42
73.20	55.02	39.26	15.75
73.21	55.41	39.32	16.09
73.22	55.80	39.38	16.42
73.23	56.19	39.43	16.76
73.24	56.59	39.49	17.10
73.25	56.99	39.55	17.44
73.26	57.39	39.61	17.78
73.27	57.79	39.67	18.13
73.28	58.20	39.72	18.48
73.29	58.61	39.78	18.83
73.30	59.02	39.84	19.18
73.31	59.43	39.90	19.53
73.32	59.85	39.96	19.89
73.33	60.27	40.01	20.25
73.34	60.69	40.07	20.62
73.35	61.11	40.13	20.98
73.36	61.54	40.19	21.35
73.37	61.97	40.25	21.72
73.38	62.39	40.30	22.09
73.39	62.83	40.36	22.46
73.40	63.26	40.42	22.84
73.41	63.70	40.48	23.22
73.42	64.13	40.54	23.60
73.43	64.57	40.59	23.98
73.44	65.01	40.65	24.36
73.45	65.46	40.71	24.75
73.46	65.90	40.77	25.13
73.47	66.35	40.83	25.52
73.48	66.80	40.89	25.91
73.49	67.25	40.94	26.31
73.50	**67.70**	**41.00**	**26.70**

Stage-Area-Storage for Pond 7P: Stormwater Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
69.50	3.410	0.000	70.03	3.500	1.852
69.51	3.412	0.035	70.04	3.502	1.887
69.52	3.413	0.070	70.05	3.503	1.922
69.53	3.415	0.105	70.06	3.505	1.957
69.54	3.417	0.140	70.07	3.507	1.992
69.55	3.418	0.175	70.08	3.509	2.027
69.56	3.420	0.210	70.09	3.510	2.062
69.57	3.422	0.245	70.10	3.512	2.097
69.58	3.424	0.280	70.11	3.514	2.132
69.59	3.425	0.315	70.12	3.515	2.167
69.60	3.427	0.349	70.13	3.517	2.202
69.61	3.429	0.384	70.14	3.519	2.237
69.62	3.430	0.419	70.15	3.521	2.272
69.63	3.432	0.454	70.16	3.522	2.307
69.64	3.434	0.489	70.17	3.524	2.342
69.65	3.436	0.524	70.18	3.526	2.377
69.66	3.437	0.559	70.19	3.527	2.412
69.67	3.439	0.594	70.20	3.529	2.447
69.68	3.441	0.629	70.21	3.531	2.481
69.69	3.442	0.664	70.22	3.532	2.516
69.70	3.444	0.699	70.23	3.534	2.551
69.71	3.446	0.734	70.24	3.536	2.586
69.72	3.447	0.769	70.25	3.537	2.621
69.73	3.449	0.804	70.26	3.539	2.656
69.74	3.451	0.839	70.27	3.541	2.691
69.75	3.452	0.874	70.28	3.543	2.726
69.76	3.454	0.909	70.29	3.544	2.761
69.77	3.456	0.944	70.30	3.546	2.796
69.78	3.458	0.979	70.31	3.548	2.831
69.79	3.459	1.014	70.32	3.549	2.866
69.80	3.461	1.048	70.33	3.551	2.901
69.81	3.463	1.083	70.34	3.553	2.936
69.82	3.464	1.118	70.35	3.554	2.971
69.83	3.466	1.153	70.36	3.556	3.006
69.84	3.468	1.188	70.37	3.558	3.041
69.85	3.469	1.223	70.38	3.560	3.076
69.86	3.471	1.258	70.39	3.561	3.111
69.87	3.473	1.293	70.40	3.563	3.146
69.88	3.475	1.328	70.41	3.565	3.180
69.89	3.476	1.363	70.42	3.566	3.215
69.90	3.478	1.398	70.43	3.568	3.250
69.91	3.480	1.433	70.44	3.570	3.285
69.92	3.481	1.468	70.45	3.572	3.320
69.93	3.483	1.503	70.46	3.573	3.355
69.94	3.485	1.538	70.47	3.575	3.390
69.95	3.487	1.573	70.48	3.577	3.425
69.96	3.488	1.608	70.49	3.578	3.460
69.97	3.490	1.643	70.50	3.580	3.495
69.98	3.492	1.678	70.51	3.582	3.532
69.99	3.493	1.713	70.52	3.583	3.568
70.00	3.495	1.748	70.53	3.585	3.605
70.01	3.497	1.782	70.54	3.587	3.642
70.02	3.498	1.817	70.55	3.588	3.678

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
70.56	3.590	3.715	71.09	3.680	5.657
70.57	3.592	3.752	71.10	3.682	5.694
70.58	3.594	3.788	71.11	3.684	5.731
70.59	3.595	3.825	71.12	3.685	5.767
70.60	3.597	3.861	71.13	3.687	5.804
70.61	3.599	3.898	71.14	3.689	5.841
70.62	3.600	3.935	71.15	3.691	5.877
70.63	3.602	3.971	71.16	3.692	5.914
70.64	3.604	4.008	71.17	3.694	5.951
70.65	3.606	4.045	71.18	3.696	5.987
70.66	3.607	4.081	71.19	3.697	6.024
70.67	3.609	4.118	71.20	3.699	6.061
70.68	3.611	4.155	71.21	3.701	6.097
70.69	3.612	4.191	71.22	3.702	6.134
70.70	3.614	4.228	71.23	3.704	6.170
70.71	3.616	4.265	71.24	3.706	6.207
70.72	3.617	4.301	71.25	3.708	6.244
70.73	3.619	4.338	71.26	3.709	6.280
70.74	3.621	4.375	71.27	3.711	6.317
70.75	3.622	4.411	71.28	3.713	6.354
70.76	3.624	4.448	71.29	3.714	6.390
70.77	3.626	4.485	71.30	3.716	6.427
70.78	3.628	4.521	71.31	3.718	6.464
70.79	3.629	4.558	71.32	3.719	6.500
70.80	3.631	4.594	71.33	3.721	6.537
70.81	3.633	4.631	71.34	3.723	6.574
70.82	3.634	4.668	71.35	3.724	6.610
70.83	3.636	4.704	71.36	3.726	6.647
70.84	3.638	4.741	71.37	3.728	6.684
70.85	3.639	4.778	71.38	3.730	6.720
70.86	3.641	4.814	71.39	3.731	6.757
70.87	3.643	4.851	71.40	3.733	6.794
70.88	3.645	4.888	71.41	3.735	6.830
70.89	3.646	4.924	71.42	3.736	6.867
70.90	3.648	4.961	71.43	3.738	6.903
70.91	3.650	4.998	71.44	3.740	6.940
70.92	3.651	5.034	71.45	3.742	6.977
70.93	3.653	5.071	71.46	3.743	7.013
70.94	3.655	5.108	71.47	3.745	7.050
70.95	3.657	5.144	71.48	3.747	7.087
70.96	3.658	5.181	71.49	3.748	7.123
70.97	3.660	5.218	71.50	3.750	7.160
70.98	3.662	5.254	71.51	3.752	7.198
70.99	3.663	5.291	71.52	3.754	7.237
71.00	3.665	5.327	71.53	3.755	7.275
71.01	3.667	5.364	71.54	3.757	7.314
71.02	3.668	5.401	71.55	3.759	7.352
71.03	3.670	5.437	71.56	3.761	7.390
71.04	3.672	5.474	71.57	3.763	7.429
71.05	3.673	5.511	71.58	3.764	7.467
71.06	3.675	5.547	71.59	3.766	7.506
71.07	3.677	5.584	71.60	3.768	7.544
71.08	3.679	5.621	71.61	3.770	7.582

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
71.62	3.772	7.621	72.15	3.867	9.656
71.63	3.773	7.659	72.16	3.869	9.694
71.64	3.775	7.698	72.17	3.871	9.733
71.65	3.777	7.736	72.18	3.872	9.771
71.66	3.779	7.774	72.19	3.874	9.810
71.67	3.781	7.813	72.20	3.876	9.848
71.68	3.782	7.851	72.21	3.878	9.886
71.69	3.784	7.890	72.22	3.880	9.925
71.70	3.786	7.928	72.23	3.881	9.963
71.71	3.788	7.966	72.24	3.883	10.002
71.72	3.790	8.005	72.25	3.885	10.040
71.73	3.791	8.043	72.26	3.887	10.078
71.74	3.793	8.082	72.27	3.889	10.117
71.75	3.795	8.120	72.28	3.890	10.155
71.76	3.797	8.158	72.29	3.892	10.194
71.77	3.799	8.197	72.30	3.894	10.232
71.78	3.800	8.235	72.31	3.896	10.270
71.79	3.802	8.274	72.32	3.898	10.309
71.80	3.804	8.312	72.33	3.899	10.347
71.81	3.806	8.350	72.34	3.901	10.386
71.82	3.808	8.389	72.35	3.903	10.424
71.83	3.809	8.427	72.36	3.905	10.462
71.84	3.811	8.466	72.37	3.907	10.501
71.85	3.813	8.504	72.38	3.908	10.539
71.86	3.815	8.542	72.39	3.910	10.578
71.87	3.817	8.581	72.40	3.912	10.616
71.88	3.818	8.619	72.41	3.914	10.654
71.89	3.820	8.658	72.42	3.916	10.693
71.90	3.822	8.696	72.43	3.917	10.731
71.91	3.824	8.734	72.44	3.919	10.770
71.92	3.826	8.773	72.45	3.921	10.808
71.93	3.827	8.811	72.46	3.923	10.846
71.94	3.829	8.850	72.47	3.925	10.885
71.95	3.831	8.888	72.48	3.926	10.923
71.96	3.833	8.926	72.49	3.928	10.962
71.97	3.835	8.965	72.50	3.930	11.000
71.98	3.836	9.003	72.51	3.932	11.040
71.99	3.838	9.042	72.52	3.934	11.080
72.00	3.840	9.080	72.53	3.935	11.121
72.01	3.842	9.118	72.54	3.937	11.161
72.02	3.844	9.157	72.55	3.939	11.201
72.03	3.845	9.195	72.56	3.941	11.241
72.04	3.847	9.234	72.57	3.943	11.281
72.05	3.849	9.272	72.58	3.944	11.322
72.06	3.851	9.310	72.59	3.946	11.362
72.07	3.853	9.349	72.60	3.948	11.402
72.08	3.854	9.387	72.61	3.950	11.442
72.09	3.856	9.426	72.62	3.952	11.482
72.10	3.858	9.464	72.63	3.953	11.523
72.11	3.860	9.502	72.64	3.955	11.563
72.12	3.862	9.541	72.65	3.957	11.603
72.13	3.863	9.579	72.66	3.959	11.643
72.14	3.865	9.618	72.67	3.961	11.683

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
72.68	3.962	11.724
72.69	3.964	11.764
72.70	3.966	11.804
72.71	3.968	11.844
72.72	3.970	11.884
72.73	3.971	11.925
72.74	3.973	11.965
72.75	3.975	12.005
72.76	3.977	12.045
72.77	3.979	12.085
72.78	3.980	12.126
72.79	3.982	12.166
72.80	3.984	12.206
72.81	3.986	12.246
72.82	3.988	12.286
72.83	3.989	12.327
72.84	3.991	12.367
72.85	3.993	12.407
72.86	3.995	12.447
72.87	3.997	12.487
72.88	3.998	12.528
72.89	4.000	12.568
72.90	4.002	12.608
72.91	4.004	12.648
72.92	4.006	12.688
72.93	4.007	12.729
72.94	4.009	12.769
72.95	4.011	12.809
72.96	4.013	12.849
72.97	4.015	12.889
72.98	4.016	12.930
72.99	4.018	12.970
73.00	4.020	13.010
73.01	4.022	13.050
73.02	4.024	13.090
73.03	4.025	13.131
73.04	4.027	13.171
73.05	4.029	13.211
73.06	4.031	13.251
73.07	4.033	13.291
73.08	4.034	13.332
73.09	4.036	13.372
73.10	4.038	13.412
73.11	4.040	13.452
73.12	4.042	13.492
73.13	4.043	13.533
73.14	4.045	13.573
73.15	4.047	13.613
73.16	4.049	13.653
73.17	4.051	13.693
73.18	4.052	13.734
73.19	4.054	13.774
73.20	4.056	13.814
73.21	4.058	13.854
73.22	4.060	13.894
73.23	4.061	13.935
73.24	4.063	13.975
73.25	4.065	14.015
73.26	4.067	14.055
73.27	4.069	14.095
73.28	4.070	14.136
73.29	4.072	14.176
73.30	4.074	14.216
73.31	4.076	14.256
73.32	4.078	14.296
73.33	4.079	14.337
73.34	4.081	14.377
73.35	4.083	14.417
73.36	4.085	14.457
73.37	4.087	14.497
73.38	4.088	14.538
73.39	4.090	14.578
73.40	4.092	14.618
73.41	4.094	14.658
73.42	4.096	14.698
73.43	4.097	14.739
73.44	4.099	14.779
73.45	4.101	14.819
73.46	4.103	14.859
73.47	4.105	14.899
73.48	4.106	14.940
73.49	4.108	14.980
73.50	**4.110**	**15.020**

Summary for Pond 8P: Switch Yard Ditch

Inflow Area = 23.940 ac, 61.82% Impervious, Inflow Depth = 4.79" for 25yr-24hr event
Inflow = 60.34 cfs @ 11.97 hrs, Volume= 9.547 af
Outflow = 30.85 cfs @ 12.07 hrs, Volume= 9.547 af, Atten= 49%, Lag= 6.3 min
Primary = 30.85 cfs @ 12.07 hrs, Volume= 9.547 af

Routing by Stor-Ind method, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Peak Elev= 76.46' @ 12.07 hrs Surf.Area= 0 sf Storage= 43,078 cf

Plug-Flow detention time= 39.1 min calculated for 9.544 af (100% of inflow)
Center-of-Mass det. time= 40.2 min (912.4 - 872.2)

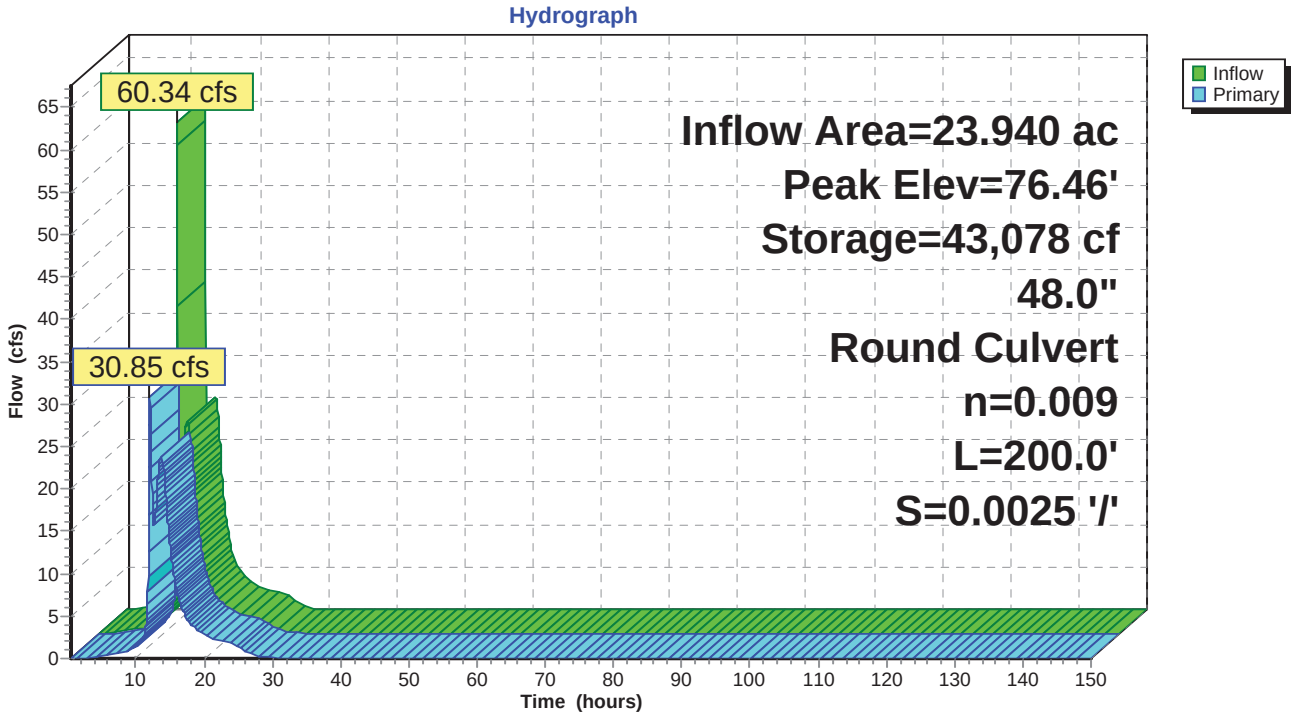
Volume	Invert	Avail.Storage	Storage Description
#1	74.00'	85,305 cf	**Custom Stage Data** Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
74.00	0	0
75.00	13,622	13,622
76.00	18,598	32,220
77.00	23,771	55,991
78.00	29,314	85,305

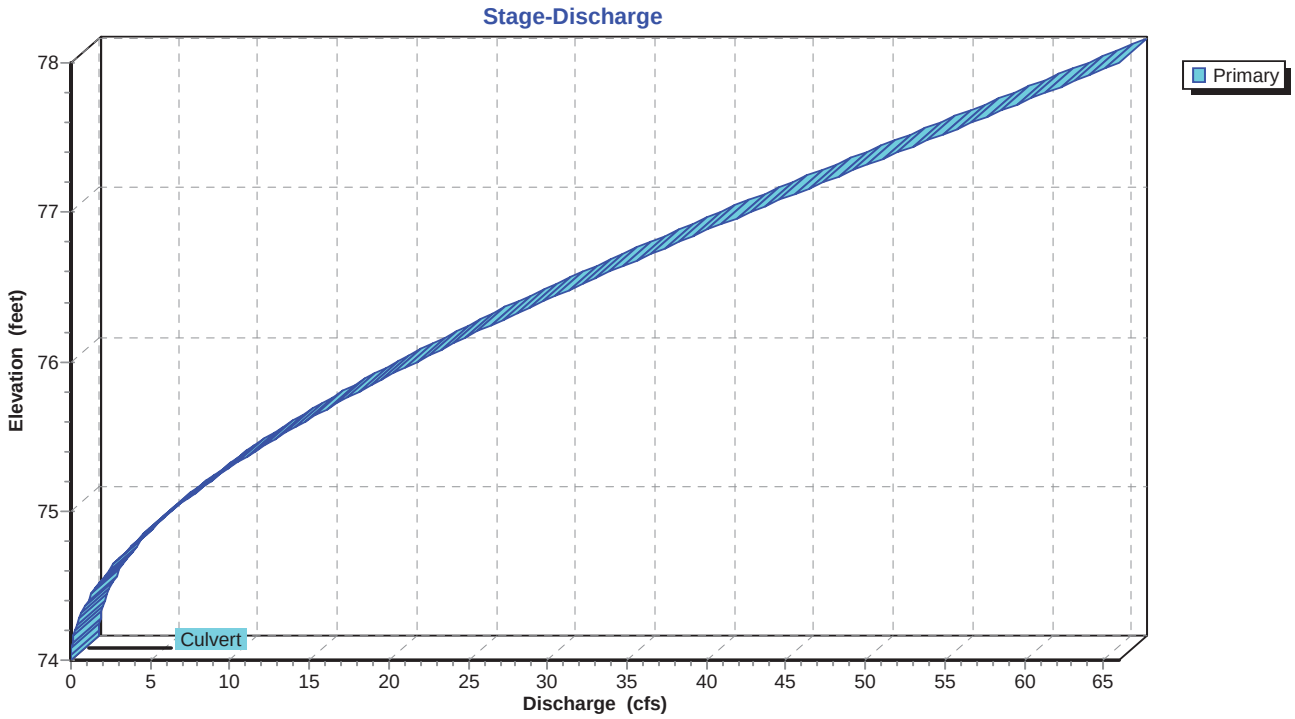
Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**48.0" Round Culvert** L= 200.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 74.00' / 73.50' S= 0.0025 '/' Cc= 0.900 n= 0.009 PVC, smooth interior, Flow Area= 12.57 sf

Primary OutFlow Max=30.47 cfs @ 12.07 hrs HW=76.44' (Free Discharge)
1=Culvert (Barrel Controls 30.47 cfs @ 5.44 fps)

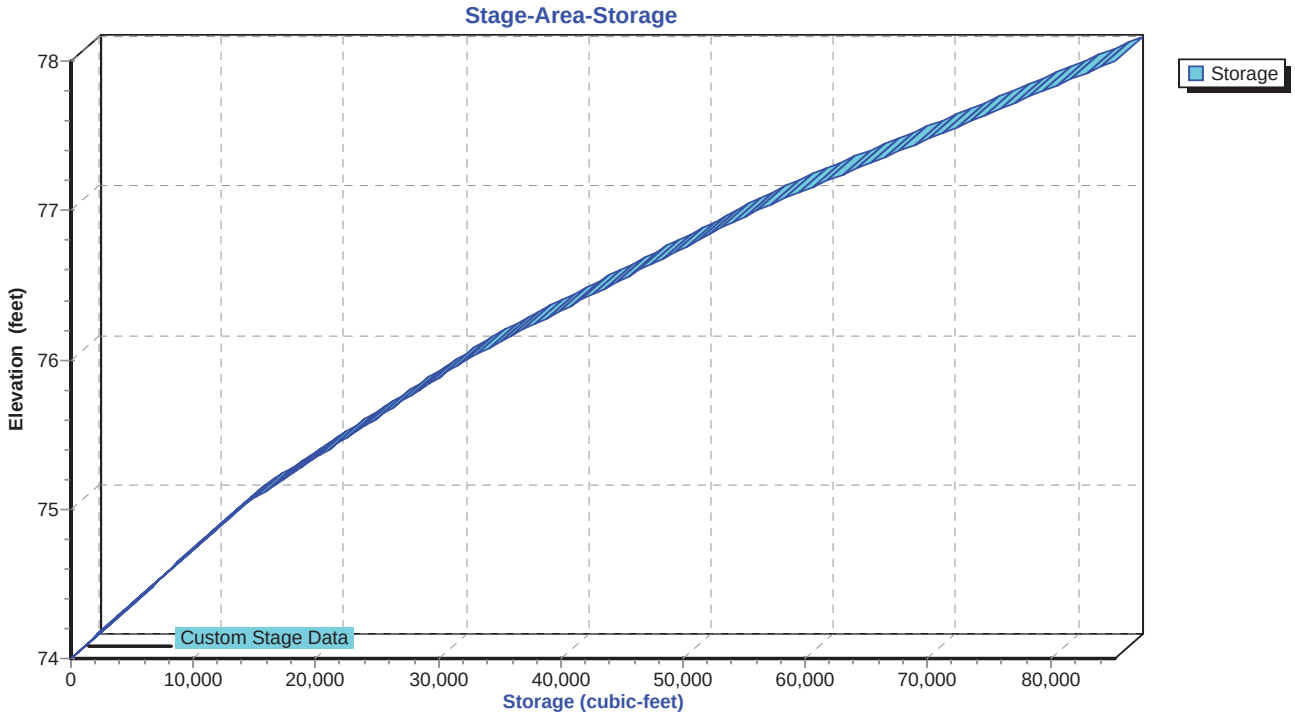
Pond 8P: Switch Yard Ditch



Pond 8P: Switch Yard Ditch



Pond 8P: Switch Yard Ditch



Hydrograph for Pond 8P: Switch Yard Ditch

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.50	0.00	0	74.00	0.00
1.00	0.00	0	74.00	0.00
1.50	0.02	4	74.00	0.00
2.00	0.09	104	74.01	0.00
2.50	0.16	328	74.02	0.01
3.00	0.22	658	74.05	0.01
3.50	0.28	1,063	74.08	0.04
4.00	0.33	1,510	74.11	0.08
4.50	0.39	1,969	74.14	0.13
5.00	0.45	2,421	74.18	0.21
5.50	0.51	2,845	74.21	0.29
6.00	0.57	3,227	74.24	0.37
6.50	0.63	3,563	74.26	0.46
7.00	0.69	3,858	74.28	0.53
7.50	0.74	4,116	74.30	0.61
8.00	0.80	4,344	74.32	0.68
8.50	0.98	4,626	74.34	0.77
9.00	1.21	5,064	74.37	0.93
9.50	1.32	5,519	74.41	1.10
10.00	1.70	6,028	74.44	1.31
10.50	2.34	6,925	74.51	1.73
11.00	3.37	8,296	74.61	2.46
11.50	**5.59**	10,603	74.78	3.93
12.00	**57.57**	**39,252**	**76.30**	**27.53**
12.50	12.37	**27,590**	**75.75**	**17.26**
13.00	21.47	28,116	75.78	17.75
13.50	25.12	33,998	76.07	23.17
14.00	21.27	33,996	76.07	23.17
14.50	15.05	28,672	75.81	18.28
15.00	11.09	23,480	75.53	13.60
15.50	8.43	19,477	75.31	10.37
16.00	6.67	16,428	75.15	8.14
16.50	5.53	14,141	75.03	6.61
17.00	4.73	12,564	74.92	5.41
17.50	4.15	11,552	74.85	4.62
18.00	3.72	10,809	74.79	4.08
18.50	3.38	10,229	74.75	3.67
19.00	3.09	9,735	74.71	3.34
19.50	2.87	9,324	74.68	3.08
20.00	2.66	8,963	74.66	2.85
20.50	2.49	8,640	74.63	2.66
21.00	2.34	8,357	74.61	2.49
21.50	2.22	8,103	74.59	2.35
22.00	2.12	7,886	74.58	2.23
22.50	2.05	7,713	74.57	2.13
23.00	1.99	7,579	74.56	2.06
23.50	1.95	7,467	74.55	2.00
24.00	1.90	7,370	74.54	1.95
24.50	1.37	6,793	74.50	1.67
25.00	1.20	6,339	74.47	1.45
25.50	0.86	5,796	74.43	1.22
26.00	0.51	5,082	74.37	0.94
26.50	0.28	4,332	74.32	0.68

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
27.00	0.15	3,676	74.27	0.48
27.50	0.08	3,140	74.23	0.35
28.00	0.05	2,711	74.20	0.26
28.50	0.02	2,367	74.17	0.20
29.00	0.01	2,091	74.15	0.15
29.50	0.01	1,865	74.14	0.12
30.00	0.00	1,681	74.12	0.09
30.50	0.00	1,530	74.11	0.08
31.00	0.00	1,400	74.10	0.07
31.50	0.00	1,290	74.09	0.06
32.00	0.00	1,197	74.09	0.05
32.50	0.00	1,119	74.08	0.04
33.00	0.00	1,052	74.08	0.04
33.50	0.00	992	74.07	0.03
34.00	0.00	937	74.07	0.03
34.50	0.00	887	74.07	0.03
35.00	0.00	841	74.06	0.02
35.50	0.00	800	74.06	0.02
36.00	0.00	763	74.06	0.02
36.50	0.00	728	74.05	0.02
37.00	0.00	697	74.05	0.02
37.50	0.00	669	74.05	0.01
38.00	0.00	643	74.05	0.01
38.50	0.00	620	74.05	0.01
39.00	0.00	599	74.04	0.01
39.50	0.00	580	74.04	0.01
40.00	0.00	562	74.04	0.01
40.50	0.00	546	74.04	0.01
41.00	0.00	531	74.04	0.01
41.50	0.00	517	74.04	0.01
42.00	0.00	503	74.04	0.01
42.50	0.00	489	74.04	0.01
43.00	0.00	476	74.03	0.01
43.50	0.00	463	74.03	0.01
44.00	0.00	450	74.03	0.01
44.50	0.00	438	74.03	0.01
45.00	0.00	426	74.03	0.01
45.50	0.00	414	74.03	0.01
46.00	0.00	403	74.03	0.01
46.50	0.00	392	74.03	0.01
47.00	0.00	381	74.03	0.01
47.50	0.00	371	74.03	0.01
48.00	0.00	361	74.03	0.01
48.50	0.00	351	74.03	0.01
49.00	0.00	341	74.03	0.01
49.50	0.00	332	74.02	0.01
50.00	0.00	323	74.02	0.00
50.50	0.00	314	74.02	0.00
51.00	0.00	306	74.02	0.00
51.50	0.00	297	74.02	0.00
52.00	0.00	289	74.02	0.00
52.50	0.00	281	74.02	0.00
53.00	0.00	274	74.02	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
53.50	0.00	266	74.02	0.00
54.00	0.00	259	74.02	0.00
54.50	0.00	252	74.02	0.00
55.00	0.00	245	74.02	0.00
55.50	0.00	238	74.02	0.00
56.00	0.00	232	74.02	0.00
56.50	0.00	225	74.02	0.00
57.00	0.00	219	74.02	0.00
57.50	0.00	213	74.02	0.00
58.00	0.00	207	74.02	0.00
58.50	0.00	202	74.01	0.00
59.00	0.00	196	74.01	0.00
59.50	0.00	191	74.01	0.00
60.00	0.00	186	74.01	0.00
60.50	0.00	181	74.01	0.00
61.00	0.00	176	74.01	0.00
61.50	0.00	171	74.01	0.00
62.00	0.00	166	74.01	0.00
62.50	0.00	162	74.01	0.00
63.00	0.00	157	74.01	0.00
63.50	0.00	153	74.01	0.00
64.00	0.00	149	74.01	0.00
64.50	0.00	145	74.01	0.00
65.00	0.00	141	74.01	0.00
65.50	0.00	137	74.01	0.00
66.00	0.00	133	74.01	0.00
66.50	0.00	130	74.01	0.00
67.00	0.00	126	74.01	0.00
67.50	0.00	123	74.01	0.00
68.00	0.00	119	74.01	0.00
68.50	0.00	116	74.01	0.00
69.00	0.00	113	74.01	0.00
69.50	0.00	110	74.01	0.00
70.00	0.00	107	74.01	0.00
70.50	0.00	104	74.01	0.00
71.00	0.00	101	74.01	0.00
71.50	0.00	98	74.01	0.00
72.00	0.00	96	74.01	0.00
72.50	0.00	93	74.01	0.00
73.00	0.00	90	74.01	0.00
73.50	0.00	88	74.01	0.00
74.00	0.00	86	74.01	0.00
74.50	0.00	83	74.01	0.00
75.00	0.00	81	74.01	0.00
75.50	0.00	79	74.01	0.00
76.00	0.00	77	74.01	0.00
76.50	0.00	75	74.01	0.00
77.00	0.00	73	74.01	0.00
77.50	0.00	71	74.01	0.00
78.00	0.00	69	74.01	0.00
78.50	0.00	67	74.00	0.00
79.00	0.00	65	74.00	0.00
79.50	0.00	63	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
80.00	0.00	61	74.00	0.00
80.50	0.00	60	74.00	0.00
81.00	0.00	58	74.00	0.00
81.50	0.00	57	74.00	0.00
82.00	0.00	55	74.00	0.00
82.50	0.00	53	74.00	0.00
83.00	0.00	52	74.00	0.00
83.50	0.00	51	74.00	0.00
84.00	0.00	49	74.00	0.00
84.50	0.00	48	74.00	0.00
85.00	0.00	47	74.00	0.00
85.50	0.00	45	74.00	0.00
86.00	0.00	44	74.00	0.00
86.50	0.00	43	74.00	0.00
87.00	0.00	42	74.00	0.00
87.50	0.00	41	74.00	0.00
88.00	0.00	39	74.00	0.00
88.50	0.00	38	74.00	0.00
89.00	0.00	37	74.00	0.00
89.50	0.00	36	74.00	0.00
90.00	0.00	35	74.00	0.00
90.50	0.00	34	74.00	0.00
91.00	0.00	33	74.00	0.00
91.50	0.00	33	74.00	0.00
92.00	0.00	32	74.00	0.00
92.50	0.00	31	74.00	0.00
93.00	0.00	30	74.00	0.00
93.50	0.00	29	74.00	0.00
94.00	0.00	28	74.00	0.00
94.50	0.00	28	74.00	0.00
95.00	0.00	27	74.00	0.00
95.50	0.00	26	74.00	0.00
96.00	0.00	25	74.00	0.00
96.50	0.00	25	74.00	0.00
97.00	0.00	24	74.00	0.00
97.50	0.00	23	74.00	0.00
98.00	0.00	23	74.00	0.00
98.50	0.00	22	74.00	0.00
99.00	0.00	21	74.00	0.00
99.50	0.00	21	74.00	0.00
100.00	0.00	20	74.00	0.00
100.50	0.00	20	74.00	0.00
101.00	0.00	19	74.00	0.00
101.50	0.00	19	74.00	0.00
102.00	0.00	18	74.00	0.00
102.50	0.00	18	74.00	0.00
103.00	0.00	17	74.00	0.00
103.50	0.00	17	74.00	0.00
104.00	0.00	16	74.00	0.00
104.50	0.00	16	74.00	0.00
105.00	0.00	15	74.00	0.00
105.50	0.00	15	74.00	0.00
106.00	0.00	15	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
106.50	0.00	14	74.00	0.00
107.00	0.00	14	74.00	0.00
107.50	0.00	13	74.00	0.00
108.00	0.00	13	74.00	0.00
108.50	0.00	13	74.00	0.00
109.00	0.00	12	74.00	0.00
109.50	0.00	12	74.00	0.00
110.00	0.00	12	74.00	0.00
110.50	0.00	11	74.00	0.00
111.00	0.00	11	74.00	0.00
111.50	0.00	11	74.00	0.00
112.00	0.00	10	74.00	0.00
112.50	0.00	10	74.00	0.00
113.00	0.00	10	74.00	0.00
113.50	0.00	10	74.00	0.00
114.00	0.00	9	74.00	0.00
114.50	0.00	9	74.00	0.00
115.00	0.00	9	74.00	0.00
115.50	0.00	9	74.00	0.00
116.00	0.00	8	74.00	0.00
116.50	0.00	8	74.00	0.00
117.00	0.00	8	74.00	0.00
117.50	0.00	8	74.00	0.00
118.00	0.00	8	74.00	0.00
118.50	0.00	7	74.00	0.00
119.00	0.00	7	74.00	0.00
119.50	0.00	7	74.00	0.00
120.00	0.00	7	74.00	0.00
120.50	0.00	7	74.00	0.00
121.00	0.00	6	74.00	0.00
121.50	0.00	6	74.00	0.00
122.00	0.00	6	74.00	0.00
122.50	0.00	6	74.00	0.00
123.00	0.00	6	74.00	0.00
123.50	0.00	6	74.00	0.00
124.00	0.00	5	74.00	0.00
124.50	0.00	5	74.00	0.00
125.00	0.00	5	74.00	0.00
125.50	0.00	5	74.00	0.00
126.00	0.00	5	74.00	0.00
126.50	0.00	5	74.00	0.00
127.00	0.00	5	74.00	0.00
127.50	0.00	4	74.00	0.00
128.00	0.00	4	74.00	0.00
128.50	0.00	4	74.00	0.00
129.00	0.00	4	74.00	0.00
129.50	0.00	4	74.00	0.00
130.00	0.00	4	74.00	0.00
130.50	0.00	4	74.00	0.00
131.00	0.00	4	74.00	0.00
131.50	0.00	4	74.00	0.00
132.00	0.00	3	74.00	0.00
132.50	0.00	3	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
133.00	0.00	3	74.00	0.00
133.50	0.00	3	74.00	0.00
134.00	0.00	3	74.00	0.00
134.50	0.00	3	74.00	0.00
135.00	0.00	3	74.00	0.00
135.50	0.00	3	74.00	0.00
136.00	0.00	3	74.00	0.00
136.50	0.00	3	74.00	0.00
137.00	0.00	3	74.00	0.00
137.50	0.00	3	74.00	0.00
138.00	0.00	2	74.00	0.00
138.50	0.00	2	74.00	0.00
139.00	0.00	2	74.00	0.00
139.50	0.00	2	74.00	0.00
140.00	0.00	2	74.00	0.00
140.50	0.00	2	74.00	0.00
141.00	0.00	2	74.00	0.00
141.50	0.00	2	74.00	0.00
142.00	0.00	2	74.00	0.00
142.50	0.00	2	74.00	0.00
143.00	0.00	2	74.00	0.00
143.50	0.00	2	74.00	0.00
144.00	0.00	2	74.00	0.00
144.50	0.00	2	74.00	0.00
145.00	0.00	2	74.00	0.00
145.50	0.00	2	74.00	0.00
146.00	0.00	2	74.00	0.00
146.50	0.00	2	74.00	0.00
147.00	0.00	2	74.00	0.00
147.50	0.00	1	74.00	0.00
148.00	0.00	1	74.00	0.00
148.50	0.00	1	74.00	0.00
149.00	0.00	1	74.00	0.00
149.50	0.00	1	74.00	0.00
150.00	0.00	1	74.00	0.00

Stage-Discharge for Pond 8P: Switch Yard Ditch

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
74.00	0.00	74.53	1.87	75.06	7.00	75.59	14.56
74.01	0.00	74.54	1.94	75.07	7.12	75.60	14.73
74.02	0.00	74.55	2.02	75.08	7.24	75.61	14.89
74.03	0.00	74.56	2.09	75.09	7.37	75.62	15.05
74.04	0.01	74.57	2.16	75.10	7.49	75.63	15.22
74.05	0.01	74.58	2.23	75.11	7.62	75.64	15.38
74.06	0.02	74.59	2.31	75.12	7.74	75.65	15.55
74.07	0.03	74.60	2.39	75.13	7.87	75.66	15.72
74.08	0.04	74.61	2.46	75.14	8.00	75.67	15.88
74.09	0.05	74.62	2.54	75.15	8.13	75.68	16.05
74.10	0.06	74.63	2.62	75.16	8.26	75.69	16.22
74.11	0.07	74.64	2.70	75.17	8.39	75.70	16.39
74.12	0.09	74.65	2.79	75.18	8.52	75.71	16.56
74.13	0.10	74.66	2.87	75.19	8.65	75.72	16.73
74.14	0.12	74.67	2.95	75.20	8.78	75.73	16.90
74.15	0.14	74.68	3.04	75.21	8.92	75.74	17.07
74.16	0.16	74.69	3.12	75.22	9.05	75.75	17.24
74.17	0.18	74.70	3.21	75.23	9.19	75.76	17.42
74.18	0.21	74.71	3.30	75.24	9.32	75.77	17.59
74.19	0.23	74.72	3.39	75.25	9.46	75.78	17.77
74.20	0.26	74.73	3.48	75.26	9.60	75.79	17.94
74.21	0.29	74.74	3.57	75.27	9.74	75.80	18.12
74.22	0.32	74.75	3.66	75.28	9.88	75.81	18.29
74.23	0.35	74.76	3.76	75.29	10.02	75.82	18.47
74.24	0.38	74.77	3.85	75.30	10.16	75.83	18.65
74.25	0.41	74.78	3.95	75.31	10.30	75.84	18.82
74.26	0.45	74.79	4.04	75.32	10.44	75.85	19.00
74.27	0.48	74.80	4.14	75.33	10.58	75.86	19.18
74.28	0.52	74.81	4.24	75.34	10.73	75.87	19.36
74.29	0.56	74.82	4.34	75.35	10.87	75.88	19.54
74.30	0.60	74.83	4.44	75.36	11.02	75.89	19.72
74.31	0.64	74.84	4.54	75.37	11.16	75.90	19.90
74.32	0.68	74.85	4.64	75.38	11.31	75.91	20.09
74.33	0.73	74.86	4.74	75.39	11.46	75.92	20.27
74.34	0.77	74.87	4.85	75.40	11.61	75.93	20.45
74.35	0.82	74.88	4.95	75.41	11.76	75.94	20.64
74.36	0.87	74.89	5.06	75.42	11.91	75.95	20.82
74.37	0.92	74.90	5.17	75.43	12.06	75.96	21.01
74.38	0.97	74.91	5.27	75.44	12.21	75.97	21.19
74.39	1.02	74.92	5.38	75.45	12.36	75.98	21.38
74.40	1.07	74.93	5.49	75.46	12.51	75.99	21.57
74.41	1.13	74.94	5.60	75.47	12.67	76.00	21.75
74.42	1.18	74.95	5.71	75.48	12.82	76.01	21.94
74.43	1.24	74.96	5.83	75.49	12.98	76.02	22.13
74.44	1.30	74.97	5.94	75.50	13.13	76.03	22.32
74.45	1.36	74.98	6.05	75.51	13.29	76.04	22.51
74.46	1.42	74.99	6.17	75.52	13.44	76.05	22.70
74.47	1.48	75.00	6.28	75.53	13.60	76.06	22.89
74.48	1.54	75.01	6.40	75.54	13.76	76.07	23.08
74.49	1.61	75.02	6.52	75.55	13.92	76.08	23.27
74.50	1.67	75.03	6.64	75.56	14.08	76.09	23.46
74.51	1.74	75.04	6.76	75.57	14.24	76.10	23.66
74.52	1.81	75.05	6.88	75.58	14.40	76.11	23.85

Stage-Discharge for Pond 8P: Switch Yard Ditch (continued)

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
76.12	24.04	76.65	34.98	77.18	46.91	77.71	59.26
76.13	24.24	76.66	35.20	77.19	47.14	77.72	59.50
76.14	24.43	76.67	35.42	77.20	47.37	77.73	59.73
76.15	24.63	76.68	35.64	77.21	47.60	77.74	59.96
76.16	24.82	76.69	35.85	77.22	47.83	77.75	60.19
76.17	25.02	76.70	36.07	77.23	48.06	77.76	60.43
76.18	25.22	76.71	36.29	77.24	48.30	77.77	60.66
76.19	25.41	76.72	36.51	77.25	48.53	77.78	60.89
76.20	25.61	76.73	36.73	77.26	48.76	77.79	61.12
76.21	25.81	76.74	36.95	77.27	48.99	77.80	61.36
76.22	26.01	76.75	37.17	77.28	49.22	77.81	61.59
76.23	26.21	76.76	37.39	77.29	49.46	77.82	61.82
76.24	26.41	76.77	37.61	77.30	49.69	77.83	62.05
76.25	26.61	76.78	37.84	77.31	49.92	77.84	62.28
76.26	26.81	76.79	38.06	77.32	50.15	77.85	62.51
76.27	27.01	76.80	38.28	77.33	50.39	77.86	62.75
76.28	27.21	76.81	38.50	77.34	50.62	77.87	62.98
76.29	27.41	76.82	38.72	77.35	50.85	77.88	63.21
76.30	27.62	76.83	38.95	77.36	51.09	77.89	63.44
76.31	27.82	76.84	39.17	77.37	51.32	77.90	63.67
76.32	28.02	76.85	39.39	77.38	51.55	77.91	63.90
76.33	28.23	76.86	39.62	77.39	51.79	77.92	64.13
76.34	28.43	76.87	39.84	77.40	52.02	77.93	64.36
76.35	28.64	76.88	40.07	77.41	52.25	77.94	64.59
76.36	28.84	76.89	40.29	77.42	52.49	77.95	64.82
76.37	29.05	76.90	40.52	77.43	52.72	77.96	65.05
76.38	29.26	76.91	40.74	77.44	52.95	77.97	65.28
76.39	29.46	76.92	40.97	77.45	53.19	77.98	65.51
76.40	29.67	76.93	41.19	77.46	53.42	77.99	65.73
76.41	29.88	76.94	41.42	77.47	53.65	78.00	**65.96**
76.42	30.09	76.95	41.64	77.48	53.89		
76.43	30.29	76.96	41.87	77.49	54.12		
76.44	30.50	76.97	42.10	77.50	54.36		
76.45	30.71	76.98	42.32	77.51	54.59		
76.46	30.92	76.99	42.55	77.52	54.82		
76.47	31.13	77.00	42.78	77.53	55.06		
76.48	31.34	77.01	43.01	77.54	55.29		
76.49	31.55	77.02	43.23	77.55	55.53		
76.50	31.77	77.03	43.46	77.56	55.76		
76.51	31.98	77.04	43.69	77.57	55.99		
76.52	32.19	77.05	43.92	77.58	56.23		
76.53	32.40	77.06	44.15	77.59	56.46		
76.54	32.61	77.07	44.38	77.60	56.69		
76.55	32.83	77.08	44.61	77.61	56.93		
76.56	33.04	77.09	44.84	77.62	57.16		
76.57	33.26	77.10	45.06	77.63	57.40		
76.58	33.47	77.11	45.29	77.64	57.63		
76.59	33.69	77.12	45.52	77.65	57.86		
76.60	33.90	77.13	45.75	77.66	58.10		
76.61	34.12	77.14	45.98	77.67	58.33		
76.62	34.33	77.15	46.22	77.68	58.56		
76.63	34.55	77.16	46.45	77.69	58.80		
76.64	34.77	77.17	46.68	77.70	59.03		

Stage-Area-Storage for Pond 8P: Switch Yard Ditch

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
74.00	0	74.53	7,220	75.06	14,738
74.01	136	74.54	7,356	75.07	14,924
74.02	272	74.55	7,492	75.08	15,110
74.03	409	74.56	7,628	75.09	15,296
74.04	545	74.57	7,765	75.10	15,482
74.05	681	74.58	7,901	75.11	15,668
74.06	817	74.59	8,037	75.12	15,854
74.07	954	74.60	8,173	75.13	16,040
74.08	1,090	74.61	8,309	75.14	16,226
74.09	1,226	74.62	8,446	75.15	16,412
74.10	1,362	74.63	8,582	75.16	16,598
74.11	1,498	74.64	8,718	75.17	16,784
74.12	1,635	74.65	8,854	75.18	16,970
74.13	1,771	74.66	8,991	75.19	17,156
74.14	1,907	74.67	9,127	75.20	17,342
74.15	2,043	74.68	9,263	75.21	17,528
74.16	2,180	74.69	9,399	75.22	17,714
74.17	2,316	74.70	9,535	75.23	17,900
74.18	2,452	74.71	9,672	75.24	18,086
74.19	2,588	74.72	9,808	75.25	18,272
74.20	2,724	74.73	9,944	75.26	18,457
74.21	2,861	74.74	10,080	75.27	18,643
74.22	2,997	74.75	10,217	75.28	18,829
74.23	3,133	74.76	10,353	75.29	19,015
74.24	3,269	74.77	10,489	75.30	19,201
74.25	3,406	74.78	10,625	75.31	19,387
74.26	3,542	74.79	10,761	75.32	19,573
74.27	3,678	74.80	10,898	75.33	19,759
74.28	3,814	74.81	11,034	75.34	19,945
74.29	3,950	74.82	11,170	75.35	20,131
74.30	4,087	74.83	11,306	75.36	20,317
74.31	4,223	74.84	11,442	75.37	20,503
74.32	4,359	74.85	11,579	75.38	20,689
74.33	4,495	74.86	11,715	75.39	20,875
74.34	4,631	74.87	11,851	75.40	21,061
74.35	4,768	74.88	11,987	75.41	21,247
74.36	4,904	74.89	12,124	75.42	21,433
74.37	5,040	74.90	12,260	75.43	21,619
74.38	5,176	74.91	12,396	75.44	21,805
74.39	5,313	74.92	12,532	75.45	21,991
74.40	5,449	74.93	12,668	75.46	22,177
74.41	5,585	74.94	12,805	75.47	22,363
74.42	5,721	74.95	12,941	75.48	22,549
74.43	5,857	74.96	13,077	75.49	22,735
74.44	5,994	74.97	13,213	75.50	22,921
74.45	6,130	74.98	13,350	75.51	23,107
74.46	6,266	74.99	13,486	75.52	23,293
74.47	6,402	75.00	13,622	75.53	23,479
74.48	6,539	75.01	13,808	75.54	23,665
74.49	6,675	75.02	13,994	75.55	23,851
74.50	6,811	75.03	14,180	75.56	24,037
74.51	6,947	75.04	14,366	75.57	24,223
74.52	7,083	75.05	14,552	75.58	24,409

Stage-Area-Storage for Pond 8P: Switch Yard Ditch (continued)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
75.59	24,595	76.12	35,073	76.65	47,671
75.60	24,781	76.13	35,310	76.66	47,909
75.61	24,967	76.14	35,548	76.67	48,147
75.62	25,153	76.15	35,786	76.68	48,384
75.63	25,339	76.16	36,023	76.69	48,622
75.64	25,525	76.17	36,261	76.70	48,860
75.65	25,711	76.18	36,499	76.71	49,097
75.66	25,897	76.19	36,736	76.72	49,335
75.67	26,083	76.20	36,974	76.73	49,573
75.68	26,269	76.21	37,212	76.74	49,811
75.69	26,455	76.22	37,450	76.75	50,048
75.70	26,641	76.23	37,687	76.76	50,286
75.71	26,827	76.24	37,925	76.77	50,524
75.72	27,013	76.25	38,163	76.78	50,761
75.73	27,199	76.26	38,400	76.79	50,999
75.74	27,385	76.27	38,638	76.80	51,237
75.75	27,571	76.28	38,876	76.81	51,475
75.76	27,756	76.29	39,114	76.82	51,712
75.77	27,942	76.30	39,351	76.83	51,950
75.78	28,128	76.31	39,589	76.84	52,188
75.79	28,314	76.32	39,827	76.85	52,425
75.80	28,500	76.33	40,064	76.86	52,663
75.81	28,686	76.34	40,302	76.87	52,901
75.82	28,872	76.35	40,540	76.88	53,138
75.83	29,058	76.36	40,778	76.89	53,376
75.84	29,244	76.37	41,015	76.90	53,614
75.85	29,430	76.38	41,253	76.91	53,852
75.86	29,616	76.39	41,491	76.92	54,089
75.87	29,802	76.40	41,728	76.93	54,327
75.88	29,988	76.41	41,966	76.94	54,565
75.89	30,174	76.42	42,204	76.95	54,802
75.90	30,360	76.43	42,442	76.96	55,040
75.91	30,546	76.44	42,679	76.97	55,278
75.92	30,732	76.45	42,917	76.98	55,516
75.93	30,918	76.46	43,155	76.99	55,753
75.94	31,104	76.47	43,392	77.00	55,991
75.95	31,290	76.48	43,630	77.01	56,284
75.96	31,476	76.49	43,868	77.02	56,577
75.97	31,662	76.50	44,106	77.03	56,870
75.98	31,848	76.51	44,343	77.04	57,164
75.99	32,034	76.52	44,581	77.05	57,457
76.00	32,220	76.53	44,819	77.06	57,750
76.01	32,458	76.54	45,056	77.07	58,043
76.02	32,695	76.55	45,294	77.08	58,336
76.03	32,933	76.56	45,532	77.09	58,629
76.04	33,171	76.57	45,769	77.10	58,922
76.05	33,409	76.58	46,007	77.11	59,216
76.06	33,646	76.59	46,245	77.12	59,509
76.07	33,884	76.60	46,483	77.13	59,802
76.08	34,122	76.61	46,720	77.14	60,095
76.09	34,359	76.62	46,958	77.15	60,388
76.10	34,597	76.63	47,196	77.16	60,681
76.11	34,835	76.64	47,433	77.17	60,974

Stage-Area-Storage for Pond 8P: Switch Yard Ditch (continued)

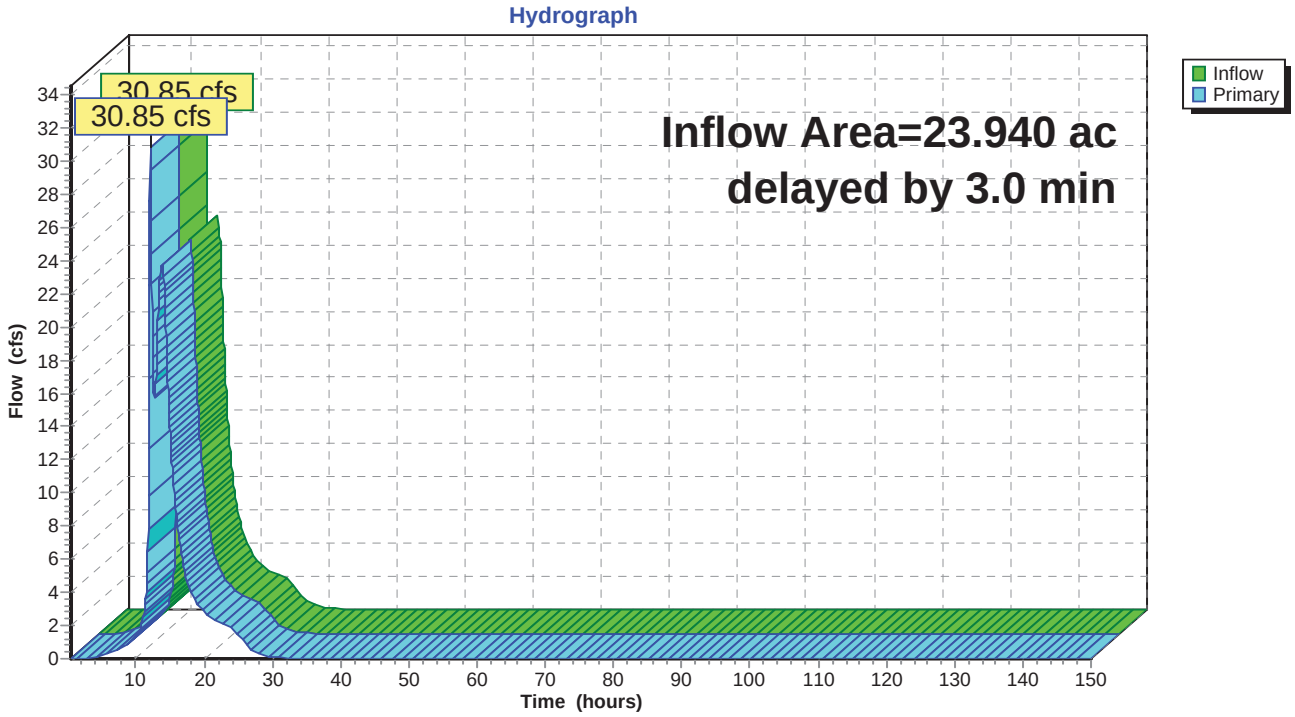
Elevation (feet)	Storage (cubic-feet)
77.18	61,268
77.19	61,561
77.20	61,854
77.21	62,147
77.22	62,440
77.23	62,733
77.24	63,026
77.25	63,320
77.26	63,613
77.27	63,906
77.28	64,199
77.29	64,492
77.30	64,785
77.31	65,078
77.32	65,371
77.33	65,665
77.34	65,958
77.35	66,251
77.36	66,544
77.37	66,837
77.38	67,130
77.39	67,423
77.40	67,717
77.41	68,010
77.42	68,303
77.43	68,596
77.44	68,889
77.45	69,182
77.46	69,475
77.47	69,769
77.48	70,062
77.49	70,355
77.50	70,648
77.51	70,941
77.52	71,234
77.53	71,527
77.54	71,821
77.55	72,114
77.56	72,407
77.57	72,700
77.58	72,993
77.59	73,286
77.60	73,579
77.61	73,873
77.62	74,166
77.63	74,459
77.64	74,752
77.65	75,045
77.66	75,338
77.67	75,631
77.68	75,925
77.69	76,218
77.70	76,511
77.71	76,804
77.72	77,097
77.73	77,390
77.74	77,683
77.75	77,977
77.76	78,270
77.77	78,563
77.78	78,856
77.79	79,149
77.80	79,442
77.81	79,735
77.82	80,028
77.83	80,322
77.84	80,615
77.85	80,908
77.86	81,201
77.87	81,494
77.88	81,787
77.89	82,080
77.90	82,374
77.91	82,667
77.92	82,960
77.93	83,253
77.94	83,546
77.95	83,839
77.96	84,132
77.97	84,426
77.98	84,719
77.99	85,012
78.00	**85,305**

Summary for Link 10L: Stormwater Piping

Inflow Area = 23.940 ac, 61.82% Impervious, Inflow Depth = 4.79" for 25yr-24hr event
Inflow = 30.85 cfs @ 12.07 hrs, Volume= 9.547 af
Primary = 30.85 cfs @ 12.12 hrs, Volume= 9.547 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow delayed by 3.0 min, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs

Link 10L: Stormwater Piping



Hydrograph for Link 10L: Stormwater Piping

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.50	0.00	**0.00**	0.00	13.75	23.90	0.00	23.88
0.75	0.00	0.00	0.00	14.00	23.17	0.00	23.42
1.00	0.00	0.00	0.00	14.25	21.15	0.00	21.72
1.25	0.00	0.00	0.00	14.50	18.28	0.00	18.84
1.50	0.00	0.00	0.00	14.75	15.73	0.00	16.21
1.75	0.00	0.00	0.00	15.00	13.60	0.00	14.00
2.00	0.00	0.00	0.00	15.25	11.84	0.00	12.17
2.25	0.00	0.00	0.00	15.50	10.37	0.00	10.64
2.50	0.01	0.00	0.00	15.75	9.15	0.00	9.38
2.75	0.01	0.00	0.01	16.00	8.14	0.00	8.33
3.00	0.01	0.00	0.01	16.25	7.30	0.00	7.46
3.25	0.02	0.00	0.02	16.50	6.61	0.00	6.74
3.50	0.04	0.00	0.03	16.75	5.97	0.00	6.11
3.75	0.06	0.00	0.05	17.00	5.41	0.00	5.51
4.00	0.08	0.00	0.07	17.25	4.97	0.00	5.05
4.25	0.10	0.00	0.10	17.50	4.62	0.00	4.69
4.50	0.13	0.00	0.13	17.75	4.33	0.00	4.38
4.75	0.17	0.00	0.16	18.00	4.08	0.00	4.12
5.00	0.21	0.00	0.20	18.25	3.86	0.00	3.90
5.25	0.24	0.00	0.24	18.50	3.67	0.00	3.71
5.50	0.29	0.00	0.28	18.75	3.50	0.00	3.53
5.75	0.33	0.00	0.32	19.00	3.34	0.00	3.37
6.00	0.37	0.00	0.36	19.25	3.20	0.00	3.23
6.25	0.41	0.00	0.40	19.50	3.08	0.00	3.10
6.50	0.46	0.00	0.45	19.75	2.96	0.00	2.99
6.75	0.49	0.00	0.49	20.00	2.85	0.00	2.88
7.00	0.53	0.00	0.53	20.25	2.75	0.00	2.77
7.25	0.57	0.00	0.57	20.50	2.66	0.00	2.68
7.50	0.61	0.00	0.60	20.75	2.57	0.00	2.59
7.75	0.65	0.00	0.64	21.00	2.49	0.00	2.51
8.00	0.68	0.00	0.67	21.25	2.42	0.00	2.43
8.25	0.72	0.00	0.71	21.50	2.35	0.00	2.36
8.50	0.77	0.00	0.76	21.75	2.29	0.00	2.30
8.75	0.84	0.00	0.83	22.00	2.23	0.00	2.24
9.00	0.93	0.00	0.91	22.25	2.18	0.00	2.19
9.25	1.02	0.00	1.00	22.50	2.13	0.00	2.14
9.50	1.10	0.00	1.09	22.75	2.09	0.00	2.10
9.75	1.19	0.00	1.17	23.00	2.06	0.00	2.07
10.00	1.31	0.00	1.28	23.25	2.03	0.00	2.04
10.25	1.49	0.00	1.45	23.50	2.00	0.00	2.01
10.50	1.73	0.00	1.68	23.75	1.98	0.00	1.98
10.75	2.04	0.00	1.97	24.00	1.95	0.00	1.96
11.00	2.46	0.00	2.37	24.25	1.82	0.00	1.85
11.25	3.03	0.00	2.90	24.50	1.67	0.00	1.69
11.50	3.93	0.00	3.73	24.75	1.55	0.00	1.57
11.75	7.82	0.00	6.41	25.00	1.45	0.00	1.47
12.00	**27.53**	0.00	**22.56**	25.25	1.34	0.00	1.37
12.25	**24.35**	0.00	**26.40**	25.50	1.22	0.00	1.24
12.50	17.26	0.00	18.20	25.75	1.08	0.00	1.10
12.75	15.65	0.00	15.61	26.00	0.94	0.00	0.96
13.00	17.75	0.00	17.16	26.25	0.80	0.00	0.83
13.25	21.04	0.00	20.40	26.50	0.68	0.00	0.70
13.50	23.17	0.00	22.86	26.75	0.57	0.00	0.59

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
27.00	0.48	0.00	0.50	40.25	0.01	0.00	0.01
27.25	0.41	0.00	0.43	40.50	0.01	0.00	0.01
27.50	0.35	0.00	0.36	40.75	0.01	0.00	0.01
27.75	0.30	0.00	0.31	41.00	0.01	0.00	0.01
28.00	0.26	0.00	0.26	41.25	0.01	0.00	0.01
28.25	0.22	0.00	0.23	41.50	0.01	0.00	0.01
28.50	0.20	0.00	0.20	41.75	0.01	0.00	0.01
28.75	0.17	0.00	0.17	42.00	0.01	0.00	0.01
29.00	0.15	0.00	0.15	42.25	0.01	0.00	0.01
29.25	0.13	0.00	0.14	42.50	0.01	0.00	0.01
29.50	0.12	0.00	0.12	42.75	0.01	0.00	0.01
29.75	0.11	0.00	0.11	43.00	0.01	0.00	0.01
30.00	0.09	0.00	0.10	43.25	0.01	0.00	0.01
30.25	0.09	0.00	0.09	43.50	0.01	0.00	0.01
30.50	0.08	0.00	0.08	43.75	0.01	0.00	0.01
30.75	0.07	0.00	0.07	44.00	0.01	0.00	0.01
31.00	0.07	0.00	0.07	44.25	0.01	0.00	0.01
31.25	0.06	0.00	0.06	44.50	0.01	0.00	0.01
31.50	0.06	0.00	0.06	44.75	0.01	0.00	0.01
31.75	0.05	0.00	0.05	45.00	0.01	0.00	0.01
32.00	0.05	0.00	0.05	45.25	0.01	0.00	0.01
32.25	0.04	0.00	0.04	45.50	0.01	0.00	0.01
32.50	0.04	0.00	0.04	45.75	0.01	0.00	0.01
32.75	0.04	0.00	0.04	46.00	0.01	0.00	0.01
33.00	0.04	0.00	0.04	46.25	0.01	0.00	0.01
33.25	0.03	0.00	0.03	46.50	0.01	0.00	0.01
33.50	0.03	0.00	0.03	46.75	0.01	0.00	0.01
33.75	0.03	0.00	0.03	47.00	0.01	0.00	0.01
34.00	0.03	0.00	0.03	47.25	0.01	0.00	0.01
34.25	0.03	0.00	0.03	47.50	0.01	0.00	0.01
34.50	0.03	0.00	0.03	47.75	0.01	0.00	0.01
34.75	0.03	0.00	0.03	48.00	0.01	0.00	0.01
35.00	0.02	0.00	0.02	48.25	0.01	0.00	0.01
35.25	0.02	0.00	0.02	48.50	0.01	0.00	0.01
35.50	0.02	0.00	0.02	48.75	0.01	0.00	0.01
35.75	0.02	0.00	0.02	49.00	0.01	0.00	0.01
36.00	0.02	0.00	0.02	49.25	0.01	0.00	0.01
36.25	0.02	0.00	0.02	49.50	0.01	0.00	0.01
36.50	0.02	0.00	0.02	49.75	0.01	0.00	0.01
36.75	0.02	0.00	0.02	50.00	0.00	0.00	0.00
37.00	0.02	0.00	0.02	50.25	0.00	0.00	0.00
37.25	0.02	0.00	0.02	50.50	0.00	0.00	0.00
37.50	0.01	0.00	0.02	50.75	0.00	0.00	0.00
37.75	0.01	0.00	0.01	51.00	0.00	0.00	0.00
38.00	0.01	0.00	0.01	51.25	0.00	0.00	0.00
38.25	0.01	0.00	0.01	51.50	0.00	0.00	0.00
38.50	0.01	0.00	0.01	51.75	0.00	0.00	0.00
38.75	0.01	0.00	0.01	52.00	0.00	0.00	0.00
39.00	0.01	0.00	0.01	52.25	0.00	0.00	0.00
39.25	0.01	0.00	0.01	52.50	0.00	0.00	0.00
39.50	0.01	0.00	0.01	52.75	0.00	0.00	0.00
39.75	0.01	0.00	0.01	53.00	0.00	0.00	0.00
40.00	0.01	0.00	0.01	53.25	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
53.50	0.00	0.00	0.00	66.75	0.00	0.00	0.00
53.75	0.00	0.00	0.00	67.00	0.00	0.00	0.00
54.00	0.00	0.00	0.00	67.25	0.00	0.00	0.00
54.25	0.00	0.00	0.00	67.50	0.00	0.00	0.00
54.50	0.00	0.00	0.00	67.75	0.00	0.00	0.00
54.75	0.00	0.00	0.00	68.00	0.00	0.00	0.00
55.00	0.00	0.00	0.00	68.25	0.00	0.00	0.00
55.25	0.00	0.00	0.00	68.50	0.00	0.00	0.00
55.50	0.00	0.00	0.00	68.75	0.00	0.00	0.00
55.75	0.00	0.00	0.00	69.00	0.00	0.00	0.00
56.00	0.00	0.00	0.00	69.25	0.00	0.00	0.00
56.25	0.00	0.00	0.00	69.50	0.00	0.00	0.00
56.50	0.00	0.00	0.00	69.75	0.00	0.00	0.00
56.75	0.00	0.00	0.00	70.00	0.00	0.00	0.00
57.00	0.00	0.00	0.00	70.25	0.00	0.00	0.00
57.25	0.00	0.00	0.00	70.50	0.00	0.00	0.00
57.50	0.00	0.00	0.00	70.75	0.00	0.00	0.00
57.75	0.00	0.00	0.00	71.00	0.00	0.00	0.00
58.00	0.00	0.00	0.00	71.25	0.00	0.00	0.00
58.25	0.00	0.00	0.00	71.50	0.00	0.00	0.00
58.50	0.00	0.00	0.00	71.75	0.00	0.00	0.00
58.75	0.00	0.00	0.00	72.00	0.00	0.00	0.00
59.00	0.00	0.00	0.00	72.25	0.00	0.00	0.00
59.25	0.00	0.00	0.00	72.50	0.00	0.00	0.00
59.50	0.00	0.00	0.00	72.75	0.00	0.00	0.00
59.75	0.00	0.00	0.00	73.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	73.25	0.00	0.00	0.00
60.25	0.00	0.00	0.00	73.50	0.00	0.00	0.00
60.50	0.00	0.00	0.00	73.75	0.00	0.00	0.00
60.75	0.00	0.00	0.00	74.00	0.00	0.00	0.00
61.00	0.00	0.00	0.00	74.25	0.00	0.00	0.00
61.25	0.00	0.00	0.00	74.50	0.00	0.00	0.00
61.50	0.00	0.00	0.00	74.75	0.00	0.00	0.00
61.75	0.00	0.00	0.00	75.00	0.00	0.00	0.00
62.00	0.00	0.00	0.00	75.25	0.00	0.00	0.00
62.25	0.00	0.00	0.00	75.50	0.00	0.00	0.00
62.50	0.00	0.00	0.00	75.75	0.00	0.00	0.00
62.75	0.00	0.00	0.00	76.00	0.00	0.00	0.00
63.00	0.00	0.00	0.00	76.25	0.00	0.00	0.00
63.25	0.00	0.00	0.00	76.50	0.00	0.00	0.00
63.50	0.00	0.00	0.00	76.75	0.00	0.00	0.00
63.75	0.00	0.00	0.00	77.00	0.00	0.00	0.00
64.00	0.00	0.00	0.00	77.25	0.00	0.00	0.00
64.25	0.00	0.00	0.00	77.50	0.00	0.00	0.00
64.50	0.00	0.00	0.00	77.75	0.00	0.00	0.00
64.75	0.00	0.00	0.00	78.00	0.00	0.00	0.00
65.00	0.00	0.00	0.00	78.25	0.00	0.00	0.00
65.25	0.00	0.00	0.00	78.50	0.00	0.00	0.00
65.50	0.00	0.00	0.00	78.75	0.00	0.00	0.00
65.75	0.00	0.00	0.00	79.00	0.00	0.00	0.00
66.00	0.00	0.00	0.00	79.25	0.00	0.00	0.00
66.25	0.00	0.00	0.00	79.50	0.00	0.00	0.00
66.50	0.00	0.00	0.00	79.75	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
80.00	0.00	0.00	0.00	93.25	0.00	0.00	0.00
80.25	0.00	0.00	0.00	93.50	0.00	0.00	0.00
80.50	0.00	0.00	0.00	93.75	0.00	0.00	0.00
80.75	0.00	0.00	0.00	94.00	0.00	0.00	0.00
81.00	0.00	0.00	0.00	94.25	0.00	0.00	0.00
81.25	0.00	0.00	0.00	94.50	0.00	0.00	0.00
81.50	0.00	0.00	0.00	94.75	0.00	0.00	0.00
81.75	0.00	0.00	0.00	95.00	0.00	0.00	0.00
82.00	0.00	0.00	0.00	95.25	0.00	0.00	0.00
82.25	0.00	0.00	0.00	95.50	0.00	0.00	0.00
82.50	0.00	0.00	0.00	95.75	0.00	0.00	0.00
82.75	0.00	0.00	0.00	96.00	0.00	0.00	0.00
83.00	0.00	0.00	0.00	96.25	0.00	0.00	0.00
83.25	0.00	0.00	0.00	96.50	0.00	0.00	0.00
83.50	0.00	0.00	0.00	96.75	0.00	0.00	0.00
83.75	0.00	0.00	0.00	97.00	0.00	0.00	0.00
84.00	0.00	0.00	0.00	97.25	0.00	0.00	0.00
84.25	0.00	0.00	0.00	97.50	0.00	0.00	0.00
84.50	0.00	0.00	0.00	97.75	0.00	0.00	0.00
84.75	0.00	0.00	0.00	98.00	0.00	0.00	0.00
85.00	0.00	0.00	0.00	98.25	0.00	0.00	0.00
85.25	0.00	0.00	0.00	98.50	0.00	0.00	0.00
85.50	0.00	0.00	0.00	98.75	0.00	0.00	0.00
85.75	0.00	0.00	0.00	99.00	0.00	0.00	0.00
86.00	0.00	0.00	0.00	99.25	0.00	0.00	0.00
86.25	0.00	0.00	0.00	99.50	0.00	0.00	0.00
86.50	0.00	0.00	0.00	99.75	0.00	0.00	0.00
86.75	0.00	0.00	0.00	100.00	0.00	0.00	0.00
87.00	0.00	0.00	0.00	100.25	0.00	0.00	0.00
87.25	0.00	0.00	0.00	100.50	0.00	0.00	0.00
87.50	0.00	0.00	0.00	100.75	0.00	0.00	0.00
87.75	0.00	0.00	0.00	101.00	0.00	0.00	0.00
88.00	0.00	0.00	0.00	101.25	0.00	0.00	0.00
88.25	0.00	0.00	0.00	101.50	0.00	0.00	0.00
88.50	0.00	0.00	0.00	101.75	0.00	0.00	0.00
88.75	0.00	0.00	0.00	102.00	0.00	0.00	0.00
89.00	0.00	0.00	0.00	102.25	0.00	0.00	0.00
89.25	0.00	0.00	0.00	102.50	0.00	0.00	0.00
89.50	0.00	0.00	0.00	102.75	0.00	0.00	0.00
89.75	0.00	0.00	0.00	103.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	103.25	0.00	0.00	0.00
90.25	0.00	0.00	0.00	103.50	0.00	0.00	0.00
90.50	0.00	0.00	0.00	103.75	0.00	0.00	0.00
90.75	0.00	0.00	0.00	104.00	0.00	0.00	0.00
91.00	0.00	0.00	0.00	104.25	0.00	0.00	0.00
91.25	0.00	0.00	0.00	104.50	0.00	0.00	0.00
91.50	0.00	0.00	0.00	104.75	0.00	0.00	0.00
91.75	0.00	0.00	0.00	105.00	0.00	0.00	0.00
92.00	0.00	0.00	0.00	105.25	0.00	0.00	0.00
92.25	0.00	0.00	0.00	105.50	0.00	0.00	0.00
92.50	0.00	0.00	0.00	105.75	0.00	0.00	0.00
92.75	0.00	0.00	0.00	106.00	0.00	0.00	0.00
93.00	0.00	0.00	0.00	106.25	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
106.50	0.00	0.00	0.00	119.75	0.00	0.00	0.00
106.75	0.00	0.00	0.00	120.00	0.00	0.00	0.00
107.00	0.00	0.00	0.00	120.25	0.00	0.00	0.00
107.25	0.00	0.00	0.00	120.50	0.00	0.00	0.00
107.50	0.00	0.00	0.00	120.75	0.00	0.00	0.00
107.75	0.00	0.00	0.00	121.00	0.00	0.00	0.00
108.00	0.00	0.00	0.00	121.25	0.00	0.00	0.00
108.25	0.00	0.00	0.00	121.50	0.00	0.00	0.00
108.50	0.00	0.00	0.00	121.75	0.00	0.00	0.00
108.75	0.00	0.00	0.00	122.00	0.00	0.00	0.00
109.00	0.00	0.00	0.00	122.25	0.00	0.00	0.00
109.25	0.00	0.00	0.00	122.50	0.00	0.00	0.00
109.50	0.00	0.00	0.00	122.75	0.00	0.00	0.00
109.75	0.00	0.00	0.00	123.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	123.25	0.00	0.00	0.00
110.25	0.00	0.00	0.00	123.50	0.00	0.00	0.00
110.50	0.00	0.00	0.00	123.75	0.00	0.00	0.00
110.75	0.00	0.00	0.00	124.00	0.00	0.00	0.00
111.00	0.00	0.00	0.00	124.25	0.00	0.00	0.00
111.25	0.00	0.00	0.00	124.50	0.00	0.00	0.00
111.50	0.00	0.00	0.00	124.75	0.00	0.00	0.00
111.75	0.00	0.00	0.00	125.00	0.00	0.00	0.00
112.00	0.00	0.00	0.00	125.25	0.00	0.00	0.00
112.25	0.00	0.00	0.00	125.50	0.00	0.00	0.00
112.50	0.00	0.00	0.00	125.75	0.00	0.00	0.00
112.75	0.00	0.00	0.00	126.00	0.00	0.00	0.00
113.00	0.00	0.00	0.00	126.25	0.00	0.00	0.00
113.25	0.00	0.00	0.00	126.50	0.00	0.00	0.00
113.50	0.00	0.00	0.00	126.75	0.00	0.00	0.00
113.75	0.00	0.00	0.00	127.00	0.00	0.00	0.00
114.00	0.00	0.00	0.00	127.25	0.00	0.00	0.00
114.25	0.00	0.00	0.00	127.50	0.00	0.00	0.00
114.50	0.00	0.00	0.00	127.75	0.00	0.00	0.00
114.75	0.00	0.00	0.00	128.00	0.00	0.00	0.00
115.00	0.00	0.00	0.00	128.25	0.00	0.00	0.00
115.25	0.00	0.00	0.00	128.50	0.00	0.00	0.00
115.50	0.00	0.00	0.00	128.75	0.00	0.00	0.00
115.75	0.00	0.00	0.00	129.00	0.00	0.00	0.00
116.00	0.00	0.00	0.00	129.25	0.00	0.00	0.00
116.25	0.00	0.00	0.00	129.50	0.00	0.00	0.00
116.50	0.00	0.00	0.00	129.75	0.00	0.00	0.00
116.75	0.00	0.00	0.00	130.00	0.00	0.00	0.00
117.00	0.00	0.00	0.00	130.25	0.00	0.00	0.00
117.25	0.00	0.00	0.00	130.50	0.00	0.00	0.00
117.50	0.00	0.00	0.00	130.75	0.00	0.00	0.00
117.75	0.00	0.00	0.00	131.00	0.00	0.00	0.00
118.00	0.00	0.00	0.00	131.25	0.00	0.00	0.00
118.25	0.00	0.00	0.00	131.50	0.00	0.00	0.00
118.50	0.00	0.00	0.00	131.75	0.00	0.00	0.00
118.75	0.00	0.00	0.00	132.00	0.00	0.00	0.00
119.00	0.00	0.00	0.00	132.25	0.00	0.00	0.00
119.25	0.00	0.00	0.00	132.50	0.00	0.00	0.00
119.50	0.00	0.00	0.00	132.75	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

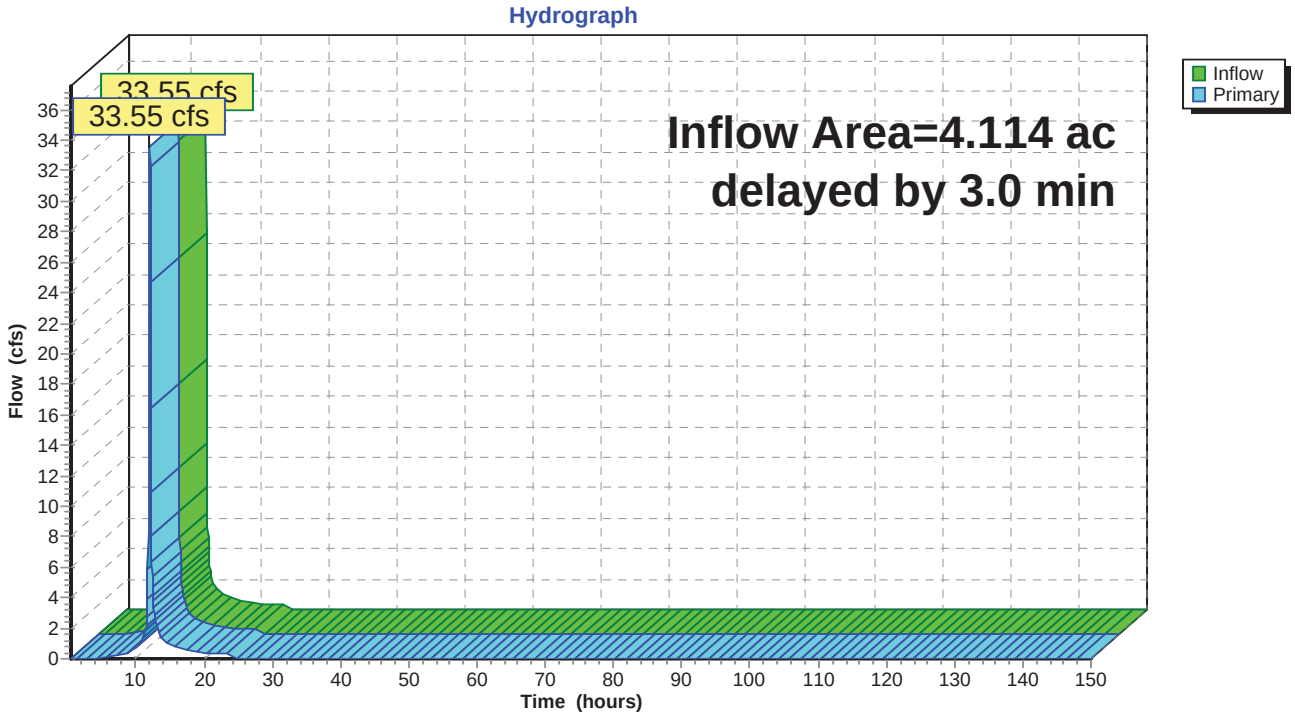
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
133.00	0.00	0.00	0.00
133.25	0.00	0.00	0.00
133.50	0.00	0.00	0.00
133.75	0.00	0.00	0.00
134.00	0.00	0.00	0.00
134.25	0.00	0.00	0.00
134.50	0.00	0.00	0.00
134.75	0.00	0.00	0.00
135.00	0.00	0.00	0.00
135.25	0.00	0.00	0.00
135.50	0.00	0.00	0.00
135.75	0.00	0.00	0.00
136.00	0.00	0.00	0.00
136.25	0.00	0.00	0.00
136.50	0.00	0.00	0.00
136.75	0.00	0.00	0.00
137.00	0.00	0.00	0.00
137.25	0.00	0.00	0.00
137.50	0.00	0.00	0.00
137.75	0.00	0.00	0.00
138.00	0.00	0.00	0.00
138.25	0.00	0.00	0.00
138.50	0.00	0.00	0.00
138.75	0.00	0.00	0.00
139.00	0.00	0.00	0.00
139.25	0.00	0.00	0.00
139.50	0.00	0.00	0.00
139.75	0.00	0.00	0.00
140.00	0.00	0.00	0.00
140.25	0.00	0.00	0.00
140.50	0.00	0.00	0.00
140.75	0.00	0.00	0.00
141.00	0.00	0.00	0.00
141.25	0.00	0.00	0.00
141.50	0.00	0.00	0.00
141.75	0.00	0.00	0.00
142.00	0.00	0.00	0.00
142.25	0.00	0.00	0.00
142.50	0.00	0.00	0.00
142.75	0.00	0.00	0.00
143.00	0.00	0.00	0.00
143.25	0.00	0.00	0.00
143.50	0.00	0.00	0.00
143.75	0.00	0.00	0.00
144.00	0.00	0.00	0.00
144.25	0.00	0.00	0.00
144.50	0.00	0.00	0.00
144.75	0.00	0.00	0.00
145.00	0.00	0.00	0.00
145.25	0.00	0.00	0.00
145.50	0.00	0.00	0.00
145.75	0.00	0.00	0.00
146.00	0.00	0.00	0.00
146.25	0.00	0.00	0.00
146.50	0.00	0.00	0.00
146.75	0.00	0.00	0.00
147.00	0.00	0.00	0.00
147.25	0.00	0.00	0.00
147.50	0.00	0.00	0.00
147.75	0.00	0.00	0.00
148.00	0.00	0.00	0.00
148.25	0.00	0.00	0.00
148.50	0.00	0.00	0.00
148.75	0.00	0.00	0.00
149.00	0.00	0.00	0.00
149.25	0.00	0.00	0.00
149.50	0.00	0.00	0.00
149.75	0.00	0.00	0.00
150.00	0.00	0.00	0.00

Summary for Link 11L: Power Block SW Piping

Inflow Area = 4.114 ac, 76.91% Impervious, Inflow Depth = 5.79" for 25yr-24hr event
Inflow = 33.55 cfs @ 12.02 hrs, Volume= 1.984 af
Primary = 33.55 cfs @ 12.07 hrs, Volume= 1.984 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow delayed by 3.0 min, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs

Link 11L: Power Block SW Piping



Hydrograph for Link 11L: Power Block SW Piping

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.50	0.00	**0.00**	0.00	13.75	1.36	0.00	1.39
0.75	0.00	0.00	0.00	14.00	1.21	0.00	1.24
1.00	0.00	0.00	0.00	14.25	1.10	0.00	1.11
1.25	0.00	0.00	0.00	14.50	1.04	0.00	1.05
1.50	0.00	0.00	0.00	14.75	0.99	0.00	1.00
1.75	0.00	0.00	0.00	15.00	0.94	0.00	0.95
2.00	0.00	0.00	0.00	15.25	0.89	0.00	0.90
2.25	0.00	0.00	0.00	15.50	0.83	0.00	0.84
2.50	0.00	0.00	0.00	15.75	0.78	0.00	0.79
2.75	0.00	0.00	0.00	16.00	0.73	0.00	0.74
3.00	0.00	0.00	0.00	16.25	0.69	0.00	0.69
3.25	0.00	0.00	0.00	16.50	0.67	0.00	0.67
3.50	0.00	0.00	0.00	16.75	0.65	0.00	0.65
3.75	0.00	0.00	0.00	17.00	0.63	0.00	0.64
4.00	0.00	0.00	0.00	17.25	0.61	0.00	0.62
4.25	0.00	0.00	0.00	17.50	0.60	0.00	0.60
4.50	0.01	0.00	0.01	17.75	0.58	0.00	0.58
4.75	0.03	0.00	0.02	18.00	0.56	0.00	0.56
5.00	0.04	0.00	0.04	18.25	0.54	0.00	0.54
5.25	0.06	0.00	0.05	18.50	0.52	0.00	0.52
5.50	0.07	0.00	0.07	18.75	0.50	0.00	0.51
5.75	0.09	0.00	0.09	19.00	0.48	0.00	0.49
6.00	0.11	0.00	0.10	19.25	0.46	0.00	0.47
6.25	0.12	0.00	0.12	19.50	0.45	0.00	0.45
6.50	0.14	0.00	0.14	19.75	0.43	0.00	0.43
6.75	0.16	0.00	0.16	20.00	0.41	0.00	0.41
7.00	0.18	0.00	0.18	20.25	0.39	0.00	0.40
7.25	0.20	0.00	0.20	20.50	0.39	0.00	0.39
7.50	0.22	0.00	0.22	20.75	0.39	0.00	0.39
7.75	0.24	0.00	0.24	21.00	0.38	0.00	0.38
8.00	0.26	0.00	0.26	21.25	0.38	0.00	0.38
8.25	0.29	0.00	0.28	21.50	0.38	0.00	0.38
8.50	0.34	0.00	0.33	21.75	0.37	0.00	0.37
8.75	0.39	0.00	0.38	22.00	0.37	0.00	0.37
9.00	0.45	0.00	0.44	22.25	0.36	0.00	0.36
9.25	0.50	0.00	0.49	22.50	0.36	0.00	0.36
9.50	0.52	0.00	0.52	22.75	0.36	0.00	0.36
9.75	0.57	0.00	0.56	23.00	0.35	0.00	0.35
10.00	0.66	0.00	0.64	23.25	0.35	0.00	0.35
10.25	0.78	0.00	0.75	23.50	0.35	0.00	0.35
10.50	0.92	0.00	0.89	23.75	0.34	0.00	0.34
10.75	1.11	0.00	1.07	24.00	0.34	0.00	0.34
11.00	1.36	0.00	1.31	24.25	0.05	0.00	0.09
11.25	1.75	0.00	1.64	24.50	0.00	0.00	0.00
11.50	2.36	0.00	2.24	24.75	0.00	0.00	0.00
11.75	8.28	0.00	5.81	25.00	0.00	0.00	0.00
12.00	**33.07**	0.00	**27.24**	25.25	0.00	0.00	0.00
12.25	8.02	0.00	**10.95**	25.50	0.00	0.00	0.00
12.50	3.74	0.00	4.18	25.75	0.00	0.00	0.00
12.75	2.50	0.00	2.63	26.00	0.00	0.00	0.00
13.00	2.07	0.00	2.15	26.25	0.00	0.00	0.00
13.25	1.76	0.00	1.80	26.50	0.00	0.00	0.00
13.50	1.54	0.00	1.58	26.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
27.00	0.00	0.00	0.00	40.25	0.00	0.00	0.00
27.25	0.00	0.00	0.00	40.50	0.00	0.00	0.00
27.50	0.00	0.00	0.00	40.75	0.00	0.00	0.00
27.75	0.00	0.00	0.00	41.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	41.25	0.00	0.00	0.00
28.25	0.00	0.00	0.00	41.50	0.00	0.00	0.00
28.50	0.00	0.00	0.00	41.75	0.00	0.00	0.00
28.75	0.00	0.00	0.00	42.00	0.00	0.00	0.00
29.00	0.00	0.00	0.00	42.25	0.00	0.00	0.00
29.25	0.00	0.00	0.00	42.50	0.00	0.00	0.00
29.50	0.00	0.00	0.00	42.75	0.00	0.00	0.00
29.75	0.00	0.00	0.00	43.00	0.00	0.00	0.00
30.00	0.00	0.00	0.00	43.25	0.00	0.00	0.00
30.25	0.00	0.00	0.00	43.50	0.00	0.00	0.00
30.50	0.00	0.00	0.00	43.75	0.00	0.00	0.00
30.75	0.00	0.00	0.00	44.00	0.00	0.00	0.00
31.00	0.00	0.00	0.00	44.25	0.00	0.00	0.00
31.25	0.00	0.00	0.00	44.50	0.00	0.00	0.00
31.50	0.00	0.00	0.00	44.75	0.00	0.00	0.00
31.75	0.00	0.00	0.00	45.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	45.25	0.00	0.00	0.00
32.25	0.00	0.00	0.00	45.50	0.00	0.00	0.00
32.50	0.00	0.00	0.00	45.75	0.00	0.00	0.00
32.75	0.00	0.00	0.00	46.00	0.00	0.00	0.00
33.00	0.00	0.00	0.00	46.25	0.00	0.00	0.00
33.25	0.00	0.00	0.00	46.50	0.00	0.00	0.00
33.50	0.00	0.00	0.00	46.75	0.00	0.00	0.00
33.75	0.00	0.00	0.00	47.00	0.00	0.00	0.00
34.00	0.00	0.00	0.00	47.25	0.00	0.00	0.00
34.25	0.00	0.00	0.00	47.50	0.00	0.00	0.00
34.50	0.00	0.00	0.00	47.75	0.00	0.00	0.00
34.75	0.00	0.00	0.00	48.00	0.00	0.00	0.00
35.00	0.00	0.00	0.00	48.25	0.00	0.00	0.00
35.25	0.00	0.00	0.00	48.50	0.00	0.00	0.00
35.50	0.00	0.00	0.00	48.75	0.00	0.00	0.00
35.75	0.00	0.00	0.00	49.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	49.25	0.00	0.00	0.00
36.25	0.00	0.00	0.00	49.50	0.00	0.00	0.00
36.50	0.00	0.00	0.00	49.75	0.00	0.00	0.00
36.75	0.00	0.00	0.00	50.00	0.00	0.00	0.00
37.00	0.00	0.00	0.00	50.25	0.00	0.00	0.00
37.25	0.00	0.00	0.00	50.50	0.00	0.00	0.00
37.50	0.00	0.00	0.00	50.75	0.00	0.00	0.00
37.75	0.00	0.00	0.00	51.00	0.00	0.00	0.00
38.00	0.00	0.00	0.00	51.25	0.00	0.00	0.00
38.25	0.00	0.00	0.00	51.50	0.00	0.00	0.00
38.50	0.00	0.00	0.00	51.75	0.00	0.00	0.00
38.75	0.00	0.00	0.00	52.00	0.00	0.00	0.00
39.00	0.00	0.00	0.00	52.25	0.00	0.00	0.00
39.25	0.00	0.00	0.00	52.50	0.00	0.00	0.00
39.50	0.00	0.00	0.00	52.75	0.00	0.00	0.00
39.75	0.00	0.00	0.00	53.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	53.25	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
53.50	0.00	0.00	0.00	66.75	0.00	0.00	0.00
53.75	0.00	0.00	0.00	67.00	0.00	0.00	0.00
54.00	0.00	0.00	0.00	67.25	0.00	0.00	0.00
54.25	0.00	0.00	0.00	67.50	0.00	0.00	0.00
54.50	0.00	0.00	0.00	67.75	0.00	0.00	0.00
54.75	0.00	0.00	0.00	68.00	0.00	0.00	0.00
55.00	0.00	0.00	0.00	68.25	0.00	0.00	0.00
55.25	0.00	0.00	0.00	68.50	0.00	0.00	0.00
55.50	0.00	0.00	0.00	68.75	0.00	0.00	0.00
55.75	0.00	0.00	0.00	69.00	0.00	0.00	0.00
56.00	0.00	0.00	0.00	69.25	0.00	0.00	0.00
56.25	0.00	0.00	0.00	69.50	0.00	0.00	0.00
56.50	0.00	0.00	0.00	69.75	0.00	0.00	0.00
56.75	0.00	0.00	0.00	70.00	0.00	0.00	0.00
57.00	0.00	0.00	0.00	70.25	0.00	0.00	0.00
57.25	0.00	0.00	0.00	70.50	0.00	0.00	0.00
57.50	0.00	0.00	0.00	70.75	0.00	0.00	0.00
57.75	0.00	0.00	0.00	71.00	0.00	0.00	0.00
58.00	0.00	0.00	0.00	71.25	0.00	0.00	0.00
58.25	0.00	0.00	0.00	71.50	0.00	0.00	0.00
58.50	0.00	0.00	0.00	71.75	0.00	0.00	0.00
58.75	0.00	0.00	0.00	72.00	0.00	0.00	0.00
59.00	0.00	0.00	0.00	72.25	0.00	0.00	0.00
59.25	0.00	0.00	0.00	72.50	0.00	0.00	0.00
59.50	0.00	0.00	0.00	72.75	0.00	0.00	0.00
59.75	0.00	0.00	0.00	73.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	73.25	0.00	0.00	0.00
60.25	0.00	0.00	0.00	73.50	0.00	0.00	0.00
60.50	0.00	0.00	0.00	73.75	0.00	0.00	0.00
60.75	0.00	0.00	0.00	74.00	0.00	0.00	0.00
61.00	0.00	0.00	0.00	74.25	0.00	0.00	0.00
61.25	0.00	0.00	0.00	74.50	0.00	0.00	0.00
61.50	0.00	0.00	0.00	74.75	0.00	0.00	0.00
61.75	0.00	0.00	0.00	75.00	0.00	0.00	0.00
62.00	0.00	0.00	0.00	75.25	0.00	0.00	0.00
62.25	0.00	0.00	0.00	75.50	0.00	0.00	0.00
62.50	0.00	0.00	0.00	75.75	0.00	0.00	0.00
62.75	0.00	0.00	0.00	76.00	0.00	0.00	0.00
63.00	0.00	0.00	0.00	76.25	0.00	0.00	0.00
63.25	0.00	0.00	0.00	76.50	0.00	0.00	0.00
63.50	0.00	0.00	0.00	76.75	0.00	0.00	0.00
63.75	0.00	0.00	0.00	77.00	0.00	0.00	0.00
64.00	0.00	0.00	0.00	77.25	0.00	0.00	0.00
64.25	0.00	0.00	0.00	77.50	0.00	0.00	0.00
64.50	0.00	0.00	0.00	77.75	0.00	0.00	0.00
64.75	0.00	0.00	0.00	78.00	0.00	0.00	0.00
65.00	0.00	0.00	0.00	78.25	0.00	0.00	0.00
65.25	0.00	0.00	0.00	78.50	0.00	0.00	0.00
65.50	0.00	0.00	0.00	78.75	0.00	0.00	0.00
65.75	0.00	0.00	0.00	79.00	0.00	0.00	0.00
66.00	0.00	0.00	0.00	79.25	0.00	0.00	0.00
66.25	0.00	0.00	0.00	79.50	0.00	0.00	0.00
66.50	0.00	0.00	0.00	79.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
80.00	0.00	0.00	0.00	93.25	0.00	0.00	0.00
80.25	0.00	0.00	0.00	93.50	0.00	0.00	0.00
80.50	0.00	0.00	0.00	93.75	0.00	0.00	0.00
80.75	0.00	0.00	0.00	94.00	0.00	0.00	0.00
81.00	0.00	0.00	0.00	94.25	0.00	0.00	0.00
81.25	0.00	0.00	0.00	94.50	0.00	0.00	0.00
81.50	0.00	0.00	0.00	94.75	0.00	0.00	0.00
81.75	0.00	0.00	0.00	95.00	0.00	0.00	0.00
82.00	0.00	0.00	0.00	95.25	0.00	0.00	0.00
82.25	0.00	0.00	0.00	95.50	0.00	0.00	0.00
82.50	0.00	0.00	0.00	95.75	0.00	0.00	0.00
82.75	0.00	0.00	0.00	96.00	0.00	0.00	0.00
83.00	0.00	0.00	0.00	96.25	0.00	0.00	0.00
83.25	0.00	0.00	0.00	96.50	0.00	0.00	0.00
83.50	0.00	0.00	0.00	96.75	0.00	0.00	0.00
83.75	0.00	0.00	0.00	97.00	0.00	0.00	0.00
84.00	0.00	0.00	0.00	97.25	0.00	0.00	0.00
84.25	0.00	0.00	0.00	97.50	0.00	0.00	0.00
84.50	0.00	0.00	0.00	97.75	0.00	0.00	0.00
84.75	0.00	0.00	0.00	98.00	0.00	0.00	0.00
85.00	0.00	0.00	0.00	98.25	0.00	0.00	0.00
85.25	0.00	0.00	0.00	98.50	0.00	0.00	0.00
85.50	0.00	0.00	0.00	98.75	0.00	0.00	0.00
85.75	0.00	0.00	0.00	99.00	0.00	0.00	0.00
86.00	0.00	0.00	0.00	99.25	0.00	0.00	0.00
86.25	0.00	0.00	0.00	99.50	0.00	0.00	0.00
86.50	0.00	0.00	0.00	99.75	0.00	0.00	0.00
86.75	0.00	0.00	0.00	100.00	0.00	0.00	0.00
87.00	0.00	0.00	0.00	100.25	0.00	0.00	0.00
87.25	0.00	0.00	0.00	100.50	0.00	0.00	0.00
87.50	0.00	0.00	0.00	100.75	0.00	0.00	0.00
87.75	0.00	0.00	0.00	101.00	0.00	0.00	0.00
88.00	0.00	0.00	0.00	101.25	0.00	0.00	0.00
88.25	0.00	0.00	0.00	101.50	0.00	0.00	0.00
88.50	0.00	0.00	0.00	101.75	0.00	0.00	0.00
88.75	0.00	0.00	0.00	102.00	0.00	0.00	0.00
89.00	0.00	0.00	0.00	102.25	0.00	0.00	0.00
89.25	0.00	0.00	0.00	102.50	0.00	0.00	0.00
89.50	0.00	0.00	0.00	102.75	0.00	0.00	0.00
89.75	0.00	0.00	0.00	103.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	103.25	0.00	0.00	0.00
90.25	0.00	0.00	0.00	103.50	0.00	0.00	0.00
90.50	0.00	0.00	0.00	103.75	0.00	0.00	0.00
90.75	0.00	0.00	0.00	104.00	0.00	0.00	0.00
91.00	0.00	0.00	0.00	104.25	0.00	0.00	0.00
91.25	0.00	0.00	0.00	104.50	0.00	0.00	0.00
91.50	0.00	0.00	0.00	104.75	0.00	0.00	0.00
91.75	0.00	0.00	0.00	105.00	0.00	0.00	0.00
92.00	0.00	0.00	0.00	105.25	0.00	0.00	0.00
92.25	0.00	0.00	0.00	105.50	0.00	0.00	0.00
92.50	0.00	0.00	0.00	105.75	0.00	0.00	0.00
92.75	0.00	0.00	0.00	106.00	0.00	0.00	0.00
93.00	0.00	0.00	0.00	106.25	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
106.50	0.00	0.00	0.00	119.75	0.00	0.00	0.00
106.75	0.00	0.00	0.00	120.00	0.00	0.00	0.00
107.00	0.00	0.00	0.00	120.25	0.00	0.00	0.00
107.25	0.00	0.00	0.00	120.50	0.00	0.00	0.00
107.50	0.00	0.00	0.00	120.75	0.00	0.00	0.00
107.75	0.00	0.00	0.00	121.00	0.00	0.00	0.00
108.00	0.00	0.00	0.00	121.25	0.00	0.00	0.00
108.25	0.00	0.00	0.00	121.50	0.00	0.00	0.00
108.50	0.00	0.00	0.00	121.75	0.00	0.00	0.00
108.75	0.00	0.00	0.00	122.00	0.00	0.00	0.00
109.00	0.00	0.00	0.00	122.25	0.00	0.00	0.00
109.25	0.00	0.00	0.00	122.50	0.00	0.00	0.00
109.50	0.00	0.00	0.00	122.75	0.00	0.00	0.00
109.75	0.00	0.00	0.00	123.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	123.25	0.00	0.00	0.00
110.25	0.00	0.00	0.00	123.50	0.00	0.00	0.00
110.50	0.00	0.00	0.00	123.75	0.00	0.00	0.00
110.75	0.00	0.00	0.00	124.00	0.00	0.00	0.00
111.00	0.00	0.00	0.00	124.25	0.00	0.00	0.00
111.25	0.00	0.00	0.00	124.50	0.00	0.00	0.00
111.50	0.00	0.00	0.00	124.75	0.00	0.00	0.00
111.75	0.00	0.00	0.00	125.00	0.00	0.00	0.00
112.00	0.00	0.00	0.00	125.25	0.00	0.00	0.00
112.25	0.00	0.00	0.00	125.50	0.00	0.00	0.00
112.50	0.00	0.00	0.00	125.75	0.00	0.00	0.00
112.75	0.00	0.00	0.00	126.00	0.00	0.00	0.00
113.00	0.00	0.00	0.00	126.25	0.00	0.00	0.00
113.25	0.00	0.00	0.00	126.50	0.00	0.00	0.00
113.50	0.00	0.00	0.00	126.75	0.00	0.00	0.00
113.75	0.00	0.00	0.00	127.00	0.00	0.00	0.00
114.00	0.00	0.00	0.00	127.25	0.00	0.00	0.00
114.25	0.00	0.00	0.00	127.50	0.00	0.00	0.00
114.50	0.00	0.00	0.00	127.75	0.00	0.00	0.00
114.75	0.00	0.00	0.00	128.00	0.00	0.00	0.00
115.00	0.00	0.00	0.00	128.25	0.00	0.00	0.00
115.25	0.00	0.00	0.00	128.50	0.00	0.00	0.00
115.50	0.00	0.00	0.00	128.75	0.00	0.00	0.00
115.75	0.00	0.00	0.00	129.00	0.00	0.00	0.00
116.00	0.00	0.00	0.00	129.25	0.00	0.00	0.00
116.25	0.00	0.00	0.00	129.50	0.00	0.00	0.00
116.50	0.00	0.00	0.00	129.75	0.00	0.00	0.00
116.75	0.00	0.00	0.00	130.00	0.00	0.00	0.00
117.00	0.00	0.00	0.00	130.25	0.00	0.00	0.00
117.25	0.00	0.00	0.00	130.50	0.00	0.00	0.00
117.50	0.00	0.00	0.00	130.75	0.00	0.00	0.00
117.75	0.00	0.00	0.00	131.00	0.00	0.00	0.00
118.00	0.00	0.00	0.00	131.25	0.00	0.00	0.00
118.25	0.00	0.00	0.00	131.50	0.00	0.00	0.00
118.50	0.00	0.00	0.00	131.75	0.00	0.00	0.00
118.75	0.00	0.00	0.00	132.00	0.00	0.00	0.00
119.00	0.00	0.00	0.00	132.25	0.00	0.00	0.00
119.25	0.00	0.00	0.00	132.50	0.00	0.00	0.00
119.50	0.00	0.00	0.00	132.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
133.00	0.00	0.00	0.00
133.25	0.00	0.00	0.00
133.50	0.00	0.00	0.00
133.75	0.00	0.00	0.00
134.00	0.00	0.00	0.00
134.25	0.00	0.00	0.00
134.50	0.00	0.00	0.00
134.75	0.00	0.00	0.00
135.00	0.00	0.00	0.00
135.25	0.00	0.00	0.00
135.50	0.00	0.00	0.00
135.75	0.00	0.00	0.00
136.00	0.00	0.00	0.00
136.25	0.00	0.00	0.00
136.50	0.00	0.00	0.00
136.75	0.00	0.00	0.00
137.00	0.00	0.00	0.00
137.25	0.00	0.00	0.00
137.50	0.00	0.00	0.00
137.75	0.00	0.00	0.00
138.00	0.00	0.00	0.00
138.25	0.00	0.00	0.00
138.50	0.00	0.00	0.00
138.75	0.00	0.00	0.00
139.00	0.00	0.00	0.00
139.25	0.00	0.00	0.00
139.50	0.00	0.00	0.00
139.75	0.00	0.00	0.00
140.00	0.00	0.00	0.00
140.25	0.00	0.00	0.00
140.50	0.00	0.00	0.00
140.75	0.00	0.00	0.00
141.00	0.00	0.00	0.00
141.25	0.00	0.00	0.00
141.50	0.00	0.00	0.00
141.75	0.00	0.00	0.00
142.00	0.00	0.00	0.00
142.25	0.00	0.00	0.00
142.50	0.00	0.00	0.00
142.75	0.00	0.00	0.00
143.00	0.00	0.00	0.00
143.25	0.00	0.00	0.00
143.50	0.00	0.00	0.00
143.75	0.00	0.00	0.00
144.00	0.00	0.00	0.00
144.25	0.00	0.00	0.00
144.50	0.00	0.00	0.00
144.75	0.00	0.00	0.00
145.00	0.00	0.00	0.00
145.25	0.00	0.00	0.00
145.50	0.00	0.00	0.00
145.75	0.00	0.00	0.00
146.00	0.00	0.00	0.00
146.25	0.00	0.00	0.00
146.50	0.00	0.00	0.00
146.75	0.00	0.00	0.00
147.00	0.00	0.00	0.00
147.25	0.00	0.00	0.00
147.50	0.00	0.00	0.00
147.75	0.00	0.00	0.00
148.00	0.00	0.00	0.00
148.25	0.00	0.00	0.00
148.50	0.00	0.00	0.00
148.75	0.00	0.00	0.00
149.00	0.00	0.00	0.00
149.25	0.00	0.00	0.00
149.50	0.00	0.00	0.00
149.75	0.00	0.00	0.00
150.00	0.00	0.00	0.00

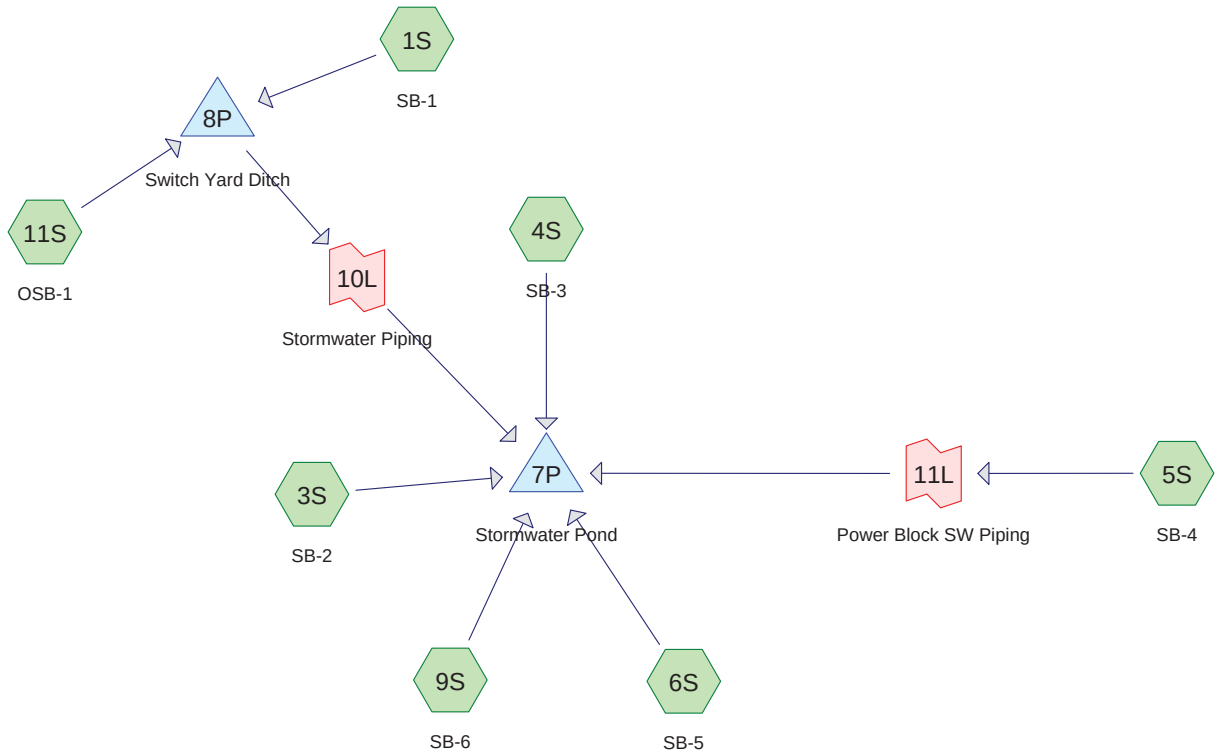
BLACK & VEATCH

Owner: Seminole Electric Cooperative, Inc.
Plant: P2021 Combined Cycle
Project No. 190285
File No. 58.5406.1102
Title: Post-Development Stormwater Analysis

Prepared by: Orinta Jankauskaite
Date: 1/23/2017
Verified by: John C. Barranco, Jr.
Date:
Page No.

Attachment 7

HydroCAD Report - 100yr-24hr



Subcat Reach Pond Link

Routing Diagram for 190285 Post-Development Stormwater Design REV 2
Prepared by Black & Veatch, Printed 1/23/2017
HydroCAD® 10.00-14 s/n 05108 © 2015 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
16.580	39	>75% Grass cover, Good, HSG A (1S, 3S, 5S, 6S, 11S)
27.664	98	Gravel surface, HSG A (1S, 3S, 4S, 5S, 6S, 9S, 11S)
6.050	98	Paved roads w/curbs & sewers, HSG A (1S, 4S, 5S, 6S)
0.570	98	Roofs, HSG A (5S, 6S)
4.830	98	Water Surface, HSG A (1S, 6S)
55.694	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
55.694	HSG A	1S, 3S, 4S, 5S, 6S, 9S, 11S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
55.694		**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
16.580	0.000	0.000	0.000	0.000	16.580	>75% Grass cover, Good	1S, 3S, 5S, 6S, 11S
27.664	0.000	0.000	0.000	0.000	27.664	Gravel surface	1S, 3S, 4S, 5S, 6S, 9S, 11S
6.050	0.000	0.000	0.000	0.000	6.050	Paved roads w/curbs & sewers	1S, 4S, 5S, 6S
0.570	0.000	0.000	0.000	0.000	0.570	Roofs	5S, 6S
4.830	0.000	0.000	0.000	0.000	4.830	Water Surface	1S, 6S
55.694	**0.000**	**0.000**	**0.000**	**0.000**	**55.694**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	4S	0.00	0.00	351.0	0.0030	0.009	24.0	0.0	0.0
2	8P	74.00	73.50	200.0	0.0025	0.009	48.0	0.0	0.0

Time span=0.50-150.00 hrs, dt=0.05 hrs, 2991 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: SB-1 Runoff Area=18.310 ac 51.61% Impervious Runoff Depth=6.36"
Flow Length=1,416' Tc=123.5 min CN=69 Runoff=36.16 cfs 9.707 af

Subcatchment 3S: SB-2 Runoff Area=6.530 ac 83.46% Impervious Runoff Depth=8.83"
Flow Length=422' Tc=7.0 min CN=88 Runoff=87.51 cfs 4.803 af

Subcatchment 4S: SB-3 Runoff Area=6.460 ac 100.00% Impervious Runoff Depth>10.06"
Flow Length=640' Slope=0.0030 '/' Tc=6.1 min CN=98 Runoff=92.13 cfs 5.415 af

Subcatchment 5S: SB-4 Runoff Area=4.114 ac 76.91% Impervious Runoff Depth=8.32"
Flow Length=590' Slope=0.0030 '/' Tc=10.8 min CN=84 Runoff=47.23 cfs 2.853 af

Subcatchment 6S: SB-5 Runoff Area=13.820 ac 60.85% Impervious Runoff Depth=7.16"
Flow Length=365' Slope=0.0025 '/' Tc=48.8 min CN=75 Runoff=61.11 cfs 8.242 af

Subcatchment 9S: SB-6 Runoff Area=0.830 ac 100.00% Impervious Runoff Depth>10.06"
Flow Length=290' Slope=0.0030 '/' Tc=5.1 min CN=98 Runoff=12.30 cfs 0.696 af

Subcatchment 11S: OSB-1 Runoff Area=5.630 ac 95.03% Impervious Runoff Depth=9.69"
Flow Length=396' Slope=0.0040 '/' Tc=6.4 min CN=95 Runoff=78.87 cfs 4.548 af

Pond 7P: Stormwater Pond Peak Elev=72.93' Storage=12.734 af Inflow=270.18 cfs 36.264 af
Discarded=37.71 cfs 35.178 af Secondary=7.39 cfs 1.086 af Outflow=45.10 cfs 36.264 af

Pond 8P: Switch Yard Ditch Peak Elev=77.04' Storage=57,303 cf Inflow=82.72 cfs 14.255 af
48.0" Round Culvert n=0.009 L=200.0' S=0.0025 '/' Outflow=43.79 cfs 14.255 af

Link 10L: Stormwater Piping delayed by 3.0 min Inflow=43.79 cfs 14.255 af
Primary=43.79 cfs 14.255 af

Link 11L: Power Block SW Piping delayed by 3.0 min Inflow=47.23 cfs 2.853 af
Primary=47.23 cfs 2.853 af

Total Runoff Area = 55.694 ac Runoff Volume = 36.264 af Average Runoff Depth = 7.81"
29.77% Pervious = 16.580 ac 70.23% Impervious = 39.114 ac

Summary for Subcatchment 1S: SB-1

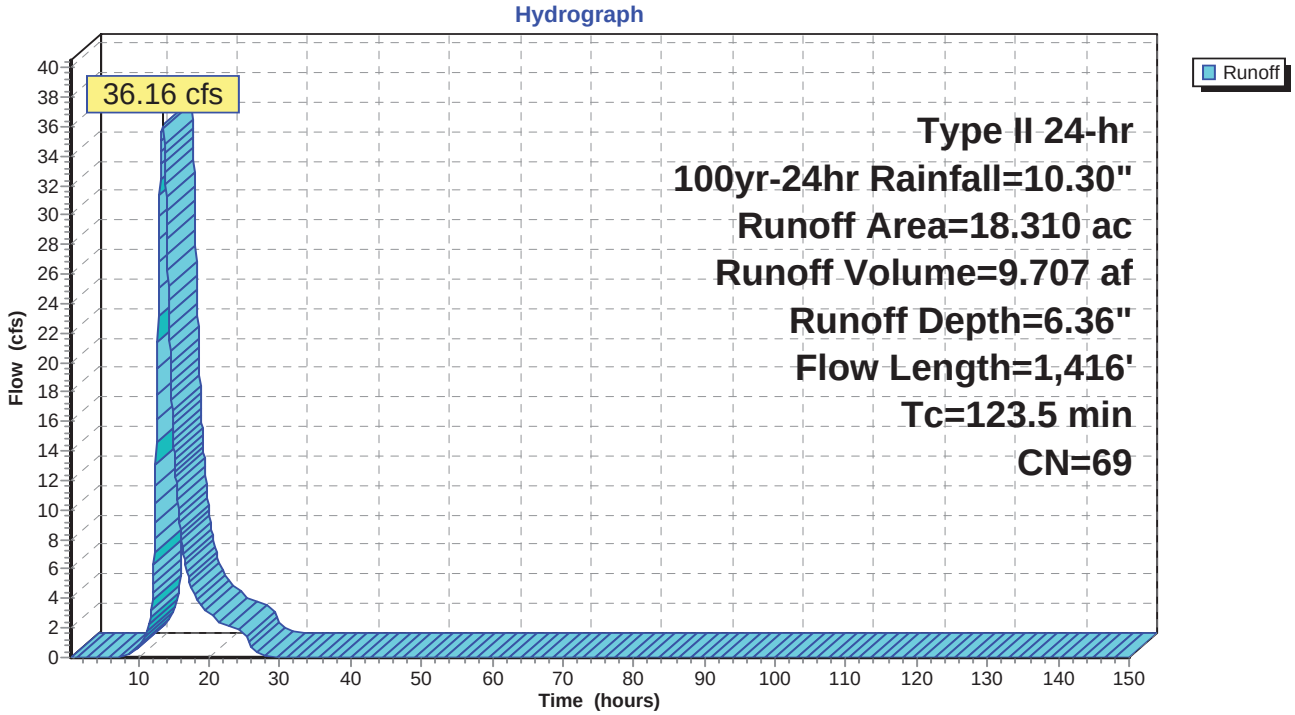
Runoff = 36.16 cfs @ 13.46 hrs, Volume= 9.707 af, Depth= 6.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
	0.490	98	Paved roads w/curbs & sewers, HSG A
	0.730	98	Water Surface, HSG A
	8.860	39	>75% Grass cover, Good, HSG A
*	8.230	98	Gravel surface, HSG A
	18.310	69	Weighted Average
	8.860		48.39% Pervious Area
	9.450		51.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
95.0	300	0.0030	0.05		**Sheet Flow, Overland Flow - Open Area** Grass: Bermuda n= 0.410 P2= 4.50"
18.3	485	0.0040	0.44		**Shallow Concentrated Flow, Overland Flow - Open Area** Short Grass Pasture Kv= 7.0 fps
10.2	631	0.0060	1.03	149.67	**Channel Flow, Grassed Ditch** Area= 145.0 sf Perim= 1,366.0' r= 0.11' n= 0.025 Short grass
123.5	1,416	Total			

Subcatchment 1S: SB-1



Hydrograph for Subcatchment 1S: SB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.00	13.75	8.34	4.64	34.24
0.75	0.08	0.00	0.00	14.00	8.45	4.73	30.31
1.00	0.11	0.00	0.00	14.25	8.54	4.81	25.22
1.25	0.14	0.00	0.00	14.50	8.63	4.89	20.76
1.50	0.17	0.00	0.00	14.75	8.71	4.96	17.40
1.75	0.20	0.00	0.00	15.00	8.79	5.03	14.76
2.00	0.23	0.00	0.00	15.25	8.87	5.09	12.59
2.25	0.26	0.00	0.00	15.50	8.94	5.16	10.86
2.50	0.29	0.00	0.00	15.75	9.00	5.21	9.49
2.75	0.32	0.00	0.00	16.00	9.06	5.27	8.38
3.00	0.36	0.00	0.00	16.25	9.12	5.32	7.47
3.25	0.39	0.00	0.00	16.50	9.18	5.37	6.74
3.50	0.42	0.00	0.00	16.75	9.23	5.42	6.12
3.75	0.46	0.00	0.00	17.00	9.29	5.46	5.61
4.00	0.49	0.00	0.00	17.25	9.34	5.51	5.17
4.25	0.53	0.00	0.00	17.50	9.39	5.55	4.81
4.50	0.57	0.00	0.00	17.75	9.44	5.60	4.50
4.75	0.61	0.00	0.00	18.00	9.49	5.64	4.25
5.00	0.65	0.00	0.00	18.25	9.53	5.68	4.02
5.25	0.69	0.00	0.00	18.50	9.58	5.72	3.82
5.50	0.73	0.00	0.00	18.75	9.62	5.75	3.63
5.75	0.78	0.00	0.00	19.00	9.66	5.79	3.47
6.00	0.82	0.00	0.00	19.25	9.70	5.83	3.34
6.25	0.87	0.00	0.00	19.50	9.74	5.86	3.22
6.50	0.92	0.00	0.00	19.75	9.77	5.89	3.11
6.75	0.97	0.00	0.00	20.00	9.81	5.92	3.00
7.00	1.02	0.00	0.00	20.25	9.84	5.95	2.89
7.25	1.07	0.01	0.00	20.50	9.87	5.98	2.79
7.50	1.13	0.01	0.01	20.75	9.90	6.01	2.68
7.75	1.18	0.02	0.03	21.00	9.94	6.04	2.59
8.00	1.24	0.02	0.06	21.25	9.97	6.07	2.50
8.25	1.30	0.03	0.10	21.50	10.00	6.09	2.42
8.50	1.36	0.04	0.16	21.75	10.03	6.12	2.35
8.75	1.43	0.06	0.22	22.00	10.06	6.15	2.29
9.00	1.51	0.07	0.30	22.25	10.09	6.18	2.24
9.25	1.60	0.09	0.39	22.50	10.12	6.20	2.20
9.50	1.68	0.12	0.50	22.75	10.15	6.23	2.17
9.75	1.77	0.14	0.62	23.00	10.18	6.26	2.14
10.00	1.86	0.17	0.77	23.25	10.21	6.28	2.11
10.25	1.98	0.21	0.93	23.50	10.24	6.31	2.08
10.50	2.10	0.25	1.11	23.75	10.27	6.34	2.06
10.75	2.25	0.31	1.32	24.00	**10.30**	**6.36**	2.04
11.00	2.42	0.39	1.57	24.25	10.30	6.36	2.01
11.25	2.64	0.48	1.88	24.50	10.30	6.36	1.96
11.50	2.91	0.62	2.30	24.75	10.30	6.36	1.87
11.75	3.99	1.26	2.86	25.00	10.30	6.36	1.71
12.00	6.83	3.37	4.09	25.25	10.30	6.36	1.49
12.25	7.27	3.74	7.14	25.50	10.30	6.36	1.23
12.50	7.57	3.99	13.03	25.75	10.30	6.36	0.97
12.75	7.78	4.16	21.38	26.00	10.30	6.36	0.73
13.00	7.95	4.31	29.93	26.25	10.30	6.36	0.54
13.25	8.10	4.43	**34.99**	26.50	10.30	6.36	0.40
13.50	8.23	4.55	**36.11**	26.75	10.30	6.36	0.30

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	6.36	0.22	40.25	10.30	6.36	0.00
27.25	10.30	6.36	0.16	40.50	10.30	6.36	0.00
27.50	10.30	6.36	0.12	40.75	10.30	6.36	0.00
27.75	10.30	6.36	0.09	41.00	10.30	6.36	0.00
28.00	10.30	6.36	0.06	41.25	10.30	6.36	0.00
28.25	10.30	6.36	0.05	41.50	10.30	6.36	0.00
28.50	10.30	6.36	0.03	41.75	10.30	6.36	0.00
28.75	10.30	6.36	0.03	42.00	10.30	6.36	0.00
29.00	10.30	6.36	0.02	42.25	10.30	6.36	0.00
29.25	10.30	6.36	0.01	42.50	10.30	6.36	0.00
29.50	10.30	6.36	0.01	42.75	10.30	6.36	0.00
29.75	10.30	6.36	0.01	43.00	10.30	6.36	0.00
30.00	10.30	6.36	0.00	43.25	10.30	6.36	0.00
30.25	10.30	6.36	0.00	43.50	10.30	6.36	0.00
30.50	10.30	6.36	0.00	43.75	10.30	6.36	0.00
30.75	10.30	6.36	0.00	44.00	10.30	6.36	0.00
31.00	10.30	6.36	0.00	44.25	10.30	6.36	0.00
31.25	10.30	6.36	0.00	44.50	10.30	6.36	0.00
31.50	10.30	6.36	0.00	44.75	10.30	6.36	0.00
31.75	10.30	6.36	0.00	45.00	10.30	6.36	0.00
32.00	10.30	6.36	0.00	45.25	10.30	6.36	0.00
32.25	10.30	6.36	0.00	45.50	10.30	6.36	0.00
32.50	10.30	6.36	0.00	45.75	10.30	6.36	0.00
32.75	10.30	6.36	0.00	46.00	10.30	6.36	0.00
33.00	10.30	6.36	0.00	46.25	10.30	6.36	0.00
33.25	10.30	6.36	0.00	46.50	10.30	6.36	0.00
33.50	10.30	6.36	0.00	46.75	10.30	6.36	0.00
33.75	10.30	6.36	0.00	47.00	10.30	6.36	0.00
34.00	10.30	6.36	0.00	47.25	10.30	6.36	0.00
34.25	10.30	6.36	0.00	47.50	10.30	6.36	0.00
34.50	10.30	6.36	0.00	47.75	10.30	6.36	0.00
34.75	10.30	6.36	0.00	48.00	10.30	6.36	0.00
35.00	10.30	6.36	0.00	48.25	10.30	6.36	0.00
35.25	10.30	6.36	0.00	48.50	10.30	6.36	0.00
35.50	10.30	6.36	0.00	48.75	10.30	6.36	0.00
35.75	10.30	6.36	0.00	49.00	10.30	6.36	0.00
36.00	10.30	6.36	0.00	49.25	10.30	6.36	0.00
36.25	10.30	6.36	0.00	49.50	10.30	6.36	0.00
36.50	10.30	6.36	0.00	49.75	10.30	6.36	0.00
36.75	10.30	6.36	0.00	50.00	10.30	6.36	0.00
37.00	10.30	6.36	0.00	50.25	10.30	6.36	0.00
37.25	10.30	6.36	0.00	50.50	10.30	6.36	0.00
37.50	10.30	6.36	0.00	50.75	10.30	6.36	0.00
37.75	10.30	6.36	0.00	51.00	10.30	6.36	0.00
38.00	10.30	6.36	0.00	51.25	10.30	6.36	0.00
38.25	10.30	6.36	0.00	51.50	10.30	6.36	0.00
38.50	10.30	6.36	0.00	51.75	10.30	6.36	0.00
38.75	10.30	6.36	0.00	52.00	10.30	6.36	0.00
39.00	10.30	6.36	0.00	52.25	10.30	6.36	0.00
39.25	10.30	6.36	0.00	52.50	10.30	6.36	0.00
39.50	10.30	6.36	0.00	52.75	10.30	6.36	0.00
39.75	10.30	6.36	0.00	53.00	10.30	6.36	0.00
40.00	10.30	6.36	0.00	53.25	10.30	6.36	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	6.36	0.00	66.75	10.30	6.36	0.00
53.75	10.30	6.36	0.00	67.00	10.30	6.36	0.00
54.00	10.30	6.36	0.00	67.25	10.30	6.36	0.00
54.25	10.30	6.36	0.00	67.50	10.30	6.36	0.00
54.50	10.30	6.36	0.00	67.75	10.30	6.36	0.00
54.75	10.30	6.36	0.00	68.00	10.30	6.36	0.00
55.00	10.30	6.36	0.00	68.25	10.30	6.36	0.00
55.25	10.30	6.36	0.00	68.50	10.30	6.36	0.00
55.50	10.30	6.36	0.00	68.75	10.30	6.36	0.00
55.75	10.30	6.36	0.00	69.00	10.30	6.36	0.00
56.00	10.30	6.36	0.00	69.25	10.30	6.36	0.00
56.25	10.30	6.36	0.00	69.50	10.30	6.36	0.00
56.50	10.30	6.36	0.00	69.75	10.30	6.36	0.00
56.75	10.30	6.36	0.00	70.00	10.30	6.36	0.00
57.00	10.30	6.36	0.00	70.25	10.30	6.36	0.00
57.25	10.30	6.36	0.00	70.50	10.30	6.36	0.00
57.50	10.30	6.36	0.00	70.75	10.30	6.36	0.00
57.75	10.30	6.36	0.00	71.00	10.30	6.36	0.00
58.00	10.30	6.36	0.00	71.25	10.30	6.36	0.00
58.25	10.30	6.36	0.00	71.50	10.30	6.36	0.00
58.50	10.30	6.36	0.00	71.75	10.30	6.36	0.00
58.75	10.30	6.36	0.00	72.00	10.30	6.36	0.00
59.00	10.30	6.36	0.00	72.25	10.30	6.36	0.00
59.25	10.30	6.36	0.00	72.50	10.30	6.36	0.00
59.50	10.30	6.36	0.00	72.75	10.30	6.36	0.00
59.75	10.30	6.36	0.00	73.00	10.30	6.36	0.00
60.00	10.30	6.36	0.00	73.25	10.30	6.36	0.00
60.25	10.30	6.36	0.00	73.50	10.30	6.36	0.00
60.50	10.30	6.36	0.00	73.75	10.30	6.36	0.00
60.75	10.30	6.36	0.00	74.00	10.30	6.36	0.00
61.00	10.30	6.36	0.00	74.25	10.30	6.36	0.00
61.25	10.30	6.36	0.00	74.50	10.30	6.36	0.00
61.50	10.30	6.36	0.00	74.75	10.30	6.36	0.00
61.75	10.30	6.36	0.00	75.00	10.30	6.36	0.00
62.00	10.30	6.36	0.00	75.25	10.30	6.36	0.00
62.25	10.30	6.36	0.00	75.50	10.30	6.36	0.00
62.50	10.30	6.36	0.00	75.75	10.30	6.36	0.00
62.75	10.30	6.36	0.00	76.00	10.30	6.36	0.00
63.00	10.30	6.36	0.00	76.25	10.30	6.36	0.00
63.25	10.30	6.36	0.00	76.50	10.30	6.36	0.00
63.50	10.30	6.36	0.00	76.75	10.30	6.36	0.00
63.75	10.30	6.36	0.00	77.00	10.30	6.36	0.00
64.00	10.30	6.36	0.00	77.25	10.30	6.36	0.00
64.25	10.30	6.36	0.00	77.50	10.30	6.36	0.00
64.50	10.30	6.36	0.00	77.75	10.30	6.36	0.00
64.75	10.30	6.36	0.00	78.00	10.30	6.36	0.00
65.00	10.30	6.36	0.00	78.25	10.30	6.36	0.00
65.25	10.30	6.36	0.00	78.50	10.30	6.36	0.00
65.50	10.30	6.36	0.00	78.75	10.30	6.36	0.00
65.75	10.30	6.36	0.00	79.00	10.30	6.36	0.00
66.00	10.30	6.36	0.00	79.25	10.30	6.36	0.00
66.25	10.30	6.36	0.00	79.50	10.30	6.36	0.00
66.50	10.30	6.36	0.00	79.75	10.30	6.36	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	6.36	0.00	93.25	10.30	6.36	0.00
80.25	10.30	6.36	0.00	93.50	10.30	6.36	0.00
80.50	10.30	6.36	0.00	93.75	10.30	6.36	0.00
80.75	10.30	6.36	0.00	94.00	10.30	6.36	0.00
81.00	10.30	6.36	0.00	94.25	10.30	6.36	0.00
81.25	10.30	6.36	0.00	94.50	10.30	6.36	0.00
81.50	10.30	6.36	0.00	94.75	10.30	6.36	0.00
81.75	10.30	6.36	0.00	95.00	10.30	6.36	0.00
82.00	10.30	6.36	0.00	95.25	10.30	6.36	0.00
82.25	10.30	6.36	0.00	95.50	10.30	6.36	0.00
82.50	10.30	6.36	0.00	95.75	10.30	6.36	0.00
82.75	10.30	6.36	0.00	96.00	10.30	6.36	0.00
83.00	10.30	6.36	0.00	96.25	10.30	6.36	0.00
83.25	10.30	6.36	0.00	96.50	10.30	6.36	0.00
83.50	10.30	6.36	0.00	96.75	10.30	6.36	0.00
83.75	10.30	6.36	0.00	97.00	10.30	6.36	0.00
84.00	10.30	6.36	0.00	97.25	10.30	6.36	0.00
84.25	10.30	6.36	0.00	97.50	10.30	6.36	0.00
84.50	10.30	6.36	0.00	97.75	10.30	6.36	0.00
84.75	10.30	6.36	0.00	98.00	10.30	6.36	0.00
85.00	10.30	6.36	0.00	98.25	10.30	6.36	0.00
85.25	10.30	6.36	0.00	98.50	10.30	6.36	0.00
85.50	10.30	6.36	0.00	98.75	10.30	6.36	0.00
85.75	10.30	6.36	0.00	99.00	10.30	6.36	0.00
86.00	10.30	6.36	0.00	99.25	10.30	6.36	0.00
86.25	10.30	6.36	0.00	99.50	10.30	6.36	0.00
86.50	10.30	6.36	0.00	99.75	10.30	6.36	0.00
86.75	10.30	6.36	0.00	100.00	10.30	6.36	0.00
87.00	10.30	6.36	0.00	100.25	10.30	6.36	0.00
87.25	10.30	6.36	0.00	100.50	10.30	6.36	0.00
87.50	10.30	6.36	0.00	100.75	10.30	6.36	0.00
87.75	10.30	6.36	0.00	101.00	10.30	6.36	0.00
88.00	10.30	6.36	0.00	101.25	10.30	6.36	0.00
88.25	10.30	6.36	0.00	101.50	10.30	6.36	0.00
88.50	10.30	6.36	0.00	101.75	10.30	6.36	0.00
88.75	10.30	6.36	0.00	102.00	10.30	6.36	0.00
89.00	10.30	6.36	0.00	102.25	10.30	6.36	0.00
89.25	10.30	6.36	0.00	102.50	10.30	6.36	0.00
89.50	10.30	6.36	0.00	102.75	10.30	6.36	0.00
89.75	10.30	6.36	0.00	103.00	10.30	6.36	0.00
90.00	10.30	6.36	0.00	103.25	10.30	6.36	0.00
90.25	10.30	6.36	0.00	103.50	10.30	6.36	0.00
90.50	10.30	6.36	0.00	103.75	10.30	6.36	0.00
90.75	10.30	6.36	0.00	104.00	10.30	6.36	0.00
91.00	10.30	6.36	0.00	104.25	10.30	6.36	0.00
91.25	10.30	6.36	0.00	104.50	10.30	6.36	0.00
91.50	10.30	6.36	0.00	104.75	10.30	6.36	0.00
91.75	10.30	6.36	0.00	105.00	10.30	6.36	0.00
92.00	10.30	6.36	0.00	105.25	10.30	6.36	0.00
92.25	10.30	6.36	0.00	105.50	10.30	6.36	0.00
92.50	10.30	6.36	0.00	105.75	10.30	6.36	0.00
92.75	10.30	6.36	0.00	106.00	10.30	6.36	0.00
93.00	10.30	6.36	0.00	106.25	10.30	6.36	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	6.36	0.00	119.75	10.30	6.36	0.00
106.75	10.30	6.36	0.00	120.00	10.30	6.36	0.00
107.00	10.30	6.36	0.00	120.25	10.30	6.36	0.00
107.25	10.30	6.36	0.00	120.50	10.30	6.36	0.00
107.50	10.30	6.36	0.00	120.75	10.30	6.36	0.00
107.75	10.30	6.36	0.00	121.00	10.30	6.36	0.00
108.00	10.30	6.36	0.00	121.25	10.30	6.36	0.00
108.25	10.30	6.36	0.00	121.50	10.30	6.36	0.00
108.50	10.30	6.36	0.00	121.75	10.30	6.36	0.00
108.75	10.30	6.36	0.00	122.00	10.30	6.36	0.00
109.00	10.30	6.36	0.00	122.25	10.30	6.36	0.00
109.25	10.30	6.36	0.00	122.50	10.30	6.36	0.00
109.50	10.30	6.36	0.00	122.75	10.30	6.36	0.00
109.75	10.30	6.36	0.00	123.00	10.30	6.36	0.00
110.00	10.30	6.36	0.00	123.25	10.30	6.36	0.00
110.25	10.30	6.36	0.00	123.50	10.30	6.36	0.00
110.50	10.30	6.36	0.00	123.75	10.30	6.36	0.00
110.75	10.30	6.36	0.00	124.00	10.30	6.36	0.00
111.00	10.30	6.36	0.00	124.25	10.30	6.36	0.00
111.25	10.30	6.36	0.00	124.50	10.30	6.36	0.00
111.50	10.30	6.36	0.00	124.75	10.30	6.36	0.00
111.75	10.30	6.36	0.00	125.00	10.30	6.36	0.00
112.00	10.30	6.36	0.00	125.25	10.30	6.36	0.00
112.25	10.30	6.36	0.00	125.50	10.30	6.36	0.00
112.50	10.30	6.36	0.00	125.75	10.30	6.36	0.00
112.75	10.30	6.36	0.00	126.00	10.30	6.36	0.00
113.00	10.30	6.36	0.00	126.25	10.30	6.36	0.00
113.25	10.30	6.36	0.00	126.50	10.30	6.36	0.00
113.50	10.30	6.36	0.00	126.75	10.30	6.36	0.00
113.75	10.30	6.36	0.00	127.00	10.30	6.36	0.00
114.00	10.30	6.36	0.00	127.25	10.30	6.36	0.00
114.25	10.30	6.36	0.00	127.50	10.30	6.36	0.00
114.50	10.30	6.36	0.00	127.75	10.30	6.36	0.00
114.75	10.30	6.36	0.00	128.00	10.30	6.36	0.00
115.00	10.30	6.36	0.00	128.25	10.30	6.36	0.00
115.25	10.30	6.36	0.00	128.50	10.30	6.36	0.00
115.50	10.30	6.36	0.00	128.75	10.30	6.36	0.00
115.75	10.30	6.36	0.00	129.00	10.30	6.36	0.00
116.00	10.30	6.36	0.00	129.25	10.30	6.36	0.00
116.25	10.30	6.36	0.00	129.50	10.30	6.36	0.00
116.50	10.30	6.36	0.00	129.75	10.30	6.36	0.00
116.75	10.30	6.36	0.00	130.00	10.30	6.36	0.00
117.00	10.30	6.36	0.00	130.25	10.30	6.36	0.00
117.25	10.30	6.36	0.00	130.50	10.30	6.36	0.00
117.50	10.30	6.36	0.00	130.75	10.30	6.36	0.00
117.75	10.30	6.36	0.00	131.00	10.30	6.36	0.00
118.00	10.30	6.36	0.00	131.25	10.30	6.36	0.00
118.25	10.30	6.36	0.00	131.50	10.30	6.36	0.00
118.50	10.30	6.36	0.00	131.75	10.30	6.36	0.00
118.75	10.30	6.36	0.00	132.00	10.30	6.36	0.00
119.00	10.30	6.36	0.00	132.25	10.30	6.36	0.00
119.25	10.30	6.36	0.00	132.50	10.30	6.36	0.00
119.50	10.30	6.36	0.00	132.75	10.30	6.36	0.00

Hydrograph for Subcatchment 1S: SB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	6.36	0.00
133.25	10.30	6.36	0.00
133.50	10.30	6.36	0.00
133.75	10.30	6.36	0.00
134.00	10.30	6.36	0.00
134.25	10.30	6.36	0.00
134.50	10.30	6.36	0.00
134.75	10.30	6.36	0.00
135.00	10.30	6.36	0.00
135.25	10.30	6.36	0.00
135.50	10.30	6.36	0.00
135.75	10.30	6.36	0.00
136.00	10.30	6.36	0.00
136.25	10.30	6.36	0.00
136.50	10.30	6.36	0.00
136.75	10.30	6.36	0.00
137.00	10.30	6.36	0.00
137.25	10.30	6.36	0.00
137.50	10.30	6.36	0.00
137.75	10.30	6.36	0.00
138.00	10.30	6.36	0.00
138.25	10.30	6.36	0.00
138.50	10.30	6.36	0.00
138.75	10.30	6.36	0.00
139.00	10.30	6.36	0.00
139.25	10.30	6.36	0.00
139.50	10.30	6.36	0.00
139.75	10.30	6.36	0.00
140.00	10.30	6.36	0.00
140.25	10.30	6.36	0.00
140.50	10.30	6.36	0.00
140.75	10.30	6.36	0.00
141.00	10.30	6.36	0.00
141.25	10.30	6.36	0.00
141.50	10.30	6.36	0.00
141.75	10.30	6.36	0.00
142.00	10.30	6.36	0.00
142.25	10.30	6.36	0.00
142.50	10.30	6.36	0.00
142.75	10.30	6.36	0.00
143.00	10.30	6.36	0.00
143.25	10.30	6.36	0.00
143.50	10.30	6.36	0.00
143.75	10.30	6.36	0.00
144.00	10.30	6.36	0.00
144.25	10.30	6.36	0.00
144.50	10.30	6.36	0.00
144.75	10.30	6.36	0.00
145.00	10.30	6.36	0.00
145.25	10.30	6.36	0.00
145.50	10.30	6.36	0.00
145.75	10.30	6.36	0.00
146.00	10.30	6.36	0.00
146.25	10.30	6.36	0.00
146.50	10.30	6.36	0.00
146.75	10.30	6.36	0.00
147.00	10.30	6.36	0.00
147.25	10.30	6.36	0.00
147.50	10.30	6.36	0.00
147.75	10.30	6.36	0.00
148.00	10.30	6.36	0.00
148.25	10.30	6.36	0.00
148.50	10.30	6.36	0.00
148.75	10.30	6.36	0.00
149.00	10.30	6.36	0.00
149.25	10.30	6.36	0.00
149.50	10.30	6.36	0.00
149.75	10.30	6.36	0.00
150.00	10.30	6.36	0.00

Summary for Subcatchment 3S: SB-2

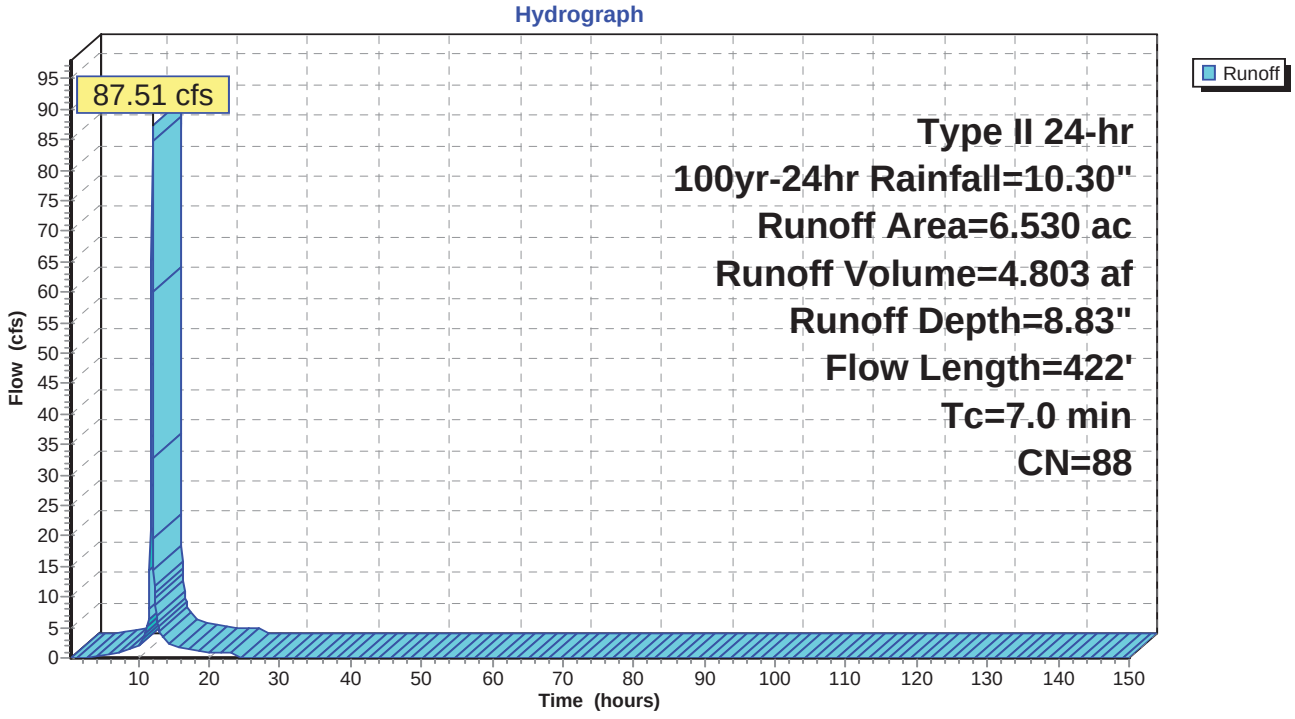
Runoff = 87.51 cfs @ 11.98 hrs, Volume= 4.803 af, Depth= 8.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
*	5.450	98	Gravel surface, HSG A
	1.080	39	>75% Grass cover, Good, HSG A
	6.530	88	Weighted Average
	1.080		16.54% Pervious Area
	5.450		83.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	300	0.0040	1.07		**Sheet Flow, Overland Flow to Storm Inlet** Smooth surfaces n= 0.011 P2= 4.50"
2.3	122	0.0030	0.88		**Shallow Concentrated Flow, Overland Flow to Storm Inlet** Unpaved Kv= 16.1 fps
7.0	422	Total			

Subcatchment 3S: SB-2



Hydrograph for Subcatchment 3S: SB-2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.00	13.75	8.34	6.91	2.93
0.75	0.08	0.00	0.00	14.00	8.45	7.00	2.60
1.00	0.11	0.00	0.00	14.25	8.54	7.10	2.39
1.25	0.14	0.00	0.00	14.50	8.63	7.18	2.28
1.50	0.17	0.00	0.00	14.75	8.71	7.26	2.16
1.75	0.20	0.00	0.00	15.00	8.79	7.34	2.05
2.00	0.23	0.00	0.00	15.25	8.87	7.42	1.93
2.25	0.26	0.00	0.00	15.50	8.94	7.49	1.81
2.50	0.29	0.00	0.01	15.75	9.00	7.55	1.70
2.75	0.32	0.00	0.04	16.00	9.06	7.61	1.58
3.00	0.36	0.00	0.08	16.25	9.12	7.67	1.51
3.25	0.39	0.01	0.12	16.50	9.18	7.72	1.47
3.50	0.42	0.02	0.16	16.75	9.23	7.78	1.43
3.75	0.46	0.02	0.19	17.00	9.29	7.83	1.38
4.00	0.49	0.03	0.23	17.25	9.34	7.88	1.34
4.25	0.53	0.04	0.27	17.50	9.39	7.93	1.30
4.50	0.57	0.05	0.31	17.75	9.44	7.98	1.26
4.75	0.61	0.07	0.36	18.00	9.49	8.03	1.22
5.00	0.65	0.08	0.40	18.25	9.53	8.07	1.18
5.25	0.69	0.10	0.44	18.50	9.58	8.11	1.14
5.50	0.73	0.12	0.49	18.75	9.62	8.16	1.09
5.75	0.78	0.14	0.54	19.00	9.66	8.20	1.05
6.00	0.82	0.16	0.58	19.25	9.70	8.23	1.01
6.25	0.87	0.18	0.63	19.50	9.74	8.27	0.97
6.50	0.92	0.21	0.68	19.75	9.77	8.31	0.93
6.75	0.97	0.24	0.72	20.00	9.81	8.34	0.89
7.00	1.02	0.26	0.77	20.25	9.84	8.37	0.86
7.25	1.07	0.30	0.82	20.50	9.87	8.41	0.85
7.50	1.13	0.33	0.86	20.75	9.90	8.44	0.85
7.75	1.18	0.36	0.91	21.00	9.94	8.47	0.84
8.00	1.24	0.40	0.96	21.25	9.97	8.50	0.83
8.25	1.30	0.44	1.06	21.50	10.00	8.53	0.82
8.50	1.36	0.48	1.20	21.75	10.03	8.56	0.81
8.75	1.43	0.53	1.35	22.00	10.06	8.59	0.81
9.00	1.51	0.59	1.51	22.25	10.09	8.62	0.80
9.25	1.60	0.65	1.60	22.50	10.12	8.65	0.79
9.50	1.68	0.71	1.63	22.75	10.15	8.68	0.78
9.75	1.77	0.78	1.78	23.00	10.18	8.71	0.77
10.00	1.86	0.86	2.03	23.25	10.21	8.74	0.76
10.25	1.98	0.95	2.34	23.50	10.24	8.77	0.76
10.50	2.10	1.05	2.72	23.75	10.27	8.80	0.75
10.75	2.25	1.17	3.23	24.00	**10.30**	**8.83**	0.74
11.00	2.42	1.31	3.87	24.25	10.30	8.83	0.02
11.25	2.64	1.50	4.99	24.50	10.30	8.83	0.00
11.50	2.91	1.74	6.52	24.75	10.30	8.83	0.00
11.75	3.99	2.72	28.20	25.00	10.30	8.83	0.00
12.00	6.83	5.43	**84.85**	25.25	10.30	8.83	0.00
12.25	7.27	5.86	11.89	25.50	10.30	8.83	0.00
12.50	7.57	6.15	7.38	25.75	10.30	8.83	0.00
12.75	7.78	6.35	5.28	26.00	10.30	8.83	0.00
13.00	7.95	6.52	4.41	26.25	10.30	8.83	0.00
13.25	8.10	6.67	3.78	26.50	10.30	8.83	0.00
13.50	8.23	6.79	3.32	26.75	10.30	8.83	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	8.83	0.00	40.25	10.30	8.83	0.00
27.25	10.30	8.83	0.00	40.50	10.30	8.83	0.00
27.50	10.30	8.83	0.00	40.75	10.30	8.83	0.00
27.75	10.30	8.83	0.00	41.00	10.30	8.83	0.00
28.00	10.30	8.83	0.00	41.25	10.30	8.83	0.00
28.25	10.30	8.83	0.00	41.50	10.30	8.83	0.00
28.50	10.30	8.83	0.00	41.75	10.30	8.83	0.00
28.75	10.30	8.83	0.00	42.00	10.30	8.83	0.00
29.00	10.30	8.83	0.00	42.25	10.30	8.83	0.00
29.25	10.30	8.83	0.00	42.50	10.30	8.83	0.00
29.50	10.30	8.83	0.00	42.75	10.30	8.83	0.00
29.75	10.30	8.83	0.00	43.00	10.30	8.83	0.00
30.00	10.30	8.83	0.00	43.25	10.30	8.83	0.00
30.25	10.30	8.83	0.00	43.50	10.30	8.83	0.00
30.50	10.30	8.83	0.00	43.75	10.30	8.83	0.00
30.75	10.30	8.83	0.00	44.00	10.30	8.83	0.00
31.00	10.30	8.83	0.00	44.25	10.30	8.83	0.00
31.25	10.30	8.83	0.00	44.50	10.30	8.83	0.00
31.50	10.30	8.83	0.00	44.75	10.30	8.83	0.00
31.75	10.30	8.83	0.00	45.00	10.30	8.83	0.00
32.00	10.30	8.83	0.00	45.25	10.30	8.83	0.00
32.25	10.30	8.83	0.00	45.50	10.30	8.83	0.00
32.50	10.30	8.83	0.00	45.75	10.30	8.83	0.00
32.75	10.30	8.83	0.00	46.00	10.30	8.83	0.00
33.00	10.30	8.83	0.00	46.25	10.30	8.83	0.00
33.25	10.30	8.83	0.00	46.50	10.30	8.83	0.00
33.50	10.30	8.83	0.00	46.75	10.30	8.83	0.00
33.75	10.30	8.83	0.00	47.00	10.30	8.83	0.00
34.00	10.30	8.83	0.00	47.25	10.30	8.83	0.00
34.25	10.30	8.83	0.00	47.50	10.30	8.83	0.00
34.50	10.30	8.83	0.00	47.75	10.30	8.83	0.00
34.75	10.30	8.83	0.00	48.00	10.30	8.83	0.00
35.00	10.30	8.83	0.00	48.25	10.30	8.83	0.00
35.25	10.30	8.83	0.00	48.50	10.30	8.83	0.00
35.50	10.30	8.83	0.00	48.75	10.30	8.83	0.00
35.75	10.30	8.83	0.00	49.00	10.30	8.83	0.00
36.00	10.30	8.83	0.00	49.25	10.30	8.83	0.00
36.25	10.30	8.83	0.00	49.50	10.30	8.83	0.00
36.50	10.30	8.83	0.00	49.75	10.30	8.83	0.00
36.75	10.30	8.83	0.00	50.00	10.30	8.83	0.00
37.00	10.30	8.83	0.00	50.25	10.30	8.83	0.00
37.25	10.30	8.83	0.00	50.50	10.30	8.83	0.00
37.50	10.30	8.83	0.00	50.75	10.30	8.83	0.00
37.75	10.30	8.83	0.00	51.00	10.30	8.83	0.00
38.00	10.30	8.83	0.00	51.25	10.30	8.83	0.00
38.25	10.30	8.83	0.00	51.50	10.30	8.83	0.00
38.50	10.30	8.83	0.00	51.75	10.30	8.83	0.00
38.75	10.30	8.83	0.00	52.00	10.30	8.83	0.00
39.00	10.30	8.83	0.00	52.25	10.30	8.83	0.00
39.25	10.30	8.83	0.00	52.50	10.30	8.83	0.00
39.50	10.30	8.83	0.00	52.75	10.30	8.83	0.00
39.75	10.30	8.83	0.00	53.00	10.30	8.83	0.00
40.00	10.30	8.83	0.00	53.25	10.30	8.83	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	8.83	0.00	66.75	10.30	8.83	0.00
53.75	10.30	8.83	0.00	67.00	10.30	8.83	0.00
54.00	10.30	8.83	0.00	67.25	10.30	8.83	0.00
54.25	10.30	8.83	0.00	67.50	10.30	8.83	0.00
54.50	10.30	8.83	0.00	67.75	10.30	8.83	0.00
54.75	10.30	8.83	0.00	68.00	10.30	8.83	0.00
55.00	10.30	8.83	0.00	68.25	10.30	8.83	0.00
55.25	10.30	8.83	0.00	68.50	10.30	8.83	0.00
55.50	10.30	8.83	0.00	68.75	10.30	8.83	0.00
55.75	10.30	8.83	0.00	69.00	10.30	8.83	0.00
56.00	10.30	8.83	0.00	69.25	10.30	8.83	0.00
56.25	10.30	8.83	0.00	69.50	10.30	8.83	0.00
56.50	10.30	8.83	0.00	69.75	10.30	8.83	0.00
56.75	10.30	8.83	0.00	70.00	10.30	8.83	0.00
57.00	10.30	8.83	0.00	70.25	10.30	8.83	0.00
57.25	10.30	8.83	0.00	70.50	10.30	8.83	0.00
57.50	10.30	8.83	0.00	70.75	10.30	8.83	0.00
57.75	10.30	8.83	0.00	71.00	10.30	8.83	0.00
58.00	10.30	8.83	0.00	71.25	10.30	8.83	0.00
58.25	10.30	8.83	0.00	71.50	10.30	8.83	0.00
58.50	10.30	8.83	0.00	71.75	10.30	8.83	0.00
58.75	10.30	8.83	0.00	72.00	10.30	8.83	0.00
59.00	10.30	8.83	0.00	72.25	10.30	8.83	0.00
59.25	10.30	8.83	0.00	72.50	10.30	8.83	0.00
59.50	10.30	8.83	0.00	72.75	10.30	8.83	0.00
59.75	10.30	8.83	0.00	73.00	10.30	8.83	0.00
60.00	10.30	8.83	0.00	73.25	10.30	8.83	0.00
60.25	10.30	8.83	0.00	73.50	10.30	8.83	0.00
60.50	10.30	8.83	0.00	73.75	10.30	8.83	0.00
60.75	10.30	8.83	0.00	74.00	10.30	8.83	0.00
61.00	10.30	8.83	0.00	74.25	10.30	8.83	0.00
61.25	10.30	8.83	0.00	74.50	10.30	8.83	0.00
61.50	10.30	8.83	0.00	74.75	10.30	8.83	0.00
61.75	10.30	8.83	0.00	75.00	10.30	8.83	0.00
62.00	10.30	8.83	0.00	75.25	10.30	8.83	0.00
62.25	10.30	8.83	0.00	75.50	10.30	8.83	0.00
62.50	10.30	8.83	0.00	75.75	10.30	8.83	0.00
62.75	10.30	8.83	0.00	76.00	10.30	8.83	0.00
63.00	10.30	8.83	0.00	76.25	10.30	8.83	0.00
63.25	10.30	8.83	0.00	76.50	10.30	8.83	0.00
63.50	10.30	8.83	0.00	76.75	10.30	8.83	0.00
63.75	10.30	8.83	0.00	77.00	10.30	8.83	0.00
64.00	10.30	8.83	0.00	77.25	10.30	8.83	0.00
64.25	10.30	8.83	0.00	77.50	10.30	8.83	0.00
64.50	10.30	8.83	0.00	77.75	10.30	8.83	0.00
64.75	10.30	8.83	0.00	78.00	10.30	8.83	0.00
65.00	10.30	8.83	0.00	78.25	10.30	8.83	0.00
65.25	10.30	8.83	0.00	78.50	10.30	8.83	0.00
65.50	10.30	8.83	0.00	78.75	10.30	8.83	0.00
65.75	10.30	8.83	0.00	79.00	10.30	8.83	0.00
66.00	10.30	8.83	0.00	79.25	10.30	8.83	0.00
66.25	10.30	8.83	0.00	79.50	10.30	8.83	0.00
66.50	10.30	8.83	0.00	79.75	10.30	8.83	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	8.83	0.00	93.25	10.30	8.83	0.00
80.25	10.30	8.83	0.00	93.50	10.30	8.83	0.00
80.50	10.30	8.83	0.00	93.75	10.30	8.83	0.00
80.75	10.30	8.83	0.00	94.00	10.30	8.83	0.00
81.00	10.30	8.83	0.00	94.25	10.30	8.83	0.00
81.25	10.30	8.83	0.00	94.50	10.30	8.83	0.00
81.50	10.30	8.83	0.00	94.75	10.30	8.83	0.00
81.75	10.30	8.83	0.00	95.00	10.30	8.83	0.00
82.00	10.30	8.83	0.00	95.25	10.30	8.83	0.00
82.25	10.30	8.83	0.00	95.50	10.30	8.83	0.00
82.50	10.30	8.83	0.00	95.75	10.30	8.83	0.00
82.75	10.30	8.83	0.00	96.00	10.30	8.83	0.00
83.00	10.30	8.83	0.00	96.25	10.30	8.83	0.00
83.25	10.30	8.83	0.00	96.50	10.30	8.83	0.00
83.50	10.30	8.83	0.00	96.75	10.30	8.83	0.00
83.75	10.30	8.83	0.00	97.00	10.30	8.83	0.00
84.00	10.30	8.83	0.00	97.25	10.30	8.83	0.00
84.25	10.30	8.83	0.00	97.50	10.30	8.83	0.00
84.50	10.30	8.83	0.00	97.75	10.30	8.83	0.00
84.75	10.30	8.83	0.00	98.00	10.30	8.83	0.00
85.00	10.30	8.83	0.00	98.25	10.30	8.83	0.00
85.25	10.30	8.83	0.00	98.50	10.30	8.83	0.00
85.50	10.30	8.83	0.00	98.75	10.30	8.83	0.00
85.75	10.30	8.83	0.00	99.00	10.30	8.83	0.00
86.00	10.30	8.83	0.00	99.25	10.30	8.83	0.00
86.25	10.30	8.83	0.00	99.50	10.30	8.83	0.00
86.50	10.30	8.83	0.00	99.75	10.30	8.83	0.00
86.75	10.30	8.83	0.00	100.00	10.30	8.83	0.00
87.00	10.30	8.83	0.00	100.25	10.30	8.83	0.00
87.25	10.30	8.83	0.00	100.50	10.30	8.83	0.00
87.50	10.30	8.83	0.00	100.75	10.30	8.83	0.00
87.75	10.30	8.83	0.00	101.00	10.30	8.83	0.00
88.00	10.30	8.83	0.00	101.25	10.30	8.83	0.00
88.25	10.30	8.83	0.00	101.50	10.30	8.83	0.00
88.50	10.30	8.83	0.00	101.75	10.30	8.83	0.00
88.75	10.30	8.83	0.00	102.00	10.30	8.83	0.00
89.00	10.30	8.83	0.00	102.25	10.30	8.83	0.00
89.25	10.30	8.83	0.00	102.50	10.30	8.83	0.00
89.50	10.30	8.83	0.00	102.75	10.30	8.83	0.00
89.75	10.30	8.83	0.00	103.00	10.30	8.83	0.00
90.00	10.30	8.83	0.00	103.25	10.30	8.83	0.00
90.25	10.30	8.83	0.00	103.50	10.30	8.83	0.00
90.50	10.30	8.83	0.00	103.75	10.30	8.83	0.00
90.75	10.30	8.83	0.00	104.00	10.30	8.83	0.00
91.00	10.30	8.83	0.00	104.25	10.30	8.83	0.00
91.25	10.30	8.83	0.00	104.50	10.30	8.83	0.00
91.50	10.30	8.83	0.00	104.75	10.30	8.83	0.00
91.75	10.30	8.83	0.00	105.00	10.30	8.83	0.00
92.00	10.30	8.83	0.00	105.25	10.30	8.83	0.00
92.25	10.30	8.83	0.00	105.50	10.30	8.83	0.00
92.50	10.30	8.83	0.00	105.75	10.30	8.83	0.00
92.75	10.30	8.83	0.00	106.00	10.30	8.83	0.00
93.00	10.30	8.83	0.00	106.25	10.30	8.83	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	8.83	0.00	119.75	10.30	8.83	0.00
106.75	10.30	8.83	0.00	120.00	10.30	8.83	0.00
107.00	10.30	8.83	0.00	120.25	10.30	8.83	0.00
107.25	10.30	8.83	0.00	120.50	10.30	8.83	0.00
107.50	10.30	8.83	0.00	120.75	10.30	8.83	0.00
107.75	10.30	8.83	0.00	121.00	10.30	8.83	0.00
108.00	10.30	8.83	0.00	121.25	10.30	8.83	0.00
108.25	10.30	8.83	0.00	121.50	10.30	8.83	0.00
108.50	10.30	8.83	0.00	121.75	10.30	8.83	0.00
108.75	10.30	8.83	0.00	122.00	10.30	8.83	0.00
109.00	10.30	8.83	0.00	122.25	10.30	8.83	0.00
109.25	10.30	8.83	0.00	122.50	10.30	8.83	0.00
109.50	10.30	8.83	0.00	122.75	10.30	8.83	0.00
109.75	10.30	8.83	0.00	123.00	10.30	8.83	0.00
110.00	10.30	8.83	0.00	123.25	10.30	8.83	0.00
110.25	10.30	8.83	0.00	123.50	10.30	8.83	0.00
110.50	10.30	8.83	0.00	123.75	10.30	8.83	0.00
110.75	10.30	8.83	0.00	124.00	10.30	8.83	0.00
111.00	10.30	8.83	0.00	124.25	10.30	8.83	0.00
111.25	10.30	8.83	0.00	124.50	10.30	8.83	0.00
111.50	10.30	8.83	0.00	124.75	10.30	8.83	0.00
111.75	10.30	8.83	0.00	125.00	10.30	8.83	0.00
112.00	10.30	8.83	0.00	125.25	10.30	8.83	0.00
112.25	10.30	8.83	0.00	125.50	10.30	8.83	0.00
112.50	10.30	8.83	0.00	125.75	10.30	8.83	0.00
112.75	10.30	8.83	0.00	126.00	10.30	8.83	0.00
113.00	10.30	8.83	0.00	126.25	10.30	8.83	0.00
113.25	10.30	8.83	0.00	126.50	10.30	8.83	0.00
113.50	10.30	8.83	0.00	126.75	10.30	8.83	0.00
113.75	10.30	8.83	0.00	127.00	10.30	8.83	0.00
114.00	10.30	8.83	0.00	127.25	10.30	8.83	0.00
114.25	10.30	8.83	0.00	127.50	10.30	8.83	0.00
114.50	10.30	8.83	0.00	127.75	10.30	8.83	0.00
114.75	10.30	8.83	0.00	128.00	10.30	8.83	0.00
115.00	10.30	8.83	0.00	128.25	10.30	8.83	0.00
115.25	10.30	8.83	0.00	128.50	10.30	8.83	0.00
115.50	10.30	8.83	0.00	128.75	10.30	8.83	0.00
115.75	10.30	8.83	0.00	129.00	10.30	8.83	0.00
116.00	10.30	8.83	0.00	129.25	10.30	8.83	0.00
116.25	10.30	8.83	0.00	129.50	10.30	8.83	0.00
116.50	10.30	8.83	0.00	129.75	10.30	8.83	0.00
116.75	10.30	8.83	0.00	130.00	10.30	8.83	0.00
117.00	10.30	8.83	0.00	130.25	10.30	8.83	0.00
117.25	10.30	8.83	0.00	130.50	10.30	8.83	0.00
117.50	10.30	8.83	0.00	130.75	10.30	8.83	0.00
117.75	10.30	8.83	0.00	131.00	10.30	8.83	0.00
118.00	10.30	8.83	0.00	131.25	10.30	8.83	0.00
118.25	10.30	8.83	0.00	131.50	10.30	8.83	0.00
118.50	10.30	8.83	0.00	131.75	10.30	8.83	0.00
118.75	10.30	8.83	0.00	132.00	10.30	8.83	0.00
119.00	10.30	8.83	0.00	132.25	10.30	8.83	0.00
119.25	10.30	8.83	0.00	132.50	10.30	8.83	0.00
119.50	10.30	8.83	0.00	132.75	10.30	8.83	0.00

Hydrograph for Subcatchment 3S: SB-2 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	8.83	0.00
133.25	10.30	8.83	0.00
133.50	10.30	8.83	0.00
133.75	10.30	8.83	0.00
134.00	10.30	8.83	0.00
134.25	10.30	8.83	0.00
134.50	10.30	8.83	0.00
134.75	10.30	8.83	0.00
135.00	10.30	8.83	0.00
135.25	10.30	8.83	0.00
135.50	10.30	8.83	0.00
135.75	10.30	8.83	0.00
136.00	10.30	8.83	0.00
136.25	10.30	8.83	0.00
136.50	10.30	8.83	0.00
136.75	10.30	8.83	0.00
137.00	10.30	8.83	0.00
137.25	10.30	8.83	0.00
137.50	10.30	8.83	0.00
137.75	10.30	8.83	0.00
138.00	10.30	8.83	0.00
138.25	10.30	8.83	0.00
138.50	10.30	8.83	0.00
138.75	10.30	8.83	0.00
139.00	10.30	8.83	0.00
139.25	10.30	8.83	0.00
139.50	10.30	8.83	0.00
139.75	10.30	8.83	0.00
140.00	10.30	8.83	0.00
140.25	10.30	8.83	0.00
140.50	10.30	8.83	0.00
140.75	10.30	8.83	0.00
141.00	10.30	8.83	0.00
141.25	10.30	8.83	0.00
141.50	10.30	8.83	0.00
141.75	10.30	8.83	0.00
142.00	10.30	8.83	0.00
142.25	10.30	8.83	0.00
142.50	10.30	8.83	0.00
142.75	10.30	8.83	0.00
143.00	10.30	8.83	0.00
143.25	10.30	8.83	0.00
143.50	10.30	8.83	0.00
143.75	10.30	8.83	0.00
144.00	10.30	8.83	0.00
144.25	10.30	8.83	0.00
144.50	10.30	8.83	0.00
144.75	10.30	8.83	0.00
145.00	10.30	8.83	0.00
145.25	10.30	8.83	0.00
145.50	10.30	8.83	0.00
145.75	10.30	8.83	0.00
146.00	10.30	8.83	0.00
146.25	10.30	8.83	0.00
146.50	10.30	8.83	0.00
146.75	10.30	8.83	0.00
147.00	10.30	8.83	0.00
147.25	10.30	8.83	0.00
147.50	10.30	8.83	0.00
147.75	10.30	8.83	0.00
148.00	10.30	8.83	0.00
148.25	10.30	8.83	0.00
148.50	10.30	8.83	0.00
148.75	10.30	8.83	0.00
149.00	10.30	8.83	0.00
149.25	10.30	8.83	0.00
149.50	10.30	8.83	0.00
149.75	10.30	8.83	0.00
150.00	10.30	8.83	0.00

Summary for Subcatchment 4S: SB-3

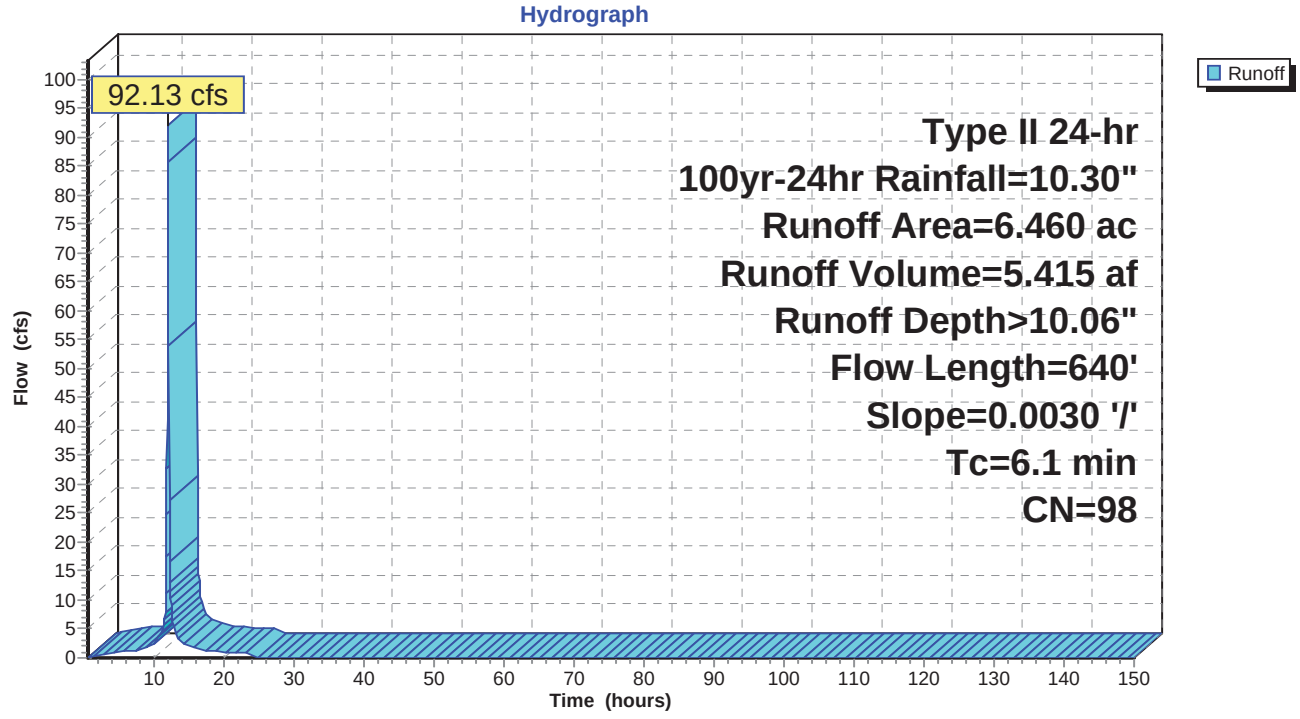
Runoff = 92.13 cfs @ 11.96 hrs, Volume= 5.415 af, Depth>10.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
	1.510	98	Paved roads w/curbs & sewers, HSG A
*	4.950	98	Gravel surface, HSG A
	6.460	98	Weighted Average
	6.460		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	289	0.0030	0.94		**Sheet Flow, Overland Flow to Storm Inlet** Smooth surfaces n= 0.011 P2= 4.50"
1.0	351	0.0030	5.70	17.90	**Pipe Channel, Storm System to Pond** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.009 Corrugated PE, smooth interior
6.1	640	Total			

Subcatchment 4S: SB-3



Hydrograph for Subcatchment 4S: SB-3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.02	13.75	8.34	8.10	2.94
0.75	0.08	0.01	0.17	14.00	8.45	8.21	2.61
1.00	0.11	0.02	0.28	14.25	8.54	8.30	2.41
1.25	0.14	0.03	0.38	14.50	8.63	8.39	2.29
1.50	0.17	0.05	0.45	14.75	8.71	8.47	2.17
1.75	0.20	0.07	0.51	15.00	8.79	8.55	2.06
2.00	0.23	0.09	0.57	15.25	8.87	8.63	1.94
2.25	0.26	0.11	0.61	15.50	8.94	8.70	1.82
2.50	0.29	0.14	0.65	15.75	9.00	8.76	1.70
2.75	0.32	0.16	0.69	16.00	9.06	8.82	1.59
3.00	0.36	0.19	0.72	16.25	9.12	8.88	1.52
3.25	0.39	0.22	0.76	16.50	9.18	8.94	1.47
3.50	0.42	0.25	0.79	16.75	9.23	8.99	1.43
3.75	0.46	0.28	0.81	17.00	9.29	9.05	1.39
4.00	0.49	0.31	0.84	17.25	9.34	9.10	1.35
4.25	0.53	0.35	0.87	17.50	9.39	9.15	1.31
4.50	0.57	0.38	0.91	17.75	9.44	9.20	1.26
4.75	0.61	0.42	0.95	18.00	9.49	9.25	1.22
5.00	0.65	0.46	0.99	18.25	9.53	9.29	1.18
5.25	0.69	0.49	1.03	18.50	9.58	9.34	1.14
5.50	0.73	0.54	1.07	18.75	9.62	9.38	1.10
5.75	0.78	0.58	1.10	19.00	9.66	9.42	1.06
6.00	0.82	0.62	1.14	19.25	9.70	9.46	1.01
6.25	0.87	0.67	1.18	19.50	9.74	9.49	0.97
6.50	0.92	0.71	1.22	19.75	9.77	9.53	0.93
6.75	0.97	0.76	1.25	20.00	9.81	9.56	0.89
7.00	1.02	0.81	1.29	20.25	9.84	9.60	0.87
7.25	1.07	0.86	1.32	20.50	9.87	9.63	0.86
7.50	1.13	0.91	1.36	20.75	9.90	9.66	0.85
7.75	1.18	0.97	1.40	21.00	9.94	9.70	0.84
8.00	1.24	1.02	1.43	21.25	9.97	9.73	0.83
8.25	1.30	1.08	1.55	21.50	10.00	9.76	0.82
8.50	1.36	1.14	1.72	21.75	10.03	9.79	0.82
8.75	1.43	1.22	1.88	22.00	10.06	9.82	0.81
9.00	1.51	1.29	2.05	22.25	10.09	9.85	0.80
9.25	1.60	1.38	2.12	22.50	10.12	9.88	0.79
9.50	1.68	1.46	2.12	22.75	10.15	9.91	0.78
9.75	1.77	1.54	2.29	23.00	10.18	9.94	0.77
10.00	1.86	1.64	2.56	23.25	10.21	9.97	0.77
10.25	1.98	1.75	2.91	23.50	10.24	10.00	0.76
10.50	2.10	1.87	3.31	23.75	10.27	10.03	0.75
10.75	2.25	2.02	3.88	24.00	**10.30**	**10.06**	0.74
11.00	2.42	2.19	4.55	24.25	10.30	10.06	0.01
11.25	2.64	2.41	5.80	24.50	10.30	10.06	0.00
11.50	2.91	2.68	7.41	24.75	10.30	10.06	0.00
11.75	3.99	3.75	**32.73**	25.00	10.30	10.06	0.00
12.00	6.83	6.59	**85.61**	25.25	10.30	10.06	0.00
12.25	7.27	7.03	11.37	25.50	10.30	10.06	0.00
12.50	7.57	7.33	7.27	25.75	10.30	10.06	0.00
12.75	7.78	7.54	5.29	26.00	10.30	10.06	0.00
13.00	7.95	7.71	4.42	26.25	10.30	10.06	0.00
13.25	8.10	7.86	3.80	26.50	10.30	10.06	0.00
13.50	8.23	7.99	3.33	26.75	10.30	10.06	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	10.06	0.00	40.25	10.30	10.06	0.00
27.25	10.30	10.06	0.00	40.50	10.30	10.06	0.00
27.50	10.30	10.06	0.00	40.75	10.30	10.06	0.00
27.75	10.30	10.06	0.00	41.00	10.30	10.06	0.00
28.00	10.30	10.06	0.00	41.25	10.30	10.06	0.00
28.25	10.30	10.06	0.00	41.50	10.30	10.06	0.00
28.50	10.30	10.06	0.00	41.75	10.30	10.06	0.00
28.75	10.30	10.06	0.00	42.00	10.30	10.06	0.00
29.00	10.30	10.06	0.00	42.25	10.30	10.06	0.00
29.25	10.30	10.06	0.00	42.50	10.30	10.06	0.00
29.50	10.30	10.06	0.00	42.75	10.30	10.06	0.00
29.75	10.30	10.06	0.00	43.00	10.30	10.06	0.00
30.00	10.30	10.06	0.00	43.25	10.30	10.06	0.00
30.25	10.30	10.06	0.00	43.50	10.30	10.06	0.00
30.50	10.30	10.06	0.00	43.75	10.30	10.06	0.00
30.75	10.30	10.06	0.00	44.00	10.30	10.06	0.00
31.00	10.30	10.06	0.00	44.25	10.30	10.06	0.00
31.25	10.30	10.06	0.00	44.50	10.30	10.06	0.00
31.50	10.30	10.06	0.00	44.75	10.30	10.06	0.00
31.75	10.30	10.06	0.00	45.00	10.30	10.06	0.00
32.00	10.30	10.06	0.00	45.25	10.30	10.06	0.00
32.25	10.30	10.06	0.00	45.50	10.30	10.06	0.00
32.50	10.30	10.06	0.00	45.75	10.30	10.06	0.00
32.75	10.30	10.06	0.00	46.00	10.30	10.06	0.00
33.00	10.30	10.06	0.00	46.25	10.30	10.06	0.00
33.25	10.30	10.06	0.00	46.50	10.30	10.06	0.00
33.50	10.30	10.06	0.00	46.75	10.30	10.06	0.00
33.75	10.30	10.06	0.00	47.00	10.30	10.06	0.00
34.00	10.30	10.06	0.00	47.25	10.30	10.06	0.00
34.25	10.30	10.06	0.00	47.50	10.30	10.06	0.00
34.50	10.30	10.06	0.00	47.75	10.30	10.06	0.00
34.75	10.30	10.06	0.00	48.00	10.30	10.06	0.00
35.00	10.30	10.06	0.00	48.25	10.30	10.06	0.00
35.25	10.30	10.06	0.00	48.50	10.30	10.06	0.00
35.50	10.30	10.06	0.00	48.75	10.30	10.06	0.00
35.75	10.30	10.06	0.00	49.00	10.30	10.06	0.00
36.00	10.30	10.06	0.00	49.25	10.30	10.06	0.00
36.25	10.30	10.06	0.00	49.50	10.30	10.06	0.00
36.50	10.30	10.06	0.00	49.75	10.30	10.06	0.00
36.75	10.30	10.06	0.00	50.00	10.30	10.06	0.00
37.00	10.30	10.06	0.00	50.25	10.30	10.06	0.00
37.25	10.30	10.06	0.00	50.50	10.30	10.06	0.00
37.50	10.30	10.06	0.00	50.75	10.30	10.06	0.00
37.75	10.30	10.06	0.00	51.00	10.30	10.06	0.00
38.00	10.30	10.06	0.00	51.25	10.30	10.06	0.00
38.25	10.30	10.06	0.00	51.50	10.30	10.06	0.00
38.50	10.30	10.06	0.00	51.75	10.30	10.06	0.00
38.75	10.30	10.06	0.00	52.00	10.30	10.06	0.00
39.00	10.30	10.06	0.00	52.25	10.30	10.06	0.00
39.25	10.30	10.06	0.00	52.50	10.30	10.06	0.00
39.50	10.30	10.06	0.00	52.75	10.30	10.06	0.00
39.75	10.30	10.06	0.00	53.00	10.30	10.06	0.00
40.00	10.30	10.06	0.00	53.25	10.30	10.06	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	10.06	0.00	66.75	10.30	10.06	0.00
53.75	10.30	10.06	0.00	67.00	10.30	10.06	0.00
54.00	10.30	10.06	0.00	67.25	10.30	10.06	0.00
54.25	10.30	10.06	0.00	67.50	10.30	10.06	0.00
54.50	10.30	10.06	0.00	67.75	10.30	10.06	0.00
54.75	10.30	10.06	0.00	68.00	10.30	10.06	0.00
55.00	10.30	10.06	0.00	68.25	10.30	10.06	0.00
55.25	10.30	10.06	0.00	68.50	10.30	10.06	0.00
55.50	10.30	10.06	0.00	68.75	10.30	10.06	0.00
55.75	10.30	10.06	0.00	69.00	10.30	10.06	0.00
56.00	10.30	10.06	0.00	69.25	10.30	10.06	0.00
56.25	10.30	10.06	0.00	69.50	10.30	10.06	0.00
56.50	10.30	10.06	0.00	69.75	10.30	10.06	0.00
56.75	10.30	10.06	0.00	70.00	10.30	10.06	0.00
57.00	10.30	10.06	0.00	70.25	10.30	10.06	0.00
57.25	10.30	10.06	0.00	70.50	10.30	10.06	0.00
57.50	10.30	10.06	0.00	70.75	10.30	10.06	0.00
57.75	10.30	10.06	0.00	71.00	10.30	10.06	0.00
58.00	10.30	10.06	0.00	71.25	10.30	10.06	0.00
58.25	10.30	10.06	0.00	71.50	10.30	10.06	0.00
58.50	10.30	10.06	0.00	71.75	10.30	10.06	0.00
58.75	10.30	10.06	0.00	72.00	10.30	10.06	0.00
59.00	10.30	10.06	0.00	72.25	10.30	10.06	0.00
59.25	10.30	10.06	0.00	72.50	10.30	10.06	0.00
59.50	10.30	10.06	0.00	72.75	10.30	10.06	0.00
59.75	10.30	10.06	0.00	73.00	10.30	10.06	0.00
60.00	10.30	10.06	0.00	73.25	10.30	10.06	0.00
60.25	10.30	10.06	0.00	73.50	10.30	10.06	0.00
60.50	10.30	10.06	0.00	73.75	10.30	10.06	0.00
60.75	10.30	10.06	0.00	74.00	10.30	10.06	0.00
61.00	10.30	10.06	0.00	74.25	10.30	10.06	0.00
61.25	10.30	10.06	0.00	74.50	10.30	10.06	0.00
61.50	10.30	10.06	0.00	74.75	10.30	10.06	0.00
61.75	10.30	10.06	0.00	75.00	10.30	10.06	0.00
62.00	10.30	10.06	0.00	75.25	10.30	10.06	0.00
62.25	10.30	10.06	0.00	75.50	10.30	10.06	0.00
62.50	10.30	10.06	0.00	75.75	10.30	10.06	0.00
62.75	10.30	10.06	0.00	76.00	10.30	10.06	0.00
63.00	10.30	10.06	0.00	76.25	10.30	10.06	0.00
63.25	10.30	10.06	0.00	76.50	10.30	10.06	0.00
63.50	10.30	10.06	0.00	76.75	10.30	10.06	0.00
63.75	10.30	10.06	0.00	77.00	10.30	10.06	0.00
64.00	10.30	10.06	0.00	77.25	10.30	10.06	0.00
64.25	10.30	10.06	0.00	77.50	10.30	10.06	0.00
64.50	10.30	10.06	0.00	77.75	10.30	10.06	0.00
64.75	10.30	10.06	0.00	78.00	10.30	10.06	0.00
65.00	10.30	10.06	0.00	78.25	10.30	10.06	0.00
65.25	10.30	10.06	0.00	78.50	10.30	10.06	0.00
65.50	10.30	10.06	0.00	78.75	10.30	10.06	0.00
65.75	10.30	10.06	0.00	79.00	10.30	10.06	0.00
66.00	10.30	10.06	0.00	79.25	10.30	10.06	0.00
66.25	10.30	10.06	0.00	79.50	10.30	10.06	0.00
66.50	10.30	10.06	0.00	79.75	10.30	10.06	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	10.06	0.00	93.25	10.30	10.06	0.00
80.25	10.30	10.06	0.00	93.50	10.30	10.06	0.00
80.50	10.30	10.06	0.00	93.75	10.30	10.06	0.00
80.75	10.30	10.06	0.00	94.00	10.30	10.06	0.00
81.00	10.30	10.06	0.00	94.25	10.30	10.06	0.00
81.25	10.30	10.06	0.00	94.50	10.30	10.06	0.00
81.50	10.30	10.06	0.00	94.75	10.30	10.06	0.00
81.75	10.30	10.06	0.00	95.00	10.30	10.06	0.00
82.00	10.30	10.06	0.00	95.25	10.30	10.06	0.00
82.25	10.30	10.06	0.00	95.50	10.30	10.06	0.00
82.50	10.30	10.06	0.00	95.75	10.30	10.06	0.00
82.75	10.30	10.06	0.00	96.00	10.30	10.06	0.00
83.00	10.30	10.06	0.00	96.25	10.30	10.06	0.00
83.25	10.30	10.06	0.00	96.50	10.30	10.06	0.00
83.50	10.30	10.06	0.00	96.75	10.30	10.06	0.00
83.75	10.30	10.06	0.00	97.00	10.30	10.06	0.00
84.00	10.30	10.06	0.00	97.25	10.30	10.06	0.00
84.25	10.30	10.06	0.00	97.50	10.30	10.06	0.00
84.50	10.30	10.06	0.00	97.75	10.30	10.06	0.00
84.75	10.30	10.06	0.00	98.00	10.30	10.06	0.00
85.00	10.30	10.06	0.00	98.25	10.30	10.06	0.00
85.25	10.30	10.06	0.00	98.50	10.30	10.06	0.00
85.50	10.30	10.06	0.00	98.75	10.30	10.06	0.00
85.75	10.30	10.06	0.00	99.00	10.30	10.06	0.00
86.00	10.30	10.06	0.00	99.25	10.30	10.06	0.00
86.25	10.30	10.06	0.00	99.50	10.30	10.06	0.00
86.50	10.30	10.06	0.00	99.75	10.30	10.06	0.00
86.75	10.30	10.06	0.00	100.00	10.30	10.06	0.00
87.00	10.30	10.06	0.00	100.25	10.30	10.06	0.00
87.25	10.30	10.06	0.00	100.50	10.30	10.06	0.00
87.50	10.30	10.06	0.00	100.75	10.30	10.06	0.00
87.75	10.30	10.06	0.00	101.00	10.30	10.06	0.00
88.00	10.30	10.06	0.00	101.25	10.30	10.06	0.00
88.25	10.30	10.06	0.00	101.50	10.30	10.06	0.00
88.50	10.30	10.06	0.00	101.75	10.30	10.06	0.00
88.75	10.30	10.06	0.00	102.00	10.30	10.06	0.00
89.00	10.30	10.06	0.00	102.25	10.30	10.06	0.00
89.25	10.30	10.06	0.00	102.50	10.30	10.06	0.00
89.50	10.30	10.06	0.00	102.75	10.30	10.06	0.00
89.75	10.30	10.06	0.00	103.00	10.30	10.06	0.00
90.00	10.30	10.06	0.00	103.25	10.30	10.06	0.00
90.25	10.30	10.06	0.00	103.50	10.30	10.06	0.00
90.50	10.30	10.06	0.00	103.75	10.30	10.06	0.00
90.75	10.30	10.06	0.00	104.00	10.30	10.06	0.00
91.00	10.30	10.06	0.00	104.25	10.30	10.06	0.00
91.25	10.30	10.06	0.00	104.50	10.30	10.06	0.00
91.50	10.30	10.06	0.00	104.75	10.30	10.06	0.00
91.75	10.30	10.06	0.00	105.00	10.30	10.06	0.00
92.00	10.30	10.06	0.00	105.25	10.30	10.06	0.00
92.25	10.30	10.06	0.00	105.50	10.30	10.06	0.00
92.50	10.30	10.06	0.00	105.75	10.30	10.06	0.00
92.75	10.30	10.06	0.00	106.00	10.30	10.06	0.00
93.00	10.30	10.06	0.00	106.25	10.30	10.06	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	10.06	0.00	119.75	10.30	10.06	0.00
106.75	10.30	10.06	0.00	120.00	10.30	10.06	0.00
107.00	10.30	10.06	0.00	120.25	10.30	10.06	0.00
107.25	10.30	10.06	0.00	120.50	10.30	10.06	0.00
107.50	10.30	10.06	0.00	120.75	10.30	10.06	0.00
107.75	10.30	10.06	0.00	121.00	10.30	10.06	0.00
108.00	10.30	10.06	0.00	121.25	10.30	10.06	0.00
108.25	10.30	10.06	0.00	121.50	10.30	10.06	0.00
108.50	10.30	10.06	0.00	121.75	10.30	10.06	0.00
108.75	10.30	10.06	0.00	122.00	10.30	10.06	0.00
109.00	10.30	10.06	0.00	122.25	10.30	10.06	0.00
109.25	10.30	10.06	0.00	122.50	10.30	10.06	0.00
109.50	10.30	10.06	0.00	122.75	10.30	10.06	0.00
109.75	10.30	10.06	0.00	123.00	10.30	10.06	0.00
110.00	10.30	10.06	0.00	123.25	10.30	10.06	0.00
110.25	10.30	10.06	0.00	123.50	10.30	10.06	0.00
110.50	10.30	10.06	0.00	123.75	10.30	10.06	0.00
110.75	10.30	10.06	0.00	124.00	10.30	10.06	0.00
111.00	10.30	10.06	0.00	124.25	10.30	10.06	0.00
111.25	10.30	10.06	0.00	124.50	10.30	10.06	0.00
111.50	10.30	10.06	0.00	124.75	10.30	10.06	0.00
111.75	10.30	10.06	0.00	125.00	10.30	10.06	0.00
112.00	10.30	10.06	0.00	125.25	10.30	10.06	0.00
112.25	10.30	10.06	0.00	125.50	10.30	10.06	0.00
112.50	10.30	10.06	0.00	125.75	10.30	10.06	0.00
112.75	10.30	10.06	0.00	126.00	10.30	10.06	0.00
113.00	10.30	10.06	0.00	126.25	10.30	10.06	0.00
113.25	10.30	10.06	0.00	126.50	10.30	10.06	0.00
113.50	10.30	10.06	0.00	126.75	10.30	10.06	0.00
113.75	10.30	10.06	0.00	127.00	10.30	10.06	0.00
114.00	10.30	10.06	0.00	127.25	10.30	10.06	0.00
114.25	10.30	10.06	0.00	127.50	10.30	10.06	0.00
114.50	10.30	10.06	0.00	127.75	10.30	10.06	0.00
114.75	10.30	10.06	0.00	128.00	10.30	10.06	0.00
115.00	10.30	10.06	0.00	128.25	10.30	10.06	0.00
115.25	10.30	10.06	0.00	128.50	10.30	10.06	0.00
115.50	10.30	10.06	0.00	128.75	10.30	10.06	0.00
115.75	10.30	10.06	0.00	129.00	10.30	10.06	0.00
116.00	10.30	10.06	0.00	129.25	10.30	10.06	0.00
116.25	10.30	10.06	0.00	129.50	10.30	10.06	0.00
116.50	10.30	10.06	0.00	129.75	10.30	10.06	0.00
116.75	10.30	10.06	0.00	130.00	10.30	10.06	0.00
117.00	10.30	10.06	0.00	130.25	10.30	10.06	0.00
117.25	10.30	10.06	0.00	130.50	10.30	10.06	0.00
117.50	10.30	10.06	0.00	130.75	10.30	10.06	0.00
117.75	10.30	10.06	0.00	131.00	10.30	10.06	0.00
118.00	10.30	10.06	0.00	131.25	10.30	10.06	0.00
118.25	10.30	10.06	0.00	131.50	10.30	10.06	0.00
118.50	10.30	10.06	0.00	131.75	10.30	10.06	0.00
118.75	10.30	10.06	0.00	132.00	10.30	10.06	0.00
119.00	10.30	10.06	0.00	132.25	10.30	10.06	0.00
119.25	10.30	10.06	0.00	132.50	10.30	10.06	0.00
119.50	10.30	10.06	0.00	132.75	10.30	10.06	0.00

Hydrograph for Subcatchment 4S: SB-3 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	10.06	0.00
133.25	10.30	10.06	0.00
133.50	10.30	10.06	0.00
133.75	10.30	10.06	0.00
134.00	10.30	10.06	0.00
134.25	10.30	10.06	0.00
134.50	10.30	10.06	0.00
134.75	10.30	10.06	0.00
135.00	10.30	10.06	0.00
135.25	10.30	10.06	0.00
135.50	10.30	10.06	0.00
135.75	10.30	10.06	0.00
136.00	10.30	10.06	0.00
136.25	10.30	10.06	0.00
136.50	10.30	10.06	0.00
136.75	10.30	10.06	0.00
137.00	10.30	10.06	0.00
137.25	10.30	10.06	0.00
137.50	10.30	10.06	0.00
137.75	10.30	10.06	0.00
138.00	10.30	10.06	0.00
138.25	10.30	10.06	0.00
138.50	10.30	10.06	0.00
138.75	10.30	10.06	0.00
139.00	10.30	10.06	0.00
139.25	10.30	10.06	0.00
139.50	10.30	10.06	0.00
139.75	10.30	10.06	0.00
140.00	10.30	10.06	0.00
140.25	10.30	10.06	0.00
140.50	10.30	10.06	0.00
140.75	10.30	10.06	0.00
141.00	10.30	10.06	0.00
141.25	10.30	10.06	0.00
141.50	10.30	10.06	0.00
141.75	10.30	10.06	0.00
142.00	10.30	10.06	0.00
142.25	10.30	10.06	0.00
142.50	10.30	10.06	0.00
142.75	10.30	10.06	0.00
143.00	10.30	10.06	0.00
143.25	10.30	10.06	0.00
143.50	10.30	10.06	0.00
143.75	10.30	10.06	0.00
144.00	10.30	10.06	0.00
144.25	10.30	10.06	0.00
144.50	10.30	10.06	0.00
144.75	10.30	10.06	0.00
145.00	10.30	10.06	0.00
145.25	10.30	10.06	0.00
145.50	10.30	10.06	0.00
145.75	10.30	10.06	0.00
146.00	10.30	10.06	0.00
146.25	10.30	10.06	0.00
146.50	10.30	10.06	0.00
146.75	10.30	10.06	0.00
147.00	10.30	10.06	0.00
147.25	10.30	10.06	0.00
147.50	10.30	10.06	0.00
147.75	10.30	10.06	0.00
148.00	10.30	10.06	0.00
148.25	10.30	10.06	0.00
148.50	10.30	10.06	0.00
148.75	10.30	10.06	0.00
149.00	10.30	10.06	0.00
149.25	10.30	10.06	0.00
149.50	10.30	10.06	0.00
149.75	10.30	10.06	0.00
150.00	10.30	10.06	0.00

Summary for Subcatchment 5S: SB-4

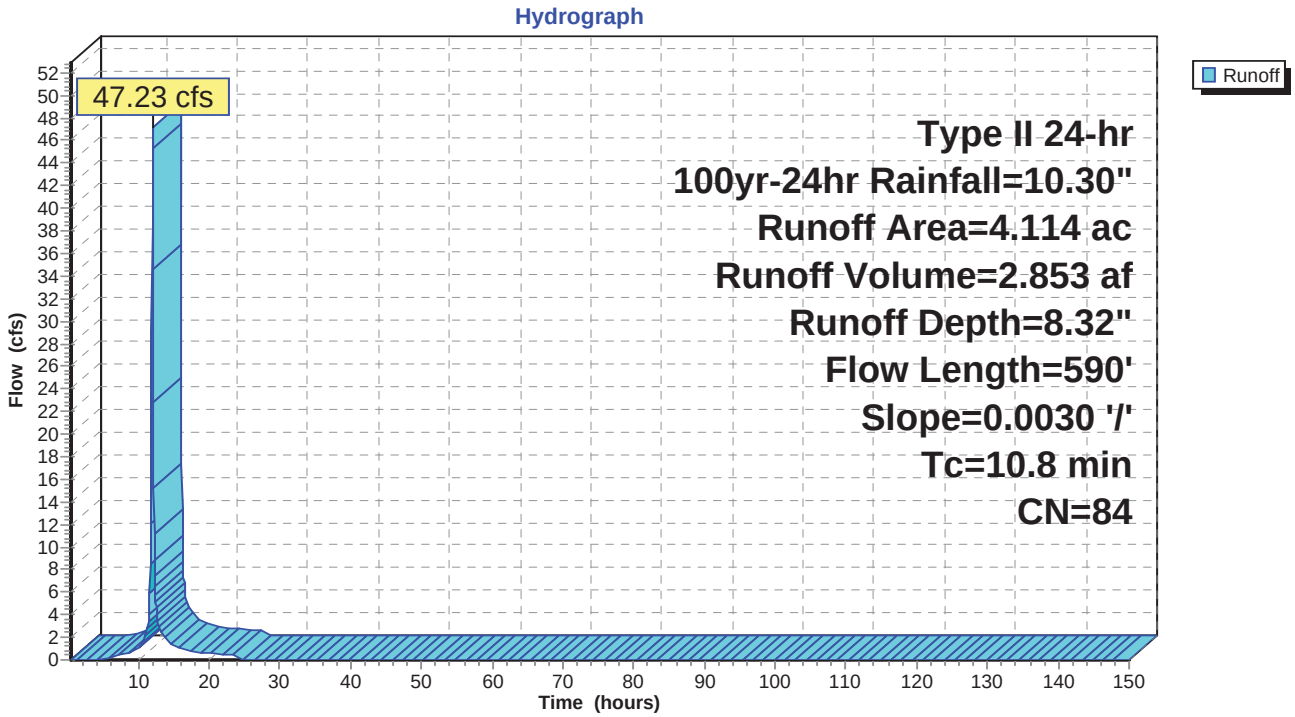
Runoff = 47.23 cfs @ 12.02 hrs, Volume= 2.853 af, Depth= 8.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
*	0.654	98	Gravel surface, HSG A
	0.100	98	Roofs, HSG A
	0.950	39	>75% Grass cover, Good, HSG A
	2.410	98	Paved roads w/curbs & sewers, HSG A
	4.114	84	Weighted Average
	0.950		23.09% Pervious Area
	3.164		76.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	300	0.0030	0.95		**Sheet Flow, Overland Flow to Storm System** Smooth surfaces n= 0.011 P2= 4.50"
5.5	290	0.0030	0.88		**Shallow Concentrated Flow, Overland Flow to Storm Inlet** Unpaved Kv= 16.1 fps
10.8	590	Total			

Subcatchment 5S: SB-4



Hydrograph for Subcatchment 5S: SB-4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.00	13.75	8.34	6.43	1.87
0.75	0.08	0.00	0.00	14.00	8.45	6.52	1.66
1.00	0.11	0.00	0.00	14.25	8.54	6.61	1.50
1.25	0.14	0.00	0.00	14.50	8.63	6.70	1.43
1.50	0.17	0.00	0.00	14.75	8.71	6.78	1.36
1.75	0.20	0.00	0.00	15.00	8.79	6.86	1.29
2.00	0.23	0.00	0.00	15.25	8.87	6.93	1.21
2.25	0.26	0.00	0.00	15.50	8.94	7.00	1.14
2.50	0.29	0.00	0.00	15.75	9.00	7.06	1.07
2.75	0.32	0.00	0.00	16.00	9.06	7.12	1.00
3.00	0.36	0.00	0.00	16.25	9.12	7.18	0.94
3.25	0.39	0.00	0.00	16.50	9.18	7.23	0.92
3.50	0.42	0.00	0.01	16.75	9.23	7.29	0.89
3.75	0.46	0.00	0.03	17.00	9.29	7.34	0.87
4.00	0.49	0.01	0.05	17.25	9.34	7.39	0.84
4.25	0.53	0.01	0.07	17.50	9.39	7.44	0.81
4.50	0.57	0.02	0.09	17.75	9.44	7.48	0.79
4.75	0.61	0.02	0.12	18.00	9.49	7.53	0.76
5.00	0.65	0.03	0.14	18.25	9.53	7.57	0.74
5.25	0.69	0.04	0.17	18.50	9.58	7.62	0.71
5.50	0.73	0.06	0.19	18.75	9.62	7.66	0.69
5.75	0.78	0.07	0.22	19.00	9.66	7.70	0.66
6.00	0.82	0.08	0.24	19.25	9.70	7.74	0.63
6.25	0.87	0.10	0.27	19.50	9.74	7.77	0.61
6.50	0.92	0.12	0.30	19.75	9.77	7.81	0.58
6.75	0.97	0.14	0.33	20.00	9.81	7.84	0.56
7.00	1.02	0.16	0.36	20.25	9.84	7.87	0.54
7.25	1.07	0.18	0.38	20.50	9.87	7.90	0.53
7.50	1.13	0.21	0.41	20.75	9.90	7.94	0.53
7.75	1.18	0.24	0.44	21.00	9.94	7.97	0.52
8.00	1.24	0.26	0.47	21.25	9.97	8.00	0.52
8.25	1.30	0.30	0.52	21.50	10.00	8.03	0.51
8.50	1.36	0.33	0.60	21.75	10.03	8.06	0.51
8.75	1.43	0.38	0.68	22.00	10.06	8.09	0.50
9.00	1.51	0.42	0.77	22.25	10.09	8.12	0.50
9.25	1.60	0.47	0.84	22.50	10.12	8.15	0.49
9.50	1.68	0.53	0.87	22.75	10.15	8.18	0.49
9.75	1.77	0.58	0.93	23.00	10.18	8.21	0.48
10.00	1.86	0.65	1.07	23.25	10.21	8.24	0.48
10.25	1.98	0.73	1.24	23.50	10.24	8.27	0.47
10.50	2.10	0.82	1.46	23.75	10.27	8.29	0.47
10.75	2.25	0.92	1.73	24.00	**10.30**	**8.32**	0.46
11.00	2.42	1.05	2.10	24.25	10.30	8.32	0.06
11.25	2.64	1.22	2.67	24.50	10.30	8.32	0.00
11.50	2.91	1.45	3.55	24.75	10.30	8.32	0.00
11.75	3.99	2.36	12.16	25.00	10.30	8.32	0.00
12.00	6.83	4.98	**46.65**	25.25	10.30	8.32	0.00
12.25	7.27	5.40	11.15	25.50	10.30	8.32	0.00
12.50	7.57	5.68	5.17	25.75	10.30	8.32	0.00
12.75	7.78	5.88	3.45	26.00	10.30	8.32	0.00
13.00	7.95	6.05	2.85	26.25	10.30	8.32	0.00
13.25	8.10	6.19	2.42	26.50	10.30	8.32	0.00
13.50	8.23	6.32	2.12	26.75	10.30	8.32	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	8.32	0.00	40.25	10.30	8.32	0.00
27.25	10.30	8.32	0.00	40.50	10.30	8.32	0.00
27.50	10.30	8.32	0.00	40.75	10.30	8.32	0.00
27.75	10.30	8.32	0.00	41.00	10.30	8.32	0.00
28.00	10.30	8.32	0.00	41.25	10.30	8.32	0.00
28.25	10.30	8.32	0.00	41.50	10.30	8.32	0.00
28.50	10.30	8.32	0.00	41.75	10.30	8.32	0.00
28.75	10.30	8.32	0.00	42.00	10.30	8.32	0.00
29.00	10.30	8.32	0.00	42.25	10.30	8.32	0.00
29.25	10.30	8.32	0.00	42.50	10.30	8.32	0.00
29.50	10.30	8.32	0.00	42.75	10.30	8.32	0.00
29.75	10.30	8.32	0.00	43.00	10.30	8.32	0.00
30.00	10.30	8.32	0.00	43.25	10.30	8.32	0.00
30.25	10.30	8.32	0.00	43.50	10.30	8.32	0.00
30.50	10.30	8.32	0.00	43.75	10.30	8.32	0.00
30.75	10.30	8.32	0.00	44.00	10.30	8.32	0.00
31.00	10.30	8.32	0.00	44.25	10.30	8.32	0.00
31.25	10.30	8.32	0.00	44.50	10.30	8.32	0.00
31.50	10.30	8.32	0.00	44.75	10.30	8.32	0.00
31.75	10.30	8.32	0.00	45.00	10.30	8.32	0.00
32.00	10.30	8.32	0.00	45.25	10.30	8.32	0.00
32.25	10.30	8.32	0.00	45.50	10.30	8.32	0.00
32.50	10.30	8.32	0.00	45.75	10.30	8.32	0.00
32.75	10.30	8.32	0.00	46.00	10.30	8.32	0.00
33.00	10.30	8.32	0.00	46.25	10.30	8.32	0.00
33.25	10.30	8.32	0.00	46.50	10.30	8.32	0.00
33.50	10.30	8.32	0.00	46.75	10.30	8.32	0.00
33.75	10.30	8.32	0.00	47.00	10.30	8.32	0.00
34.00	10.30	8.32	0.00	47.25	10.30	8.32	0.00
34.25	10.30	8.32	0.00	47.50	10.30	8.32	0.00
34.50	10.30	8.32	0.00	47.75	10.30	8.32	0.00
34.75	10.30	8.32	0.00	48.00	10.30	8.32	0.00
35.00	10.30	8.32	0.00	48.25	10.30	8.32	0.00
35.25	10.30	8.32	0.00	48.50	10.30	8.32	0.00
35.50	10.30	8.32	0.00	48.75	10.30	8.32	0.00
35.75	10.30	8.32	0.00	49.00	10.30	8.32	0.00
36.00	10.30	8.32	0.00	49.25	10.30	8.32	0.00
36.25	10.30	8.32	0.00	49.50	10.30	8.32	0.00
36.50	10.30	8.32	0.00	49.75	10.30	8.32	0.00
36.75	10.30	8.32	0.00	50.00	10.30	8.32	0.00
37.00	10.30	8.32	0.00	50.25	10.30	8.32	0.00
37.25	10.30	8.32	0.00	50.50	10.30	8.32	0.00
37.50	10.30	8.32	0.00	50.75	10.30	8.32	0.00
37.75	10.30	8.32	0.00	51.00	10.30	8.32	0.00
38.00	10.30	8.32	0.00	51.25	10.30	8.32	0.00
38.25	10.30	8.32	0.00	51.50	10.30	8.32	0.00
38.50	10.30	8.32	0.00	51.75	10.30	8.32	0.00
38.75	10.30	8.32	0.00	52.00	10.30	8.32	0.00
39.00	10.30	8.32	0.00	52.25	10.30	8.32	0.00
39.25	10.30	8.32	0.00	52.50	10.30	8.32	0.00
39.50	10.30	8.32	0.00	52.75	10.30	8.32	0.00
39.75	10.30	8.32	0.00	53.00	10.30	8.32	0.00
40.00	10.30	8.32	0.00	53.25	10.30	8.32	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	8.32	0.00	66.75	10.30	8.32	0.00
53.75	10.30	8.32	0.00	67.00	10.30	8.32	0.00
54.00	10.30	8.32	0.00	67.25	10.30	8.32	0.00
54.25	10.30	8.32	0.00	67.50	10.30	8.32	0.00
54.50	10.30	8.32	0.00	67.75	10.30	8.32	0.00
54.75	10.30	8.32	0.00	68.00	10.30	8.32	0.00
55.00	10.30	8.32	0.00	68.25	10.30	8.32	0.00
55.25	10.30	8.32	0.00	68.50	10.30	8.32	0.00
55.50	10.30	8.32	0.00	68.75	10.30	8.32	0.00
55.75	10.30	8.32	0.00	69.00	10.30	8.32	0.00
56.00	10.30	8.32	0.00	69.25	10.30	8.32	0.00
56.25	10.30	8.32	0.00	69.50	10.30	8.32	0.00
56.50	10.30	8.32	0.00	69.75	10.30	8.32	0.00
56.75	10.30	8.32	0.00	70.00	10.30	8.32	0.00
57.00	10.30	8.32	0.00	70.25	10.30	8.32	0.00
57.25	10.30	8.32	0.00	70.50	10.30	8.32	0.00
57.50	10.30	8.32	0.00	70.75	10.30	8.32	0.00
57.75	10.30	8.32	0.00	71.00	10.30	8.32	0.00
58.00	10.30	8.32	0.00	71.25	10.30	8.32	0.00
58.25	10.30	8.32	0.00	71.50	10.30	8.32	0.00
58.50	10.30	8.32	0.00	71.75	10.30	8.32	0.00
58.75	10.30	8.32	0.00	72.00	10.30	8.32	0.00
59.00	10.30	8.32	0.00	72.25	10.30	8.32	0.00
59.25	10.30	8.32	0.00	72.50	10.30	8.32	0.00
59.50	10.30	8.32	0.00	72.75	10.30	8.32	0.00
59.75	10.30	8.32	0.00	73.00	10.30	8.32	0.00
60.00	10.30	8.32	0.00	73.25	10.30	8.32	0.00
60.25	10.30	8.32	0.00	73.50	10.30	8.32	0.00
60.50	10.30	8.32	0.00	73.75	10.30	8.32	0.00
60.75	10.30	8.32	0.00	74.00	10.30	8.32	0.00
61.00	10.30	8.32	0.00	74.25	10.30	8.32	0.00
61.25	10.30	8.32	0.00	74.50	10.30	8.32	0.00
61.50	10.30	8.32	0.00	74.75	10.30	8.32	0.00
61.75	10.30	8.32	0.00	75.00	10.30	8.32	0.00
62.00	10.30	8.32	0.00	75.25	10.30	8.32	0.00
62.25	10.30	8.32	0.00	75.50	10.30	8.32	0.00
62.50	10.30	8.32	0.00	75.75	10.30	8.32	0.00
62.75	10.30	8.32	0.00	76.00	10.30	8.32	0.00
63.00	10.30	8.32	0.00	76.25	10.30	8.32	0.00
63.25	10.30	8.32	0.00	76.50	10.30	8.32	0.00
63.50	10.30	8.32	0.00	76.75	10.30	8.32	0.00
63.75	10.30	8.32	0.00	77.00	10.30	8.32	0.00
64.00	10.30	8.32	0.00	77.25	10.30	8.32	0.00
64.25	10.30	8.32	0.00	77.50	10.30	8.32	0.00
64.50	10.30	8.32	0.00	77.75	10.30	8.32	0.00
64.75	10.30	8.32	0.00	78.00	10.30	8.32	0.00
65.00	10.30	8.32	0.00	78.25	10.30	8.32	0.00
65.25	10.30	8.32	0.00	78.50	10.30	8.32	0.00
65.50	10.30	8.32	0.00	78.75	10.30	8.32	0.00
65.75	10.30	8.32	0.00	79.00	10.30	8.32	0.00
66.00	10.30	8.32	0.00	79.25	10.30	8.32	0.00
66.25	10.30	8.32	0.00	79.50	10.30	8.32	0.00
66.50	10.30	8.32	0.00	79.75	10.30	8.32	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	8.32	0.00	93.25	10.30	8.32	0.00
80.25	10.30	8.32	0.00	93.50	10.30	8.32	0.00
80.50	10.30	8.32	0.00	93.75	10.30	8.32	0.00
80.75	10.30	8.32	0.00	94.00	10.30	8.32	0.00
81.00	10.30	8.32	0.00	94.25	10.30	8.32	0.00
81.25	10.30	8.32	0.00	94.50	10.30	8.32	0.00
81.50	10.30	8.32	0.00	94.75	10.30	8.32	0.00
81.75	10.30	8.32	0.00	95.00	10.30	8.32	0.00
82.00	10.30	8.32	0.00	95.25	10.30	8.32	0.00
82.25	10.30	8.32	0.00	95.50	10.30	8.32	0.00
82.50	10.30	8.32	0.00	95.75	10.30	8.32	0.00
82.75	10.30	8.32	0.00	96.00	10.30	8.32	0.00
83.00	10.30	8.32	0.00	96.25	10.30	8.32	0.00
83.25	10.30	8.32	0.00	96.50	10.30	8.32	0.00
83.50	10.30	8.32	0.00	96.75	10.30	8.32	0.00
83.75	10.30	8.32	0.00	97.00	10.30	8.32	0.00
84.00	10.30	8.32	0.00	97.25	10.30	8.32	0.00
84.25	10.30	8.32	0.00	97.50	10.30	8.32	0.00
84.50	10.30	8.32	0.00	97.75	10.30	8.32	0.00
84.75	10.30	8.32	0.00	98.00	10.30	8.32	0.00
85.00	10.30	8.32	0.00	98.25	10.30	8.32	0.00
85.25	10.30	8.32	0.00	98.50	10.30	8.32	0.00
85.50	10.30	8.32	0.00	98.75	10.30	8.32	0.00
85.75	10.30	8.32	0.00	99.00	10.30	8.32	0.00
86.00	10.30	8.32	0.00	99.25	10.30	8.32	0.00
86.25	10.30	8.32	0.00	99.50	10.30	8.32	0.00
86.50	10.30	8.32	0.00	99.75	10.30	8.32	0.00
86.75	10.30	8.32	0.00	100.00	10.30	8.32	0.00
87.00	10.30	8.32	0.00	100.25	10.30	8.32	0.00
87.25	10.30	8.32	0.00	100.50	10.30	8.32	0.00
87.50	10.30	8.32	0.00	100.75	10.30	8.32	0.00
87.75	10.30	8.32	0.00	101.00	10.30	8.32	0.00
88.00	10.30	8.32	0.00	101.25	10.30	8.32	0.00
88.25	10.30	8.32	0.00	101.50	10.30	8.32	0.00
88.50	10.30	8.32	0.00	101.75	10.30	8.32	0.00
88.75	10.30	8.32	0.00	102.00	10.30	8.32	0.00
89.00	10.30	8.32	0.00	102.25	10.30	8.32	0.00
89.25	10.30	8.32	0.00	102.50	10.30	8.32	0.00
89.50	10.30	8.32	0.00	102.75	10.30	8.32	0.00
89.75	10.30	8.32	0.00	103.00	10.30	8.32	0.00
90.00	10.30	8.32	0.00	103.25	10.30	8.32	0.00
90.25	10.30	8.32	0.00	103.50	10.30	8.32	0.00
90.50	10.30	8.32	0.00	103.75	10.30	8.32	0.00
90.75	10.30	8.32	0.00	104.00	10.30	8.32	0.00
91.00	10.30	8.32	0.00	104.25	10.30	8.32	0.00
91.25	10.30	8.32	0.00	104.50	10.30	8.32	0.00
91.50	10.30	8.32	0.00	104.75	10.30	8.32	0.00
91.75	10.30	8.32	0.00	105.00	10.30	8.32	0.00
92.00	10.30	8.32	0.00	105.25	10.30	8.32	0.00
92.25	10.30	8.32	0.00	105.50	10.30	8.32	0.00
92.50	10.30	8.32	0.00	105.75	10.30	8.32	0.00
92.75	10.30	8.32	0.00	106.00	10.30	8.32	0.00
93.00	10.30	8.32	0.00	106.25	10.30	8.32	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	8.32	0.00	119.75	10.30	8.32	0.00
106.75	10.30	8.32	0.00	120.00	10.30	8.32	0.00
107.00	10.30	8.32	0.00	120.25	10.30	8.32	0.00
107.25	10.30	8.32	0.00	120.50	10.30	8.32	0.00
107.50	10.30	8.32	0.00	120.75	10.30	8.32	0.00
107.75	10.30	8.32	0.00	121.00	10.30	8.32	0.00
108.00	10.30	8.32	0.00	121.25	10.30	8.32	0.00
108.25	10.30	8.32	0.00	121.50	10.30	8.32	0.00
108.50	10.30	8.32	0.00	121.75	10.30	8.32	0.00
108.75	10.30	8.32	0.00	122.00	10.30	8.32	0.00
109.00	10.30	8.32	0.00	122.25	10.30	8.32	0.00
109.25	10.30	8.32	0.00	122.50	10.30	8.32	0.00
109.50	10.30	8.32	0.00	122.75	10.30	8.32	0.00
109.75	10.30	8.32	0.00	123.00	10.30	8.32	0.00
110.00	10.30	8.32	0.00	123.25	10.30	8.32	0.00
110.25	10.30	8.32	0.00	123.50	10.30	8.32	0.00
110.50	10.30	8.32	0.00	123.75	10.30	8.32	0.00
110.75	10.30	8.32	0.00	124.00	10.30	8.32	0.00
111.00	10.30	8.32	0.00	124.25	10.30	8.32	0.00
111.25	10.30	8.32	0.00	124.50	10.30	8.32	0.00
111.50	10.30	8.32	0.00	124.75	10.30	8.32	0.00
111.75	10.30	8.32	0.00	125.00	10.30	8.32	0.00
112.00	10.30	8.32	0.00	125.25	10.30	8.32	0.00
112.25	10.30	8.32	0.00	125.50	10.30	8.32	0.00
112.50	10.30	8.32	0.00	125.75	10.30	8.32	0.00
112.75	10.30	8.32	0.00	126.00	10.30	8.32	0.00
113.00	10.30	8.32	0.00	126.25	10.30	8.32	0.00
113.25	10.30	8.32	0.00	126.50	10.30	8.32	0.00
113.50	10.30	8.32	0.00	126.75	10.30	8.32	0.00
113.75	10.30	8.32	0.00	127.00	10.30	8.32	0.00
114.00	10.30	8.32	0.00	127.25	10.30	8.32	0.00
114.25	10.30	8.32	0.00	127.50	10.30	8.32	0.00
114.50	10.30	8.32	0.00	127.75	10.30	8.32	0.00
114.75	10.30	8.32	0.00	128.00	10.30	8.32	0.00
115.00	10.30	8.32	0.00	128.25	10.30	8.32	0.00
115.25	10.30	8.32	0.00	128.50	10.30	8.32	0.00
115.50	10.30	8.32	0.00	128.75	10.30	8.32	0.00
115.75	10.30	8.32	0.00	129.00	10.30	8.32	0.00
116.00	10.30	8.32	0.00	129.25	10.30	8.32	0.00
116.25	10.30	8.32	0.00	129.50	10.30	8.32	0.00
116.50	10.30	8.32	0.00	129.75	10.30	8.32	0.00
116.75	10.30	8.32	0.00	130.00	10.30	8.32	0.00
117.00	10.30	8.32	0.00	130.25	10.30	8.32	0.00
117.25	10.30	8.32	0.00	130.50	10.30	8.32	0.00
117.50	10.30	8.32	0.00	130.75	10.30	8.32	0.00
117.75	10.30	8.32	0.00	131.00	10.30	8.32	0.00
118.00	10.30	8.32	0.00	131.25	10.30	8.32	0.00
118.25	10.30	8.32	0.00	131.50	10.30	8.32	0.00
118.50	10.30	8.32	0.00	131.75	10.30	8.32	0.00
118.75	10.30	8.32	0.00	132.00	10.30	8.32	0.00
119.00	10.30	8.32	0.00	132.25	10.30	8.32	0.00
119.25	10.30	8.32	0.00	132.50	10.30	8.32	0.00
119.50	10.30	8.32	0.00	132.75	10.30	8.32	0.00

Hydrograph for Subcatchment 5S: SB-4 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	8.32	0.00
133.25	10.30	8.32	0.00
133.50	10.30	8.32	0.00
133.75	10.30	8.32	0.00
134.00	10.30	8.32	0.00
134.25	10.30	8.32	0.00
134.50	10.30	8.32	0.00
134.75	10.30	8.32	0.00
135.00	10.30	8.32	0.00
135.25	10.30	8.32	0.00
135.50	10.30	8.32	0.00
135.75	10.30	8.32	0.00
136.00	10.30	8.32	0.00
136.25	10.30	8.32	0.00
136.50	10.30	8.32	0.00
136.75	10.30	8.32	0.00
137.00	10.30	8.32	0.00
137.25	10.30	8.32	0.00
137.50	10.30	8.32	0.00
137.75	10.30	8.32	0.00
138.00	10.30	8.32	0.00
138.25	10.30	8.32	0.00
138.50	10.30	8.32	0.00
138.75	10.30	8.32	0.00
139.00	10.30	8.32	0.00
139.25	10.30	8.32	0.00
139.50	10.30	8.32	0.00
139.75	10.30	8.32	0.00
140.00	10.30	8.32	0.00
140.25	10.30	8.32	0.00
140.50	10.30	8.32	0.00
140.75	10.30	8.32	0.00
141.00	10.30	8.32	0.00
141.25	10.30	8.32	0.00
141.50	10.30	8.32	0.00
141.75	10.30	8.32	0.00
142.00	10.30	8.32	0.00
142.25	10.30	8.32	0.00
142.50	10.30	8.32	0.00
142.75	10.30	8.32	0.00
143.00	10.30	8.32	0.00
143.25	10.30	8.32	0.00
143.50	10.30	8.32	0.00
143.75	10.30	8.32	0.00
144.00	10.30	8.32	0.00
144.25	10.30	8.32	0.00
144.50	10.30	8.32	0.00
144.75	10.30	8.32	0.00
145.00	10.30	8.32	0.00
145.25	10.30	8.32	0.00
145.50	10.30	8.32	0.00
145.75	10.30	8.32	0.00
146.00	10.30	8.32	0.00
146.25	10.30	8.32	0.00
146.50	10.30	8.32	0.00
146.75	10.30	8.32	0.00
147.00	10.30	8.32	0.00
147.25	10.30	8.32	0.00
147.50	10.30	8.32	0.00
147.75	10.30	8.32	0.00
148.00	10.30	8.32	0.00
148.25	10.30	8.32	0.00
148.50	10.30	8.32	0.00
148.75	10.30	8.32	0.00
149.00	10.30	8.32	0.00
149.25	10.30	8.32	0.00
149.50	10.30	8.32	0.00
149.75	10.30	8.32	0.00
150.00	10.30	8.32	0.00

Summary for Subcatchment 6S: SB-5

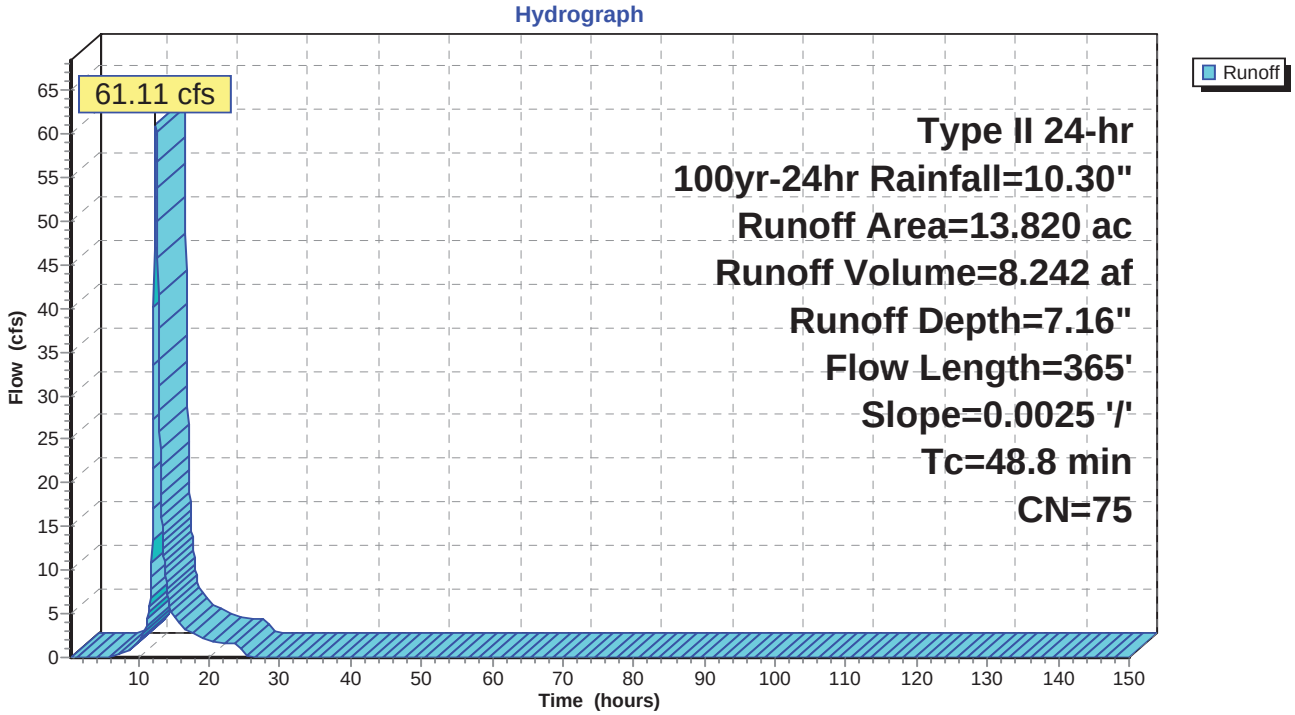
Runoff = 61.11 cfs @ 12.47 hrs, Volume= 8.242 af, Depth= 7.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
	4.100	98	Water Surface, HSG A
	0.470	98	Roofs, HSG A
	5.410	39	>75% Grass cover, Good, HSG A
*	2.200	98	Gravel surface, HSG A
	1.640	98	Paved roads w/curbs & sewers, HSG A
	13.820	75	Weighted Average
	5.410		39.15% Pervious Area
	8.410		60.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
45.7	300	0.0025	0.11		**Sheet Flow, Overland Flow to Pond** Grass: Short n= 0.150 P2= 4.50"
3.1	65	0.0025	0.35		**Shallow Concentrated Flow, Overland Flow to Pond** Short Grass Pasture Kv= 7.0 fps
48.8	365	Total			

Subcatchment 6S: SB-5



Hydrograph for Subcatchment 6S: SB-5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.00	13.75	8.34	5.35	10.01
0.75	0.08	0.00	0.00	14.00	8.45	5.45	8.04
1.00	0.11	0.00	0.00	14.25	8.54	5.53	6.74
1.25	0.14	0.00	0.00	14.50	8.63	5.61	5.78
1.50	0.17	0.00	0.00	14.75	8.71	5.69	5.13
1.75	0.20	0.00	0.00	15.00	8.79	5.76	4.74
2.00	0.23	0.00	0.00	15.25	8.87	5.83	4.45
2.25	0.26	0.00	0.00	15.50	8.94	5.89	4.19
2.50	0.29	0.00	0.00	15.75	9.00	5.95	3.95
2.75	0.32	0.00	0.00	16.00	9.06	6.01	3.72
3.00	0.36	0.00	0.00	16.25	9.12	6.06	3.49
3.25	0.39	0.00	0.00	16.50	9.18	6.12	3.28
3.50	0.42	0.00	0.00	16.75	9.23	6.17	3.12
3.75	0.46	0.00	0.00	17.00	9.29	6.22	2.99
4.00	0.49	0.00	0.00	17.25	9.34	6.27	2.89
4.25	0.53	0.00	0.00	17.50	9.39	6.31	2.80
4.50	0.57	0.00	0.00	17.75	9.44	6.36	2.72
4.75	0.61	0.00	0.00	18.00	9.49	6.40	2.63
5.00	0.65	0.00	0.00	18.25	9.53	6.44	2.55
5.25	0.69	0.00	0.00	18.50	9.58	6.48	2.47
5.50	0.73	0.00	0.00	18.75	9.62	6.52	2.39
5.75	0.78	0.00	0.02	19.00	9.66	6.56	2.31
6.00	0.82	0.01	0.06	19.25	9.70	6.60	2.23
6.25	0.87	0.01	0.11	19.50	9.74	6.63	2.14
6.50	0.92	0.02	0.17	19.75	9.77	6.66	2.06
6.75	0.97	0.03	0.23	20.00	9.81	6.70	1.98
7.00	1.02	0.03	0.30	20.25	9.84	6.73	1.90
7.25	1.07	0.04	0.37	20.50	9.87	6.76	1.82
7.50	1.13	0.06	0.45	20.75	9.90	6.79	1.77
7.75	1.18	0.07	0.52	21.00	9.94	6.82	1.73
8.00	1.24	0.08	0.60	21.25	9.97	6.85	1.71
8.25	1.30	0.10	0.69	21.50	10.00	6.88	1.69
8.50	1.36	0.12	0.78	21.75	10.03	6.91	1.67
8.75	1.43	0.14	0.90	22.00	10.06	6.94	1.65
9.00	1.51	0.17	1.06	22.25	10.09	6.96	1.64
9.25	1.60	0.20	1.25	22.50	10.12	6.99	1.62
9.50	1.68	0.24	1.44	22.75	10.15	7.02	1.60
9.75	1.77	0.27	1.61	23.00	10.18	7.05	1.59
10.00	1.86	0.32	1.78	23.25	10.21	7.08	1.57
10.25	1.98	0.37	2.01	23.50	10.24	7.10	1.56
10.50	2.10	0.43	2.33	23.75	10.27	7.13	1.54
10.75	2.25	0.51	2.76	24.00	**10.30**	**7.16**	1.52
11.00	2.42	0.60	3.32	24.25	10.30	7.16	1.46
11.25	2.64	0.73	4.06	24.50	10.30	7.16	1.13
11.50	2.91	0.91	5.11	24.75	10.30	7.16	0.63
11.75	3.99	1.66	7.08	25.00	10.30	7.16	0.30
12.00	6.83	4.00	17.06	25.25	10.30	7.16	0.14
12.25	7.27	4.39	**46.78**	25.50	10.30	7.16	0.06
12.50	7.57	4.66	**60.86**	25.75	10.30	7.16	0.03
12.75	7.78	4.84	45.85	26.00	10.30	7.16	0.01
13.00	7.95	5.00	28.35	26.25	10.30	7.16	0.01
13.25	8.10	5.13	18.70	26.50	10.30	7.16	0.00
13.50	8.23	5.25	13.21	26.75	10.30	7.16	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	7.16	0.00	40.25	10.30	7.16	0.00
27.25	10.30	7.16	0.00	40.50	10.30	7.16	0.00
27.50	10.30	7.16	0.00	40.75	10.30	7.16	0.00
27.75	10.30	7.16	0.00	41.00	10.30	7.16	0.00
28.00	10.30	7.16	0.00	41.25	10.30	7.16	0.00
28.25	10.30	7.16	0.00	41.50	10.30	7.16	0.00
28.50	10.30	7.16	0.00	41.75	10.30	7.16	0.00
28.75	10.30	7.16	0.00	42.00	10.30	7.16	0.00
29.00	10.30	7.16	0.00	42.25	10.30	7.16	0.00
29.25	10.30	7.16	0.00	42.50	10.30	7.16	0.00
29.50	10.30	7.16	0.00	42.75	10.30	7.16	0.00
29.75	10.30	7.16	0.00	43.00	10.30	7.16	0.00
30.00	10.30	7.16	0.00	43.25	10.30	7.16	0.00
30.25	10.30	7.16	0.00	43.50	10.30	7.16	0.00
30.50	10.30	7.16	0.00	43.75	10.30	7.16	0.00
30.75	10.30	7.16	0.00	44.00	10.30	7.16	0.00
31.00	10.30	7.16	0.00	44.25	10.30	7.16	0.00
31.25	10.30	7.16	0.00	44.50	10.30	7.16	0.00
31.50	10.30	7.16	0.00	44.75	10.30	7.16	0.00
31.75	10.30	7.16	0.00	45.00	10.30	7.16	0.00
32.00	10.30	7.16	0.00	45.25	10.30	7.16	0.00
32.25	10.30	7.16	0.00	45.50	10.30	7.16	0.00
32.50	10.30	7.16	0.00	45.75	10.30	7.16	0.00
32.75	10.30	7.16	0.00	46.00	10.30	7.16	0.00
33.00	10.30	7.16	0.00	46.25	10.30	7.16	0.00
33.25	10.30	7.16	0.00	46.50	10.30	7.16	0.00
33.50	10.30	7.16	0.00	46.75	10.30	7.16	0.00
33.75	10.30	7.16	0.00	47.00	10.30	7.16	0.00
34.00	10.30	7.16	0.00	47.25	10.30	7.16	0.00
34.25	10.30	7.16	0.00	47.50	10.30	7.16	0.00
34.50	10.30	7.16	0.00	47.75	10.30	7.16	0.00
34.75	10.30	7.16	0.00	48.00	10.30	7.16	0.00
35.00	10.30	7.16	0.00	48.25	10.30	7.16	0.00
35.25	10.30	7.16	0.00	48.50	10.30	7.16	0.00
35.50	10.30	7.16	0.00	48.75	10.30	7.16	0.00
35.75	10.30	7.16	0.00	49.00	10.30	7.16	0.00
36.00	10.30	7.16	0.00	49.25	10.30	7.16	0.00
36.25	10.30	7.16	0.00	49.50	10.30	7.16	0.00
36.50	10.30	7.16	0.00	49.75	10.30	7.16	0.00
36.75	10.30	7.16	0.00	50.00	10.30	7.16	0.00
37.00	10.30	7.16	0.00	50.25	10.30	7.16	0.00
37.25	10.30	7.16	0.00	50.50	10.30	7.16	0.00
37.50	10.30	7.16	0.00	50.75	10.30	7.16	0.00
37.75	10.30	7.16	0.00	51.00	10.30	7.16	0.00
38.00	10.30	7.16	0.00	51.25	10.30	7.16	0.00
38.25	10.30	7.16	0.00	51.50	10.30	7.16	0.00
38.50	10.30	7.16	0.00	51.75	10.30	7.16	0.00
38.75	10.30	7.16	0.00	52.00	10.30	7.16	0.00
39.00	10.30	7.16	0.00	52.25	10.30	7.16	0.00
39.25	10.30	7.16	0.00	52.50	10.30	7.16	0.00
39.50	10.30	7.16	0.00	52.75	10.30	7.16	0.00
39.75	10.30	7.16	0.00	53.00	10.30	7.16	0.00
40.00	10.30	7.16	0.00	53.25	10.30	7.16	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	7.16	0.00	66.75	10.30	7.16	0.00
53.75	10.30	7.16	0.00	67.00	10.30	7.16	0.00
54.00	10.30	7.16	0.00	67.25	10.30	7.16	0.00
54.25	10.30	7.16	0.00	67.50	10.30	7.16	0.00
54.50	10.30	7.16	0.00	67.75	10.30	7.16	0.00
54.75	10.30	7.16	0.00	68.00	10.30	7.16	0.00
55.00	10.30	7.16	0.00	68.25	10.30	7.16	0.00
55.25	10.30	7.16	0.00	68.50	10.30	7.16	0.00
55.50	10.30	7.16	0.00	68.75	10.30	7.16	0.00
55.75	10.30	7.16	0.00	69.00	10.30	7.16	0.00
56.00	10.30	7.16	0.00	69.25	10.30	7.16	0.00
56.25	10.30	7.16	0.00	69.50	10.30	7.16	0.00
56.50	10.30	7.16	0.00	69.75	10.30	7.16	0.00
56.75	10.30	7.16	0.00	70.00	10.30	7.16	0.00
57.00	10.30	7.16	0.00	70.25	10.30	7.16	0.00
57.25	10.30	7.16	0.00	70.50	10.30	7.16	0.00
57.50	10.30	7.16	0.00	70.75	10.30	7.16	0.00
57.75	10.30	7.16	0.00	71.00	10.30	7.16	0.00
58.00	10.30	7.16	0.00	71.25	10.30	7.16	0.00
58.25	10.30	7.16	0.00	71.50	10.30	7.16	0.00
58.50	10.30	7.16	0.00	71.75	10.30	7.16	0.00
58.75	10.30	7.16	0.00	72.00	10.30	7.16	0.00
59.00	10.30	7.16	0.00	72.25	10.30	7.16	0.00
59.25	10.30	7.16	0.00	72.50	10.30	7.16	0.00
59.50	10.30	7.16	0.00	72.75	10.30	7.16	0.00
59.75	10.30	7.16	0.00	73.00	10.30	7.16	0.00
60.00	10.30	7.16	0.00	73.25	10.30	7.16	0.00
60.25	10.30	7.16	0.00	73.50	10.30	7.16	0.00
60.50	10.30	7.16	0.00	73.75	10.30	7.16	0.00
60.75	10.30	7.16	0.00	74.00	10.30	7.16	0.00
61.00	10.30	7.16	0.00	74.25	10.30	7.16	0.00
61.25	10.30	7.16	0.00	74.50	10.30	7.16	0.00
61.50	10.30	7.16	0.00	74.75	10.30	7.16	0.00
61.75	10.30	7.16	0.00	75.00	10.30	7.16	0.00
62.00	10.30	7.16	0.00	75.25	10.30	7.16	0.00
62.25	10.30	7.16	0.00	75.50	10.30	7.16	0.00
62.50	10.30	7.16	0.00	75.75	10.30	7.16	0.00
62.75	10.30	7.16	0.00	76.00	10.30	7.16	0.00
63.00	10.30	7.16	0.00	76.25	10.30	7.16	0.00
63.25	10.30	7.16	0.00	76.50	10.30	7.16	0.00
63.50	10.30	7.16	0.00	76.75	10.30	7.16	0.00
63.75	10.30	7.16	0.00	77.00	10.30	7.16	0.00
64.00	10.30	7.16	0.00	77.25	10.30	7.16	0.00
64.25	10.30	7.16	0.00	77.50	10.30	7.16	0.00
64.50	10.30	7.16	0.00	77.75	10.30	7.16	0.00
64.75	10.30	7.16	0.00	78.00	10.30	7.16	0.00
65.00	10.30	7.16	0.00	78.25	10.30	7.16	0.00
65.25	10.30	7.16	0.00	78.50	10.30	7.16	0.00
65.50	10.30	7.16	0.00	78.75	10.30	7.16	0.00
65.75	10.30	7.16	0.00	79.00	10.30	7.16	0.00
66.00	10.30	7.16	0.00	79.25	10.30	7.16	0.00
66.25	10.30	7.16	0.00	79.50	10.30	7.16	0.00
66.50	10.30	7.16	0.00	79.75	10.30	7.16	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	7.16	0.00	93.25	10.30	7.16	0.00
80.25	10.30	7.16	0.00	93.50	10.30	7.16	0.00
80.50	10.30	7.16	0.00	93.75	10.30	7.16	0.00
80.75	10.30	7.16	0.00	94.00	10.30	7.16	0.00
81.00	10.30	7.16	0.00	94.25	10.30	7.16	0.00
81.25	10.30	7.16	0.00	94.50	10.30	7.16	0.00
81.50	10.30	7.16	0.00	94.75	10.30	7.16	0.00
81.75	10.30	7.16	0.00	95.00	10.30	7.16	0.00
82.00	10.30	7.16	0.00	95.25	10.30	7.16	0.00
82.25	10.30	7.16	0.00	95.50	10.30	7.16	0.00
82.50	10.30	7.16	0.00	95.75	10.30	7.16	0.00
82.75	10.30	7.16	0.00	96.00	10.30	7.16	0.00
83.00	10.30	7.16	0.00	96.25	10.30	7.16	0.00
83.25	10.30	7.16	0.00	96.50	10.30	7.16	0.00
83.50	10.30	7.16	0.00	96.75	10.30	7.16	0.00
83.75	10.30	7.16	0.00	97.00	10.30	7.16	0.00
84.00	10.30	7.16	0.00	97.25	10.30	7.16	0.00
84.25	10.30	7.16	0.00	97.50	10.30	7.16	0.00
84.50	10.30	7.16	0.00	97.75	10.30	7.16	0.00
84.75	10.30	7.16	0.00	98.00	10.30	7.16	0.00
85.00	10.30	7.16	0.00	98.25	10.30	7.16	0.00
85.25	10.30	7.16	0.00	98.50	10.30	7.16	0.00
85.50	10.30	7.16	0.00	98.75	10.30	7.16	0.00
85.75	10.30	7.16	0.00	99.00	10.30	7.16	0.00
86.00	10.30	7.16	0.00	99.25	10.30	7.16	0.00
86.25	10.30	7.16	0.00	99.50	10.30	7.16	0.00
86.50	10.30	7.16	0.00	99.75	10.30	7.16	0.00
86.75	10.30	7.16	0.00	100.00	10.30	7.16	0.00
87.00	10.30	7.16	0.00	100.25	10.30	7.16	0.00
87.25	10.30	7.16	0.00	100.50	10.30	7.16	0.00
87.50	10.30	7.16	0.00	100.75	10.30	7.16	0.00
87.75	10.30	7.16	0.00	101.00	10.30	7.16	0.00
88.00	10.30	7.16	0.00	101.25	10.30	7.16	0.00
88.25	10.30	7.16	0.00	101.50	10.30	7.16	0.00
88.50	10.30	7.16	0.00	101.75	10.30	7.16	0.00
88.75	10.30	7.16	0.00	102.00	10.30	7.16	0.00
89.00	10.30	7.16	0.00	102.25	10.30	7.16	0.00
89.25	10.30	7.16	0.00	102.50	10.30	7.16	0.00
89.50	10.30	7.16	0.00	102.75	10.30	7.16	0.00
89.75	10.30	7.16	0.00	103.00	10.30	7.16	0.00
90.00	10.30	7.16	0.00	103.25	10.30	7.16	0.00
90.25	10.30	7.16	0.00	103.50	10.30	7.16	0.00
90.50	10.30	7.16	0.00	103.75	10.30	7.16	0.00
90.75	10.30	7.16	0.00	104.00	10.30	7.16	0.00
91.00	10.30	7.16	0.00	104.25	10.30	7.16	0.00
91.25	10.30	7.16	0.00	104.50	10.30	7.16	0.00
91.50	10.30	7.16	0.00	104.75	10.30	7.16	0.00
91.75	10.30	7.16	0.00	105.00	10.30	7.16	0.00
92.00	10.30	7.16	0.00	105.25	10.30	7.16	0.00
92.25	10.30	7.16	0.00	105.50	10.30	7.16	0.00
92.50	10.30	7.16	0.00	105.75	10.30	7.16	0.00
92.75	10.30	7.16	0.00	106.00	10.30	7.16	0.00
93.00	10.30	7.16	0.00	106.25	10.30	7.16	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	7.16	0.00	119.75	10.30	7.16	0.00
106.75	10.30	7.16	0.00	120.00	10.30	7.16	0.00
107.00	10.30	7.16	0.00	120.25	10.30	7.16	0.00
107.25	10.30	7.16	0.00	120.50	10.30	7.16	0.00
107.50	10.30	7.16	0.00	120.75	10.30	7.16	0.00
107.75	10.30	7.16	0.00	121.00	10.30	7.16	0.00
108.00	10.30	7.16	0.00	121.25	10.30	7.16	0.00
108.25	10.30	7.16	0.00	121.50	10.30	7.16	0.00
108.50	10.30	7.16	0.00	121.75	10.30	7.16	0.00
108.75	10.30	7.16	0.00	122.00	10.30	7.16	0.00
109.00	10.30	7.16	0.00	122.25	10.30	7.16	0.00
109.25	10.30	7.16	0.00	122.50	10.30	7.16	0.00
109.50	10.30	7.16	0.00	122.75	10.30	7.16	0.00
109.75	10.30	7.16	0.00	123.00	10.30	7.16	0.00
110.00	10.30	7.16	0.00	123.25	10.30	7.16	0.00
110.25	10.30	7.16	0.00	123.50	10.30	7.16	0.00
110.50	10.30	7.16	0.00	123.75	10.30	7.16	0.00
110.75	10.30	7.16	0.00	124.00	10.30	7.16	0.00
111.00	10.30	7.16	0.00	124.25	10.30	7.16	0.00
111.25	10.30	7.16	0.00	124.50	10.30	7.16	0.00
111.50	10.30	7.16	0.00	124.75	10.30	7.16	0.00
111.75	10.30	7.16	0.00	125.00	10.30	7.16	0.00
112.00	10.30	7.16	0.00	125.25	10.30	7.16	0.00
112.25	10.30	7.16	0.00	125.50	10.30	7.16	0.00
112.50	10.30	7.16	0.00	125.75	10.30	7.16	0.00
112.75	10.30	7.16	0.00	126.00	10.30	7.16	0.00
113.00	10.30	7.16	0.00	126.25	10.30	7.16	0.00
113.25	10.30	7.16	0.00	126.50	10.30	7.16	0.00
113.50	10.30	7.16	0.00	126.75	10.30	7.16	0.00
113.75	10.30	7.16	0.00	127.00	10.30	7.16	0.00
114.00	10.30	7.16	0.00	127.25	10.30	7.16	0.00
114.25	10.30	7.16	0.00	127.50	10.30	7.16	0.00
114.50	10.30	7.16	0.00	127.75	10.30	7.16	0.00
114.75	10.30	7.16	0.00	128.00	10.30	7.16	0.00
115.00	10.30	7.16	0.00	128.25	10.30	7.16	0.00
115.25	10.30	7.16	0.00	128.50	10.30	7.16	0.00
115.50	10.30	7.16	0.00	128.75	10.30	7.16	0.00
115.75	10.30	7.16	0.00	129.00	10.30	7.16	0.00
116.00	10.30	7.16	0.00	129.25	10.30	7.16	0.00
116.25	10.30	7.16	0.00	129.50	10.30	7.16	0.00
116.50	10.30	7.16	0.00	129.75	10.30	7.16	0.00
116.75	10.30	7.16	0.00	130.00	10.30	7.16	0.00
117.00	10.30	7.16	0.00	130.25	10.30	7.16	0.00
117.25	10.30	7.16	0.00	130.50	10.30	7.16	0.00
117.50	10.30	7.16	0.00	130.75	10.30	7.16	0.00
117.75	10.30	7.16	0.00	131.00	10.30	7.16	0.00
118.00	10.30	7.16	0.00	131.25	10.30	7.16	0.00
118.25	10.30	7.16	0.00	131.50	10.30	7.16	0.00
118.50	10.30	7.16	0.00	131.75	10.30	7.16	0.00
118.75	10.30	7.16	0.00	132.00	10.30	7.16	0.00
119.00	10.30	7.16	0.00	132.25	10.30	7.16	0.00
119.25	10.30	7.16	0.00	132.50	10.30	7.16	0.00
119.50	10.30	7.16	0.00	132.75	10.30	7.16	0.00

Hydrograph for Subcatchment 6S: SB-5 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	7.16	0.00
133.25	10.30	7.16	0.00
133.50	10.30	7.16	0.00
133.75	10.30	7.16	0.00
134.00	10.30	7.16	0.00
134.25	10.30	7.16	0.00
134.50	10.30	7.16	0.00
134.75	10.30	7.16	0.00
135.00	10.30	7.16	0.00
135.25	10.30	7.16	0.00
135.50	10.30	7.16	0.00
135.75	10.30	7.16	0.00
136.00	10.30	7.16	0.00
136.25	10.30	7.16	0.00
136.50	10.30	7.16	0.00
136.75	10.30	7.16	0.00
137.00	10.30	7.16	0.00
137.25	10.30	7.16	0.00
137.50	10.30	7.16	0.00
137.75	10.30	7.16	0.00
138.00	10.30	7.16	0.00
138.25	10.30	7.16	0.00
138.50	10.30	7.16	0.00
138.75	10.30	7.16	0.00
139.00	10.30	7.16	0.00
139.25	10.30	7.16	0.00
139.50	10.30	7.16	0.00
139.75	10.30	7.16	0.00
140.00	10.30	7.16	0.00
140.25	10.30	7.16	0.00
140.50	10.30	7.16	0.00
140.75	10.30	7.16	0.00
141.00	10.30	7.16	0.00
141.25	10.30	7.16	0.00
141.50	10.30	7.16	0.00
141.75	10.30	7.16	0.00
142.00	10.30	7.16	0.00
142.25	10.30	7.16	0.00
142.50	10.30	7.16	0.00
142.75	10.30	7.16	0.00
143.00	10.30	7.16	0.00
143.25	10.30	7.16	0.00
143.50	10.30	7.16	0.00
143.75	10.30	7.16	0.00
144.00	10.30	7.16	0.00
144.25	10.30	7.16	0.00
144.50	10.30	7.16	0.00
144.75	10.30	7.16	0.00
145.00	10.30	7.16	0.00
145.25	10.30	7.16	0.00
145.50	10.30	7.16	0.00
145.75	10.30	7.16	0.00
146.00	10.30	7.16	0.00
146.25	10.30	7.16	0.00
146.50	10.30	7.16	0.00
146.75	10.30	7.16	0.00
147.00	10.30	7.16	0.00
147.25	10.30	7.16	0.00
147.50	10.30	7.16	0.00
147.75	10.30	7.16	0.00
148.00	10.30	7.16	0.00
148.25	10.30	7.16	0.00
148.50	10.30	7.16	0.00
148.75	10.30	7.16	0.00
149.00	10.30	7.16	0.00
149.25	10.30	7.16	0.00
149.50	10.30	7.16	0.00
149.75	10.30	7.16	0.00
150.00	10.30	7.16	0.00

Summary for Subcatchment 9S: SB-6

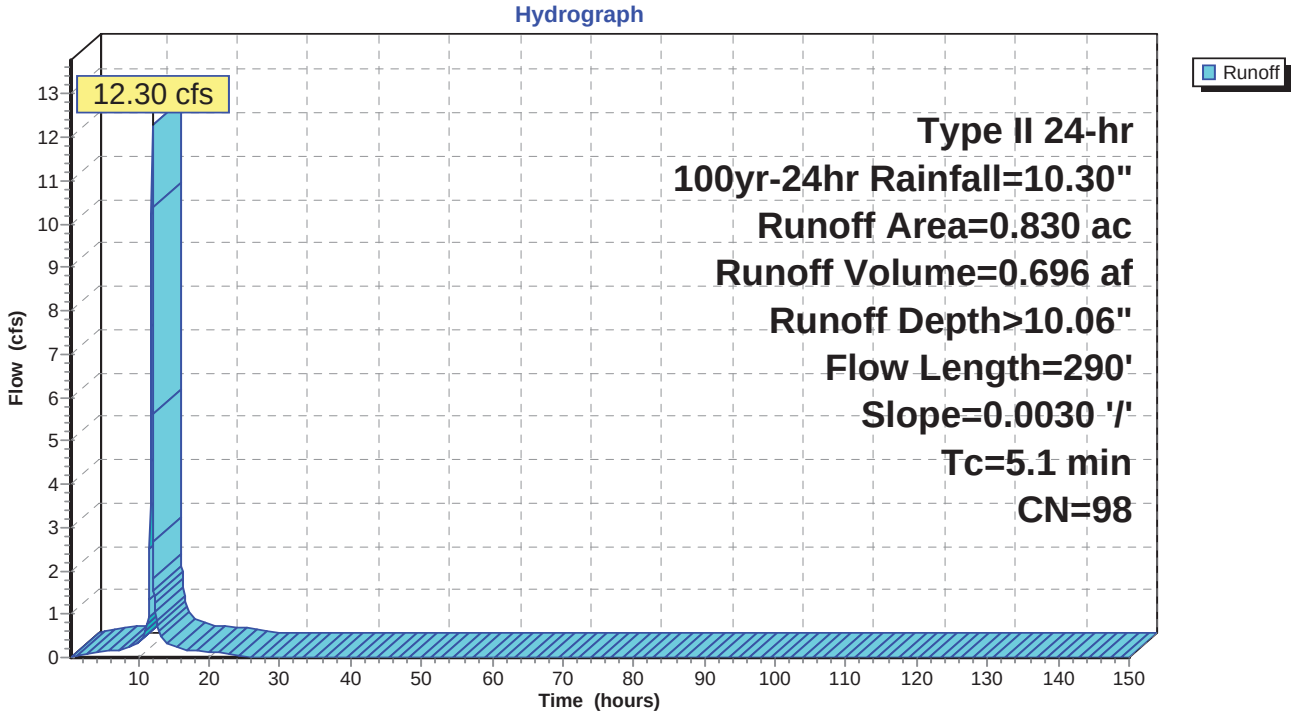
Runoff = 12.30 cfs @ 11.95 hrs, Volume= 0.696 af, Depth>10.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
*	0.830	98	Gravel surface, HSG A
	0.830		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	290	0.0030	0.94		**Sheet Flow, Overland Flow** Smooth surfaces n= 0.011 P2= 4.50"

Subcatchment 9S: SB-6



Hydrograph for Subcatchment 9S: SB-6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.00	13.75	8.34	8.10	0.38
0.75	0.08	0.01	0.02	14.00	8.45	8.21	0.33
1.00	0.11	0.02	0.04	14.25	8.54	8.30	0.31
1.25	0.14	0.03	0.05	14.50	8.63	8.39	0.29
1.50	0.17	0.05	0.06	14.75	8.71	8.47	0.28
1.75	0.20	0.07	0.07	15.00	8.79	8.55	0.26
2.00	0.23	0.09	0.07	15.25	8.87	8.63	0.25
2.25	0.26	0.11	0.08	15.50	8.94	8.70	0.23
2.50	0.29	0.14	0.08	15.75	9.00	8.76	0.22
2.75	0.32	0.16	0.09	16.00	9.06	8.82	0.20
3.00	0.36	0.19	0.09	16.25	9.12	8.88	0.19
3.25	0.39	0.22	0.10	16.50	9.18	8.94	0.19
3.50	0.42	0.25	0.10	16.75	9.23	8.99	0.18
3.75	0.46	0.28	0.10	17.00	9.29	9.05	0.18
4.00	0.49	0.31	0.11	17.25	9.34	9.10	0.17
4.25	0.53	0.35	0.11	17.50	9.39	9.15	0.17
4.50	0.57	0.38	0.12	17.75	9.44	9.20	0.16
4.75	0.61	0.42	0.12	18.00	9.49	9.25	0.16
5.00	0.65	0.46	0.13	18.25	9.53	9.29	0.15
5.25	0.69	0.49	0.13	18.50	9.58	9.34	0.15
5.50	0.73	0.54	0.14	18.75	9.62	9.38	0.14
5.75	0.78	0.58	0.14	19.00	9.66	9.42	0.14
6.00	0.82	0.62	0.15	19.25	9.70	9.46	0.13
6.25	0.87	0.67	0.15	19.50	9.74	9.49	0.12
6.50	0.92	0.71	0.16	19.75	9.77	9.53	0.12
6.75	0.97	0.76	0.16	20.00	9.81	9.56	0.11
7.00	1.02	0.81	0.17	20.25	9.84	9.60	0.11
7.25	1.07	0.86	0.17	20.50	9.87	9.63	0.11
7.50	1.13	0.91	0.18	20.75	9.90	9.66	0.11
7.75	1.18	0.97	0.18	21.00	9.94	9.70	0.11
8.00	1.24	1.02	0.18	21.25	9.97	9.73	0.11
8.25	1.30	1.08	0.20	21.50	10.00	9.76	0.11
8.50	1.36	1.14	0.22	21.75	10.03	9.79	0.10
8.75	1.43	1.22	0.24	22.00	10.06	9.82	0.10
9.00	1.51	1.29	0.26	22.25	10.09	9.85	0.10
9.25	1.60	1.38	0.27	22.50	10.12	9.88	0.10
9.50	1.68	1.46	0.27	22.75	10.15	9.91	0.10
9.75	1.77	1.54	0.30	23.00	10.18	9.94	0.10
10.00	1.86	1.64	0.33	23.25	10.21	9.97	0.10
10.25	1.98	1.75	0.38	23.50	10.24	10.00	0.10
10.50	2.10	1.87	0.43	23.75	10.27	10.03	0.10
10.75	2.25	2.02	0.50	24.00	**10.30**	**10.06**	0.09
11.00	2.42	2.19	0.59	24.25	10.30	10.06	0.00
11.25	2.64	2.41	0.76	24.50	10.30	10.06	0.00
11.50	2.91	2.68	0.96	24.75	10.30	10.06	0.00
11.75	3.99	3.75	**4.52**	25.00	10.30	10.06	0.00
12.00	6.83	6.59	**10.37**	25.25	10.30	10.06	0.00
12.25	7.27	7.03	1.40	25.50	10.30	10.06	0.00
12.50	7.57	7.33	0.90	25.75	10.30	10.06	0.00
12.75	7.78	7.54	0.67	26.00	10.30	10.06	0.00
13.00	7.95	7.71	0.56	26.25	10.30	10.06	0.00
13.25	8.10	7.86	0.48	26.50	10.30	10.06	0.00
13.50	8.23	7.99	0.42	26.75	10.30	10.06	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	10.06	0.00	40.25	10.30	10.06	0.00
27.25	10.30	10.06	0.00	40.50	10.30	10.06	0.00
27.50	10.30	10.06	0.00	40.75	10.30	10.06	0.00
27.75	10.30	10.06	0.00	41.00	10.30	10.06	0.00
28.00	10.30	10.06	0.00	41.25	10.30	10.06	0.00
28.25	10.30	10.06	0.00	41.50	10.30	10.06	0.00
28.50	10.30	10.06	0.00	41.75	10.30	10.06	0.00
28.75	10.30	10.06	0.00	42.00	10.30	10.06	0.00
29.00	10.30	10.06	0.00	42.25	10.30	10.06	0.00
29.25	10.30	10.06	0.00	42.50	10.30	10.06	0.00
29.50	10.30	10.06	0.00	42.75	10.30	10.06	0.00
29.75	10.30	10.06	0.00	43.00	10.30	10.06	0.00
30.00	10.30	10.06	0.00	43.25	10.30	10.06	0.00
30.25	10.30	10.06	0.00	43.50	10.30	10.06	0.00
30.50	10.30	10.06	0.00	43.75	10.30	10.06	0.00
30.75	10.30	10.06	0.00	44.00	10.30	10.06	0.00
31.00	10.30	10.06	0.00	44.25	10.30	10.06	0.00
31.25	10.30	10.06	0.00	44.50	10.30	10.06	0.00
31.50	10.30	10.06	0.00	44.75	10.30	10.06	0.00
31.75	10.30	10.06	0.00	45.00	10.30	10.06	0.00
32.00	10.30	10.06	0.00	45.25	10.30	10.06	0.00
32.25	10.30	10.06	0.00	45.50	10.30	10.06	0.00
32.50	10.30	10.06	0.00	45.75	10.30	10.06	0.00
32.75	10.30	10.06	0.00	46.00	10.30	10.06	0.00
33.00	10.30	10.06	0.00	46.25	10.30	10.06	0.00
33.25	10.30	10.06	0.00	46.50	10.30	10.06	0.00
33.50	10.30	10.06	0.00	46.75	10.30	10.06	0.00
33.75	10.30	10.06	0.00	47.00	10.30	10.06	0.00
34.00	10.30	10.06	0.00	47.25	10.30	10.06	0.00
34.25	10.30	10.06	0.00	47.50	10.30	10.06	0.00
34.50	10.30	10.06	0.00	47.75	10.30	10.06	0.00
34.75	10.30	10.06	0.00	48.00	10.30	10.06	0.00
35.00	10.30	10.06	0.00	48.25	10.30	10.06	0.00
35.25	10.30	10.06	0.00	48.50	10.30	10.06	0.00
35.50	10.30	10.06	0.00	48.75	10.30	10.06	0.00
35.75	10.30	10.06	0.00	49.00	10.30	10.06	0.00
36.00	10.30	10.06	0.00	49.25	10.30	10.06	0.00
36.25	10.30	10.06	0.00	49.50	10.30	10.06	0.00
36.50	10.30	10.06	0.00	49.75	10.30	10.06	0.00
36.75	10.30	10.06	0.00	50.00	10.30	10.06	0.00
37.00	10.30	10.06	0.00	50.25	10.30	10.06	0.00
37.25	10.30	10.06	0.00	50.50	10.30	10.06	0.00
37.50	10.30	10.06	0.00	50.75	10.30	10.06	0.00
37.75	10.30	10.06	0.00	51.00	10.30	10.06	0.00
38.00	10.30	10.06	0.00	51.25	10.30	10.06	0.00
38.25	10.30	10.06	0.00	51.50	10.30	10.06	0.00
38.50	10.30	10.06	0.00	51.75	10.30	10.06	0.00
38.75	10.30	10.06	0.00	52.00	10.30	10.06	0.00
39.00	10.30	10.06	0.00	52.25	10.30	10.06	0.00
39.25	10.30	10.06	0.00	52.50	10.30	10.06	0.00
39.50	10.30	10.06	0.00	52.75	10.30	10.06	0.00
39.75	10.30	10.06	0.00	53.00	10.30	10.06	0.00
40.00	10.30	10.06	0.00	53.25	10.30	10.06	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	10.06	0.00	66.75	10.30	10.06	0.00
53.75	10.30	10.06	0.00	67.00	10.30	10.06	0.00
54.00	10.30	10.06	0.00	67.25	10.30	10.06	0.00
54.25	10.30	10.06	0.00	67.50	10.30	10.06	0.00
54.50	10.30	10.06	0.00	67.75	10.30	10.06	0.00
54.75	10.30	10.06	0.00	68.00	10.30	10.06	0.00
55.00	10.30	10.06	0.00	68.25	10.30	10.06	0.00
55.25	10.30	10.06	0.00	68.50	10.30	10.06	0.00
55.50	10.30	10.06	0.00	68.75	10.30	10.06	0.00
55.75	10.30	10.06	0.00	69.00	10.30	10.06	0.00
56.00	10.30	10.06	0.00	69.25	10.30	10.06	0.00
56.25	10.30	10.06	0.00	69.50	10.30	10.06	0.00
56.50	10.30	10.06	0.00	69.75	10.30	10.06	0.00
56.75	10.30	10.06	0.00	70.00	10.30	10.06	0.00
57.00	10.30	10.06	0.00	70.25	10.30	10.06	0.00
57.25	10.30	10.06	0.00	70.50	10.30	10.06	0.00
57.50	10.30	10.06	0.00	70.75	10.30	10.06	0.00
57.75	10.30	10.06	0.00	71.00	10.30	10.06	0.00
58.00	10.30	10.06	0.00	71.25	10.30	10.06	0.00
58.25	10.30	10.06	0.00	71.50	10.30	10.06	0.00
58.50	10.30	10.06	0.00	71.75	10.30	10.06	0.00
58.75	10.30	10.06	0.00	72.00	10.30	10.06	0.00
59.00	10.30	10.06	0.00	72.25	10.30	10.06	0.00
59.25	10.30	10.06	0.00	72.50	10.30	10.06	0.00
59.50	10.30	10.06	0.00	72.75	10.30	10.06	0.00
59.75	10.30	10.06	0.00	73.00	10.30	10.06	0.00
60.00	10.30	10.06	0.00	73.25	10.30	10.06	0.00
60.25	10.30	10.06	0.00	73.50	10.30	10.06	0.00
60.50	10.30	10.06	0.00	73.75	10.30	10.06	0.00
60.75	10.30	10.06	0.00	74.00	10.30	10.06	0.00
61.00	10.30	10.06	0.00	74.25	10.30	10.06	0.00
61.25	10.30	10.06	0.00	74.50	10.30	10.06	0.00
61.50	10.30	10.06	0.00	74.75	10.30	10.06	0.00
61.75	10.30	10.06	0.00	75.00	10.30	10.06	0.00
62.00	10.30	10.06	0.00	75.25	10.30	10.06	0.00
62.25	10.30	10.06	0.00	75.50	10.30	10.06	0.00
62.50	10.30	10.06	0.00	75.75	10.30	10.06	0.00
62.75	10.30	10.06	0.00	76.00	10.30	10.06	0.00
63.00	10.30	10.06	0.00	76.25	10.30	10.06	0.00
63.25	10.30	10.06	0.00	76.50	10.30	10.06	0.00
63.50	10.30	10.06	0.00	76.75	10.30	10.06	0.00
63.75	10.30	10.06	0.00	77.00	10.30	10.06	0.00
64.00	10.30	10.06	0.00	77.25	10.30	10.06	0.00
64.25	10.30	10.06	0.00	77.50	10.30	10.06	0.00
64.50	10.30	10.06	0.00	77.75	10.30	10.06	0.00
64.75	10.30	10.06	0.00	78.00	10.30	10.06	0.00
65.00	10.30	10.06	0.00	78.25	10.30	10.06	0.00
65.25	10.30	10.06	0.00	78.50	10.30	10.06	0.00
65.50	10.30	10.06	0.00	78.75	10.30	10.06	0.00
65.75	10.30	10.06	0.00	79.00	10.30	10.06	0.00
66.00	10.30	10.06	0.00	79.25	10.30	10.06	0.00
66.25	10.30	10.06	0.00	79.50	10.30	10.06	0.00
66.50	10.30	10.06	0.00	79.75	10.30	10.06	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	10.06	0.00	93.25	10.30	10.06	0.00
80.25	10.30	10.06	0.00	93.50	10.30	10.06	0.00
80.50	10.30	10.06	0.00	93.75	10.30	10.06	0.00
80.75	10.30	10.06	0.00	94.00	10.30	10.06	0.00
81.00	10.30	10.06	0.00	94.25	10.30	10.06	0.00
81.25	10.30	10.06	0.00	94.50	10.30	10.06	0.00
81.50	10.30	10.06	0.00	94.75	10.30	10.06	0.00
81.75	10.30	10.06	0.00	95.00	10.30	10.06	0.00
82.00	10.30	10.06	0.00	95.25	10.30	10.06	0.00
82.25	10.30	10.06	0.00	95.50	10.30	10.06	0.00
82.50	10.30	10.06	0.00	95.75	10.30	10.06	0.00
82.75	10.30	10.06	0.00	96.00	10.30	10.06	0.00
83.00	10.30	10.06	0.00	96.25	10.30	10.06	0.00
83.25	10.30	10.06	0.00	96.50	10.30	10.06	0.00
83.50	10.30	10.06	0.00	96.75	10.30	10.06	0.00
83.75	10.30	10.06	0.00	97.00	10.30	10.06	0.00
84.00	10.30	10.06	0.00	97.25	10.30	10.06	0.00
84.25	10.30	10.06	0.00	97.50	10.30	10.06	0.00
84.50	10.30	10.06	0.00	97.75	10.30	10.06	0.00
84.75	10.30	10.06	0.00	98.00	10.30	10.06	0.00
85.00	10.30	10.06	0.00	98.25	10.30	10.06	0.00
85.25	10.30	10.06	0.00	98.50	10.30	10.06	0.00
85.50	10.30	10.06	0.00	98.75	10.30	10.06	0.00
85.75	10.30	10.06	0.00	99.00	10.30	10.06	0.00
86.00	10.30	10.06	0.00	99.25	10.30	10.06	0.00
86.25	10.30	10.06	0.00	99.50	10.30	10.06	0.00
86.50	10.30	10.06	0.00	99.75	10.30	10.06	0.00
86.75	10.30	10.06	0.00	100.00	10.30	10.06	0.00
87.00	10.30	10.06	0.00	100.25	10.30	10.06	0.00
87.25	10.30	10.06	0.00	100.50	10.30	10.06	0.00
87.50	10.30	10.06	0.00	100.75	10.30	10.06	0.00
87.75	10.30	10.06	0.00	101.00	10.30	10.06	0.00
88.00	10.30	10.06	0.00	101.25	10.30	10.06	0.00
88.25	10.30	10.06	0.00	101.50	10.30	10.06	0.00
88.50	10.30	10.06	0.00	101.75	10.30	10.06	0.00
88.75	10.30	10.06	0.00	102.00	10.30	10.06	0.00
89.00	10.30	10.06	0.00	102.25	10.30	10.06	0.00
89.25	10.30	10.06	0.00	102.50	10.30	10.06	0.00
89.50	10.30	10.06	0.00	102.75	10.30	10.06	0.00
89.75	10.30	10.06	0.00	103.00	10.30	10.06	0.00
90.00	10.30	10.06	0.00	103.25	10.30	10.06	0.00
90.25	10.30	10.06	0.00	103.50	10.30	10.06	0.00
90.50	10.30	10.06	0.00	103.75	10.30	10.06	0.00
90.75	10.30	10.06	0.00	104.00	10.30	10.06	0.00
91.00	10.30	10.06	0.00	104.25	10.30	10.06	0.00
91.25	10.30	10.06	0.00	104.50	10.30	10.06	0.00
91.50	10.30	10.06	0.00	104.75	10.30	10.06	0.00
91.75	10.30	10.06	0.00	105.00	10.30	10.06	0.00
92.00	10.30	10.06	0.00	105.25	10.30	10.06	0.00
92.25	10.30	10.06	0.00	105.50	10.30	10.06	0.00
92.50	10.30	10.06	0.00	105.75	10.30	10.06	0.00
92.75	10.30	10.06	0.00	106.00	10.30	10.06	0.00
93.00	10.30	10.06	0.00	106.25	10.30	10.06	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	10.06	0.00	119.75	10.30	10.06	0.00
106.75	10.30	10.06	0.00	120.00	10.30	10.06	0.00
107.00	10.30	10.06	0.00	120.25	10.30	10.06	0.00
107.25	10.30	10.06	0.00	120.50	10.30	10.06	0.00
107.50	10.30	10.06	0.00	120.75	10.30	10.06	0.00
107.75	10.30	10.06	0.00	121.00	10.30	10.06	0.00
108.00	10.30	10.06	0.00	121.25	10.30	10.06	0.00
108.25	10.30	10.06	0.00	121.50	10.30	10.06	0.00
108.50	10.30	10.06	0.00	121.75	10.30	10.06	0.00
108.75	10.30	10.06	0.00	122.00	10.30	10.06	0.00
109.00	10.30	10.06	0.00	122.25	10.30	10.06	0.00
109.25	10.30	10.06	0.00	122.50	10.30	10.06	0.00
109.50	10.30	10.06	0.00	122.75	10.30	10.06	0.00
109.75	10.30	10.06	0.00	123.00	10.30	10.06	0.00
110.00	10.30	10.06	0.00	123.25	10.30	10.06	0.00
110.25	10.30	10.06	0.00	123.50	10.30	10.06	0.00
110.50	10.30	10.06	0.00	123.75	10.30	10.06	0.00
110.75	10.30	10.06	0.00	124.00	10.30	10.06	0.00
111.00	10.30	10.06	0.00	124.25	10.30	10.06	0.00
111.25	10.30	10.06	0.00	124.50	10.30	10.06	0.00
111.50	10.30	10.06	0.00	124.75	10.30	10.06	0.00
111.75	10.30	10.06	0.00	125.00	10.30	10.06	0.00
112.00	10.30	10.06	0.00	125.25	10.30	10.06	0.00
112.25	10.30	10.06	0.00	125.50	10.30	10.06	0.00
112.50	10.30	10.06	0.00	125.75	10.30	10.06	0.00
112.75	10.30	10.06	0.00	126.00	10.30	10.06	0.00
113.00	10.30	10.06	0.00	126.25	10.30	10.06	0.00
113.25	10.30	10.06	0.00	126.50	10.30	10.06	0.00
113.50	10.30	10.06	0.00	126.75	10.30	10.06	0.00
113.75	10.30	10.06	0.00	127.00	10.30	10.06	0.00
114.00	10.30	10.06	0.00	127.25	10.30	10.06	0.00
114.25	10.30	10.06	0.00	127.50	10.30	10.06	0.00
114.50	10.30	10.06	0.00	127.75	10.30	10.06	0.00
114.75	10.30	10.06	0.00	128.00	10.30	10.06	0.00
115.00	10.30	10.06	0.00	128.25	10.30	10.06	0.00
115.25	10.30	10.06	0.00	128.50	10.30	10.06	0.00
115.50	10.30	10.06	0.00	128.75	10.30	10.06	0.00
115.75	10.30	10.06	0.00	129.00	10.30	10.06	0.00
116.00	10.30	10.06	0.00	129.25	10.30	10.06	0.00
116.25	10.30	10.06	0.00	129.50	10.30	10.06	0.00
116.50	10.30	10.06	0.00	129.75	10.30	10.06	0.00
116.75	10.30	10.06	0.00	130.00	10.30	10.06	0.00
117.00	10.30	10.06	0.00	130.25	10.30	10.06	0.00
117.25	10.30	10.06	0.00	130.50	10.30	10.06	0.00
117.50	10.30	10.06	0.00	130.75	10.30	10.06	0.00
117.75	10.30	10.06	0.00	131.00	10.30	10.06	0.00
118.00	10.30	10.06	0.00	131.25	10.30	10.06	0.00
118.25	10.30	10.06	0.00	131.50	10.30	10.06	0.00
118.50	10.30	10.06	0.00	131.75	10.30	10.06	0.00
118.75	10.30	10.06	0.00	132.00	10.30	10.06	0.00
119.00	10.30	10.06	0.00	132.25	10.30	10.06	0.00
119.25	10.30	10.06	0.00	132.50	10.30	10.06	0.00
119.50	10.30	10.06	0.00	132.75	10.30	10.06	0.00

Hydrograph for Subcatchment 9S: SB-6 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	10.06	0.00
133.25	10.30	10.06	0.00
133.50	10.30	10.06	0.00
133.75	10.30	10.06	0.00
134.00	10.30	10.06	0.00
134.25	10.30	10.06	0.00
134.50	10.30	10.06	0.00
134.75	10.30	10.06	0.00
135.00	10.30	10.06	0.00
135.25	10.30	10.06	0.00
135.50	10.30	10.06	0.00
135.75	10.30	10.06	0.00
136.00	10.30	10.06	0.00
136.25	10.30	10.06	0.00
136.50	10.30	10.06	0.00
136.75	10.30	10.06	0.00
137.00	10.30	10.06	0.00
137.25	10.30	10.06	0.00
137.50	10.30	10.06	0.00
137.75	10.30	10.06	0.00
138.00	10.30	10.06	0.00
138.25	10.30	10.06	0.00
138.50	10.30	10.06	0.00
138.75	10.30	10.06	0.00
139.00	10.30	10.06	0.00
139.25	10.30	10.06	0.00
139.50	10.30	10.06	0.00
139.75	10.30	10.06	0.00
140.00	10.30	10.06	0.00
140.25	10.30	10.06	0.00
140.50	10.30	10.06	0.00
140.75	10.30	10.06	0.00
141.00	10.30	10.06	0.00
141.25	10.30	10.06	0.00
141.50	10.30	10.06	0.00
141.75	10.30	10.06	0.00
142.00	10.30	10.06	0.00
142.25	10.30	10.06	0.00
142.50	10.30	10.06	0.00
142.75	10.30	10.06	0.00
143.00	10.30	10.06	0.00
143.25	10.30	10.06	0.00
143.50	10.30	10.06	0.00
143.75	10.30	10.06	0.00
144.00	10.30	10.06	0.00
144.25	10.30	10.06	0.00
144.50	10.30	10.06	0.00
144.75	10.30	10.06	0.00
145.00	10.30	10.06	0.00
145.25	10.30	10.06	0.00
145.50	10.30	10.06	0.00
145.75	10.30	10.06	0.00
146.00	10.30	10.06	0.00
146.25	10.30	10.06	0.00
146.50	10.30	10.06	0.00
146.75	10.30	10.06	0.00
147.00	10.30	10.06	0.00
147.25	10.30	10.06	0.00
147.50	10.30	10.06	0.00
147.75	10.30	10.06	0.00
148.00	10.30	10.06	0.00
148.25	10.30	10.06	0.00
148.50	10.30	10.06	0.00
148.75	10.30	10.06	0.00
149.00	10.30	10.06	0.00
149.25	10.30	10.06	0.00
149.50	10.30	10.06	0.00
149.75	10.30	10.06	0.00
150.00	10.30	10.06	0.00

Summary for Subcatchment 11S: OSB-1

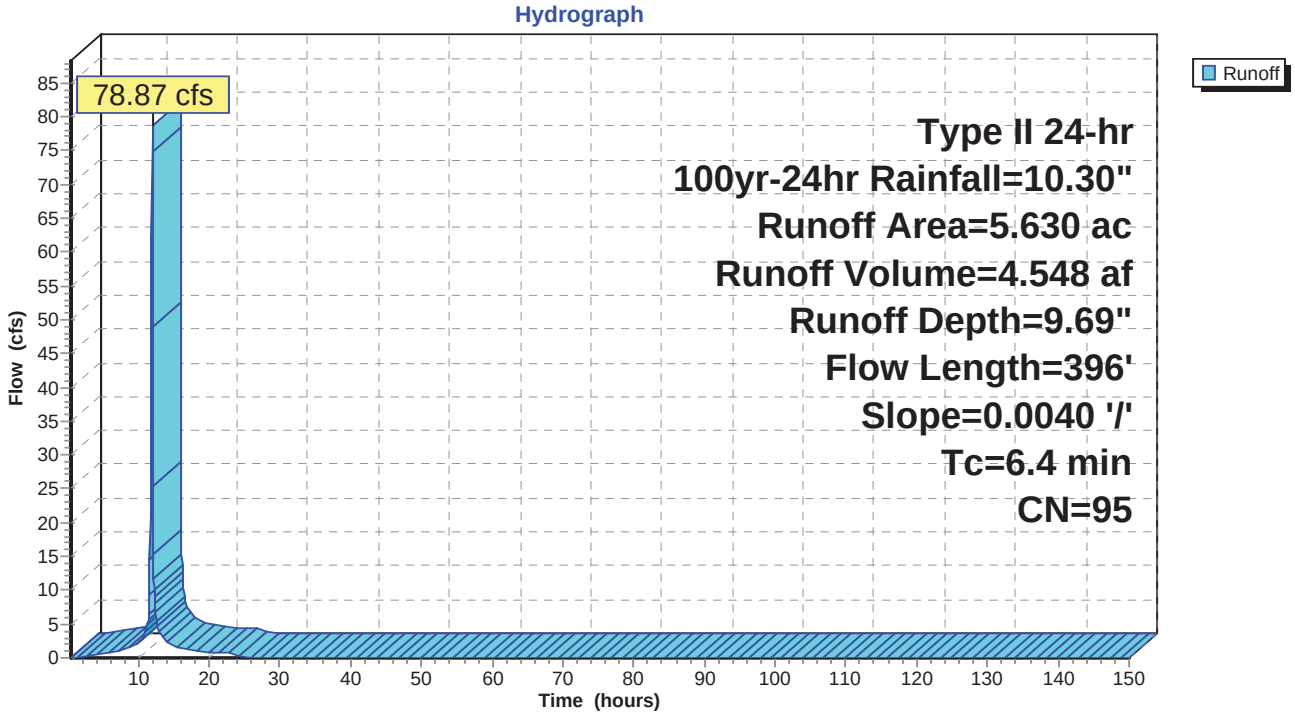
Runoff = 78.87 cfs @ 11.97 hrs, Volume= 4.548 af, Depth= 9.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr-24hr Rainfall=10.30"

	Area (ac)	CN	Description
	0.280	39	>75% Grass cover, Good, HSG A
*	5.350	98	Gravel surface, HSG A
	5.630	95	Weighted Average
	0.280		4.97% Pervious Area
	5.350		95.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	264	0.0040	1.04		**Sheet Flow, Overland Flow** Smooth surfaces n= 0.011 P2= 4.50"
2.2	132	0.0040	1.02		**Shallow Concentrated Flow, Overland Flow** Unpaved Kv= 16.1 fps
6.4	396	Total			

Subcatchment 11S: OSB-1



Hydrograph for Subcatchment 11S: OSB-1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.50	0.05	0.00	0.00	13.75	8.34	7.74	2.56
0.75	0.08	0.00	0.00	14.00	8.45	7.85	2.27
1.00	0.11	0.00	0.00	14.25	8.54	7.94	2.09
1.25	0.14	0.00	0.05	14.50	8.63	8.03	1.99
1.50	0.17	0.01	0.11	14.75	8.71	8.11	1.89
1.75	0.20	0.01	0.17	15.00	8.79	8.19	1.79
2.00	0.23	0.02	0.22	15.25	8.87	8.26	1.69
2.25	0.26	0.03	0.27	15.50	8.94	8.33	1.58
2.50	0.29	0.05	0.31	15.75	9.00	8.40	1.48
2.75	0.32	0.06	0.36	16.00	9.06	8.46	1.38
3.00	0.36	0.08	0.40	16.25	9.12	8.52	1.32
3.25	0.39	0.10	0.43	16.50	9.18	8.58	1.28
3.50	0.42	0.12	0.47	16.75	9.23	8.63	1.25
3.75	0.46	0.14	0.50	17.00	9.29	8.68	1.21
4.00	0.49	0.17	0.54	17.25	9.34	8.74	1.17
4.25	0.53	0.19	0.57	17.50	9.39	8.79	1.14
4.50	0.57	0.22	0.61	17.75	9.44	8.84	1.10
4.75	0.61	0.25	0.65	18.00	9.49	8.88	1.06
5.00	0.65	0.28	0.69	18.25	9.53	8.93	1.03
5.25	0.69	0.31	0.73	18.50	9.58	8.97	0.99
5.50	0.73	0.34	0.77	18.75	9.62	9.01	0.95
5.75	0.78	0.38	0.81	19.00	9.66	9.05	0.92
6.00	0.82	0.41	0.85	19.25	9.70	9.09	0.88
6.25	0.87	0.45	0.89	19.50	9.74	9.13	0.85
6.50	0.92	0.49	0.92	19.75	9.77	9.17	0.81
6.75	0.97	0.54	0.96	20.00	9.81	9.20	0.77
7.00	1.02	0.58	1.00	20.25	9.84	9.23	0.75
7.25	1.07	0.63	1.04	20.50	9.87	9.27	0.75
7.50	1.13	0.67	1.07	20.75	9.90	9.30	0.74
7.75	1.18	0.72	1.11	21.00	9.94	9.33	0.73
8.00	1.24	0.77	1.14	21.25	9.97	9.36	0.72
8.25	1.30	0.83	1.24	21.50	10.00	9.40	0.72
8.50	1.36	0.89	1.38	21.75	10.03	9.43	0.71
8.75	1.43	0.95	1.53	22.00	10.06	9.46	0.70
9.00	1.51	1.03	1.67	22.25	10.09	9.49	0.70
9.25	1.60	1.10	1.74	22.50	10.12	9.52	0.69
9.50	1.68	1.18	1.75	22.75	10.15	9.55	0.68
9.75	1.77	1.26	1.89	23.00	10.18	9.58	0.67
10.00	1.86	1.35	2.12	23.25	10.21	9.61	0.67
10.25	1.98	1.46	2.42	23.50	10.24	9.64	0.66
10.50	2.10	1.58	2.77	23.75	10.27	9.67	0.65
10.75	2.25	1.72	3.26	24.00	**10.30**	**9.69**	0.64
11.00	2.42	1.89	3.83	24.25	10.30	9.69	0.01
11.25	2.64	2.10	4.90	24.50	10.30	9.69	0.00
11.50	2.91	2.37	6.29	24.75	10.30	9.69	0.00
11.75	3.99	3.42	**27.48**	25.00	10.30	9.69	0.00
12.00	6.83	6.24	**74.89**	25.25	10.30	9.69	0.00
12.25	7.27	6.68	10.05	25.50	10.30	9.69	0.00
12.50	7.57	6.97	6.38	25.75	10.30	9.69	0.00
12.75	7.78	7.18	4.61	26.00	10.30	9.69	0.00
13.00	7.95	7.35	3.85	26.25	10.30	9.69	0.00
13.25	8.10	7.50	3.31	26.50	10.30	9.69	0.00
13.50	8.23	7.63	2.90	26.75	10.30	9.69	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
27.00	10.30	9.69	0.00	40.25	10.30	9.69	0.00
27.25	10.30	9.69	0.00	40.50	10.30	9.69	0.00
27.50	10.30	9.69	0.00	40.75	10.30	9.69	0.00
27.75	10.30	9.69	0.00	41.00	10.30	9.69	0.00
28.00	10.30	9.69	0.00	41.25	10.30	9.69	0.00
28.25	10.30	9.69	0.00	41.50	10.30	9.69	0.00
28.50	10.30	9.69	0.00	41.75	10.30	9.69	0.00
28.75	10.30	9.69	0.00	42.00	10.30	9.69	0.00
29.00	10.30	9.69	0.00	42.25	10.30	9.69	0.00
29.25	10.30	9.69	0.00	42.50	10.30	9.69	0.00
29.50	10.30	9.69	0.00	42.75	10.30	9.69	0.00
29.75	10.30	9.69	0.00	43.00	10.30	9.69	0.00
30.00	10.30	9.69	0.00	43.25	10.30	9.69	0.00
30.25	10.30	9.69	0.00	43.50	10.30	9.69	0.00
30.50	10.30	9.69	0.00	43.75	10.30	9.69	0.00
30.75	10.30	9.69	0.00	44.00	10.30	9.69	0.00
31.00	10.30	9.69	0.00	44.25	10.30	9.69	0.00
31.25	10.30	9.69	0.00	44.50	10.30	9.69	0.00
31.50	10.30	9.69	0.00	44.75	10.30	9.69	0.00
31.75	10.30	9.69	0.00	45.00	10.30	9.69	0.00
32.00	10.30	9.69	0.00	45.25	10.30	9.69	0.00
32.25	10.30	9.69	0.00	45.50	10.30	9.69	0.00
32.50	10.30	9.69	0.00	45.75	10.30	9.69	0.00
32.75	10.30	9.69	0.00	46.00	10.30	9.69	0.00
33.00	10.30	9.69	0.00	46.25	10.30	9.69	0.00
33.25	10.30	9.69	0.00	46.50	10.30	9.69	0.00
33.50	10.30	9.69	0.00	46.75	10.30	9.69	0.00
33.75	10.30	9.69	0.00	47.00	10.30	9.69	0.00
34.00	10.30	9.69	0.00	47.25	10.30	9.69	0.00
34.25	10.30	9.69	0.00	47.50	10.30	9.69	0.00
34.50	10.30	9.69	0.00	47.75	10.30	9.69	0.00
34.75	10.30	9.69	0.00	48.00	10.30	9.69	0.00
35.00	10.30	9.69	0.00	48.25	10.30	9.69	0.00
35.25	10.30	9.69	0.00	48.50	10.30	9.69	0.00
35.50	10.30	9.69	0.00	48.75	10.30	9.69	0.00
35.75	10.30	9.69	0.00	49.00	10.30	9.69	0.00
36.00	10.30	9.69	0.00	49.25	10.30	9.69	0.00
36.25	10.30	9.69	0.00	49.50	10.30	9.69	0.00
36.50	10.30	9.69	0.00	49.75	10.30	9.69	0.00
36.75	10.30	9.69	0.00	50.00	10.30	9.69	0.00
37.00	10.30	9.69	0.00	50.25	10.30	9.69	0.00
37.25	10.30	9.69	0.00	50.50	10.30	9.69	0.00
37.50	10.30	9.69	0.00	50.75	10.30	9.69	0.00
37.75	10.30	9.69	0.00	51.00	10.30	9.69	0.00
38.00	10.30	9.69	0.00	51.25	10.30	9.69	0.00
38.25	10.30	9.69	0.00	51.50	10.30	9.69	0.00
38.50	10.30	9.69	0.00	51.75	10.30	9.69	0.00
38.75	10.30	9.69	0.00	52.00	10.30	9.69	0.00
39.00	10.30	9.69	0.00	52.25	10.30	9.69	0.00
39.25	10.30	9.69	0.00	52.50	10.30	9.69	0.00
39.50	10.30	9.69	0.00	52.75	10.30	9.69	0.00
39.75	10.30	9.69	0.00	53.00	10.30	9.69	0.00
40.00	10.30	9.69	0.00	53.25	10.30	9.69	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
53.50	10.30	9.69	0.00	66.75	10.30	9.69	0.00
53.75	10.30	9.69	0.00	67.00	10.30	9.69	0.00
54.00	10.30	9.69	0.00	67.25	10.30	9.69	0.00
54.25	10.30	9.69	0.00	67.50	10.30	9.69	0.00
54.50	10.30	9.69	0.00	67.75	10.30	9.69	0.00
54.75	10.30	9.69	0.00	68.00	10.30	9.69	0.00
55.00	10.30	9.69	0.00	68.25	10.30	9.69	0.00
55.25	10.30	9.69	0.00	68.50	10.30	9.69	0.00
55.50	10.30	9.69	0.00	68.75	10.30	9.69	0.00
55.75	10.30	9.69	0.00	69.00	10.30	9.69	0.00
56.00	10.30	9.69	0.00	69.25	10.30	9.69	0.00
56.25	10.30	9.69	0.00	69.50	10.30	9.69	0.00
56.50	10.30	9.69	0.00	69.75	10.30	9.69	0.00
56.75	10.30	9.69	0.00	70.00	10.30	9.69	0.00
57.00	10.30	9.69	0.00	70.25	10.30	9.69	0.00
57.25	10.30	9.69	0.00	70.50	10.30	9.69	0.00
57.50	10.30	9.69	0.00	70.75	10.30	9.69	0.00
57.75	10.30	9.69	0.00	71.00	10.30	9.69	0.00
58.00	10.30	9.69	0.00	71.25	10.30	9.69	0.00
58.25	10.30	9.69	0.00	71.50	10.30	9.69	0.00
58.50	10.30	9.69	0.00	71.75	10.30	9.69	0.00
58.75	10.30	9.69	0.00	72.00	10.30	9.69	0.00
59.00	10.30	9.69	0.00	72.25	10.30	9.69	0.00
59.25	10.30	9.69	0.00	72.50	10.30	9.69	0.00
59.50	10.30	9.69	0.00	72.75	10.30	9.69	0.00
59.75	10.30	9.69	0.00	73.00	10.30	9.69	0.00
60.00	10.30	9.69	0.00	73.25	10.30	9.69	0.00
60.25	10.30	9.69	0.00	73.50	10.30	9.69	0.00
60.50	10.30	9.69	0.00	73.75	10.30	9.69	0.00
60.75	10.30	9.69	0.00	74.00	10.30	9.69	0.00
61.00	10.30	9.69	0.00	74.25	10.30	9.69	0.00
61.25	10.30	9.69	0.00	74.50	10.30	9.69	0.00
61.50	10.30	9.69	0.00	74.75	10.30	9.69	0.00
61.75	10.30	9.69	0.00	75.00	10.30	9.69	0.00
62.00	10.30	9.69	0.00	75.25	10.30	9.69	0.00
62.25	10.30	9.69	0.00	75.50	10.30	9.69	0.00
62.50	10.30	9.69	0.00	75.75	10.30	9.69	0.00
62.75	10.30	9.69	0.00	76.00	10.30	9.69	0.00
63.00	10.30	9.69	0.00	76.25	10.30	9.69	0.00
63.25	10.30	9.69	0.00	76.50	10.30	9.69	0.00
63.50	10.30	9.69	0.00	76.75	10.30	9.69	0.00
63.75	10.30	9.69	0.00	77.00	10.30	9.69	0.00
64.00	10.30	9.69	0.00	77.25	10.30	9.69	0.00
64.25	10.30	9.69	0.00	77.50	10.30	9.69	0.00
64.50	10.30	9.69	0.00	77.75	10.30	9.69	0.00
64.75	10.30	9.69	0.00	78.00	10.30	9.69	0.00
65.00	10.30	9.69	0.00	78.25	10.30	9.69	0.00
65.25	10.30	9.69	0.00	78.50	10.30	9.69	0.00
65.50	10.30	9.69	0.00	78.75	10.30	9.69	0.00
65.75	10.30	9.69	0.00	79.00	10.30	9.69	0.00
66.00	10.30	9.69	0.00	79.25	10.30	9.69	0.00
66.25	10.30	9.69	0.00	79.50	10.30	9.69	0.00
66.50	10.30	9.69	0.00	79.75	10.30	9.69	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
80.00	10.30	9.69	0.00	93.25	10.30	9.69	0.00
80.25	10.30	9.69	0.00	93.50	10.30	9.69	0.00
80.50	10.30	9.69	0.00	93.75	10.30	9.69	0.00
80.75	10.30	9.69	0.00	94.00	10.30	9.69	0.00
81.00	10.30	9.69	0.00	94.25	10.30	9.69	0.00
81.25	10.30	9.69	0.00	94.50	10.30	9.69	0.00
81.50	10.30	9.69	0.00	94.75	10.30	9.69	0.00
81.75	10.30	9.69	0.00	95.00	10.30	9.69	0.00
82.00	10.30	9.69	0.00	95.25	10.30	9.69	0.00
82.25	10.30	9.69	0.00	95.50	10.30	9.69	0.00
82.50	10.30	9.69	0.00	95.75	10.30	9.69	0.00
82.75	10.30	9.69	0.00	96.00	10.30	9.69	0.00
83.00	10.30	9.69	0.00	96.25	10.30	9.69	0.00
83.25	10.30	9.69	0.00	96.50	10.30	9.69	0.00
83.50	10.30	9.69	0.00	96.75	10.30	9.69	0.00
83.75	10.30	9.69	0.00	97.00	10.30	9.69	0.00
84.00	10.30	9.69	0.00	97.25	10.30	9.69	0.00
84.25	10.30	9.69	0.00	97.50	10.30	9.69	0.00
84.50	10.30	9.69	0.00	97.75	10.30	9.69	0.00
84.75	10.30	9.69	0.00	98.00	10.30	9.69	0.00
85.00	10.30	9.69	0.00	98.25	10.30	9.69	0.00
85.25	10.30	9.69	0.00	98.50	10.30	9.69	0.00
85.50	10.30	9.69	0.00	98.75	10.30	9.69	0.00
85.75	10.30	9.69	0.00	99.00	10.30	9.69	0.00
86.00	10.30	9.69	0.00	99.25	10.30	9.69	0.00
86.25	10.30	9.69	0.00	99.50	10.30	9.69	0.00
86.50	10.30	9.69	0.00	99.75	10.30	9.69	0.00
86.75	10.30	9.69	0.00	100.00	10.30	9.69	0.00
87.00	10.30	9.69	0.00	100.25	10.30	9.69	0.00
87.25	10.30	9.69	0.00	100.50	10.30	9.69	0.00
87.50	10.30	9.69	0.00	100.75	10.30	9.69	0.00
87.75	10.30	9.69	0.00	101.00	10.30	9.69	0.00
88.00	10.30	9.69	0.00	101.25	10.30	9.69	0.00
88.25	10.30	9.69	0.00	101.50	10.30	9.69	0.00
88.50	10.30	9.69	0.00	101.75	10.30	9.69	0.00
88.75	10.30	9.69	0.00	102.00	10.30	9.69	0.00
89.00	10.30	9.69	0.00	102.25	10.30	9.69	0.00
89.25	10.30	9.69	0.00	102.50	10.30	9.69	0.00
89.50	10.30	9.69	0.00	102.75	10.30	9.69	0.00
89.75	10.30	9.69	0.00	103.00	10.30	9.69	0.00
90.00	10.30	9.69	0.00	103.25	10.30	9.69	0.00
90.25	10.30	9.69	0.00	103.50	10.30	9.69	0.00
90.50	10.30	9.69	0.00	103.75	10.30	9.69	0.00
90.75	10.30	9.69	0.00	104.00	10.30	9.69	0.00
91.00	10.30	9.69	0.00	104.25	10.30	9.69	0.00
91.25	10.30	9.69	0.00	104.50	10.30	9.69	0.00
91.50	10.30	9.69	0.00	104.75	10.30	9.69	0.00
91.75	10.30	9.69	0.00	105.00	10.30	9.69	0.00
92.00	10.30	9.69	0.00	105.25	10.30	9.69	0.00
92.25	10.30	9.69	0.00	105.50	10.30	9.69	0.00
92.50	10.30	9.69	0.00	105.75	10.30	9.69	0.00
92.75	10.30	9.69	0.00	106.00	10.30	9.69	0.00
93.00	10.30	9.69	0.00	106.25	10.30	9.69	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
106.50	10.30	9.69	0.00	119.75	10.30	9.69	0.00
106.75	10.30	9.69	0.00	120.00	10.30	9.69	0.00
107.00	10.30	9.69	0.00	120.25	10.30	9.69	0.00
107.25	10.30	9.69	0.00	120.50	10.30	9.69	0.00
107.50	10.30	9.69	0.00	120.75	10.30	9.69	0.00
107.75	10.30	9.69	0.00	121.00	10.30	9.69	0.00
108.00	10.30	9.69	0.00	121.25	10.30	9.69	0.00
108.25	10.30	9.69	0.00	121.50	10.30	9.69	0.00
108.50	10.30	9.69	0.00	121.75	10.30	9.69	0.00
108.75	10.30	9.69	0.00	122.00	10.30	9.69	0.00
109.00	10.30	9.69	0.00	122.25	10.30	9.69	0.00
109.25	10.30	9.69	0.00	122.50	10.30	9.69	0.00
109.50	10.30	9.69	0.00	122.75	10.30	9.69	0.00
109.75	10.30	9.69	0.00	123.00	10.30	9.69	0.00
110.00	10.30	9.69	0.00	123.25	10.30	9.69	0.00
110.25	10.30	9.69	0.00	123.50	10.30	9.69	0.00
110.50	10.30	9.69	0.00	123.75	10.30	9.69	0.00
110.75	10.30	9.69	0.00	124.00	10.30	9.69	0.00
111.00	10.30	9.69	0.00	124.25	10.30	9.69	0.00
111.25	10.30	9.69	0.00	124.50	10.30	9.69	0.00
111.50	10.30	9.69	0.00	124.75	10.30	9.69	0.00
111.75	10.30	9.69	0.00	125.00	10.30	9.69	0.00
112.00	10.30	9.69	0.00	125.25	10.30	9.69	0.00
112.25	10.30	9.69	0.00	125.50	10.30	9.69	0.00
112.50	10.30	9.69	0.00	125.75	10.30	9.69	0.00
112.75	10.30	9.69	0.00	126.00	10.30	9.69	0.00
113.00	10.30	9.69	0.00	126.25	10.30	9.69	0.00
113.25	10.30	9.69	0.00	126.50	10.30	9.69	0.00
113.50	10.30	9.69	0.00	126.75	10.30	9.69	0.00
113.75	10.30	9.69	0.00	127.00	10.30	9.69	0.00
114.00	10.30	9.69	0.00	127.25	10.30	9.69	0.00
114.25	10.30	9.69	0.00	127.50	10.30	9.69	0.00
114.50	10.30	9.69	0.00	127.75	10.30	9.69	0.00
114.75	10.30	9.69	0.00	128.00	10.30	9.69	0.00
115.00	10.30	9.69	0.00	128.25	10.30	9.69	0.00
115.25	10.30	9.69	0.00	128.50	10.30	9.69	0.00
115.50	10.30	9.69	0.00	128.75	10.30	9.69	0.00
115.75	10.30	9.69	0.00	129.00	10.30	9.69	0.00
116.00	10.30	9.69	0.00	129.25	10.30	9.69	0.00
116.25	10.30	9.69	0.00	129.50	10.30	9.69	0.00
116.50	10.30	9.69	0.00	129.75	10.30	9.69	0.00
116.75	10.30	9.69	0.00	130.00	10.30	9.69	0.00
117.00	10.30	9.69	0.00	130.25	10.30	9.69	0.00
117.25	10.30	9.69	0.00	130.50	10.30	9.69	0.00
117.50	10.30	9.69	0.00	130.75	10.30	9.69	0.00
117.75	10.30	9.69	0.00	131.00	10.30	9.69	0.00
118.00	10.30	9.69	0.00	131.25	10.30	9.69	0.00
118.25	10.30	9.69	0.00	131.50	10.30	9.69	0.00
118.50	10.30	9.69	0.00	131.75	10.30	9.69	0.00
118.75	10.30	9.69	0.00	132.00	10.30	9.69	0.00
119.00	10.30	9.69	0.00	132.25	10.30	9.69	0.00
119.25	10.30	9.69	0.00	132.50	10.30	9.69	0.00
119.50	10.30	9.69	0.00	132.75	10.30	9.69	0.00

Hydrograph for Subcatchment 11S: OSB-1 (continued)

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
133.00	10.30	9.69	0.00
133.25	10.30	9.69	0.00
133.50	10.30	9.69	0.00
133.75	10.30	9.69	0.00
134.00	10.30	9.69	0.00
134.25	10.30	9.69	0.00
134.50	10.30	9.69	0.00
134.75	10.30	9.69	0.00
135.00	10.30	9.69	0.00
135.25	10.30	9.69	0.00
135.50	10.30	9.69	0.00
135.75	10.30	9.69	0.00
136.00	10.30	9.69	0.00
136.25	10.30	9.69	0.00
136.50	10.30	9.69	0.00
136.75	10.30	9.69	0.00
137.00	10.30	9.69	0.00
137.25	10.30	9.69	0.00
137.50	10.30	9.69	0.00
137.75	10.30	9.69	0.00
138.00	10.30	9.69	0.00
138.25	10.30	9.69	0.00
138.50	10.30	9.69	0.00
138.75	10.30	9.69	0.00
139.00	10.30	9.69	0.00
139.25	10.30	9.69	0.00
139.50	10.30	9.69	0.00
139.75	10.30	9.69	0.00
140.00	10.30	9.69	0.00
140.25	10.30	9.69	0.00
140.50	10.30	9.69	0.00
140.75	10.30	9.69	0.00
141.00	10.30	9.69	0.00
141.25	10.30	9.69	0.00
141.50	10.30	9.69	0.00
141.75	10.30	9.69	0.00
142.00	10.30	9.69	0.00
142.25	10.30	9.69	0.00
142.50	10.30	9.69	0.00
142.75	10.30	9.69	0.00
143.00	10.30	9.69	0.00
143.25	10.30	9.69	0.00
143.50	10.30	9.69	0.00
143.75	10.30	9.69	0.00
144.00	10.30	9.69	0.00
144.25	10.30	9.69	0.00
144.50	10.30	9.69	0.00
144.75	10.30	9.69	0.00
145.00	10.30	9.69	0.00
145.25	10.30	9.69	0.00
145.50	10.30	9.69	0.00
145.75	10.30	9.69	0.00
146.00	10.30	9.69	0.00
146.25	10.30	9.69	0.00
146.50	10.30	9.69	0.00
146.75	10.30	9.69	0.00
147.00	10.30	9.69	0.00
147.25	10.30	9.69	0.00
147.50	10.30	9.69	0.00
147.75	10.30	9.69	0.00
148.00	10.30	9.69	0.00
148.25	10.30	9.69	0.00
148.50	10.30	9.69	0.00
148.75	10.30	9.69	0.00
149.00	10.30	9.69	0.00
149.25	10.30	9.69	0.00
149.50	10.30	9.69	0.00
149.75	10.30	9.69	0.00
150.00	10.30	9.69	0.00

Summary for Pond 7P: Stormwater Pond

Inflow Area = 55.694 ac, 70.23% Impervious, Inflow Depth > 7.81" for 100yr-24hr event
Inflow = 270.18 cfs @ 11.99 hrs, Volume= 36.264 af
Outflow = 45.10 cfs @ 14.31 hrs, Volume= 36.264 af, Atten= 83%, Lag= 139.6 min
Discarded = 37.71 cfs @ 14.31 hrs, Volume= 35.178 af
Secondary = 7.39 cfs @ 14.31 hrs, Volume= 1.086 af

Routing by Stor-Ind method, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Peak Elev= 72.93' @ 14.31 hrs Surf.Area= 4.008 ac Storage= 12.734 af

Plug-Flow detention time= 147.1 min calculated for 36.252 af (100% of inflow)
Center-of-Mass det. time= 147.0 min (981.6 - 834.6)

Volume	Invert	Avail.Storage	Storage Description
#1	69.50'	15.020 af	**Custom Stage Data (Prismatic)** Listed below

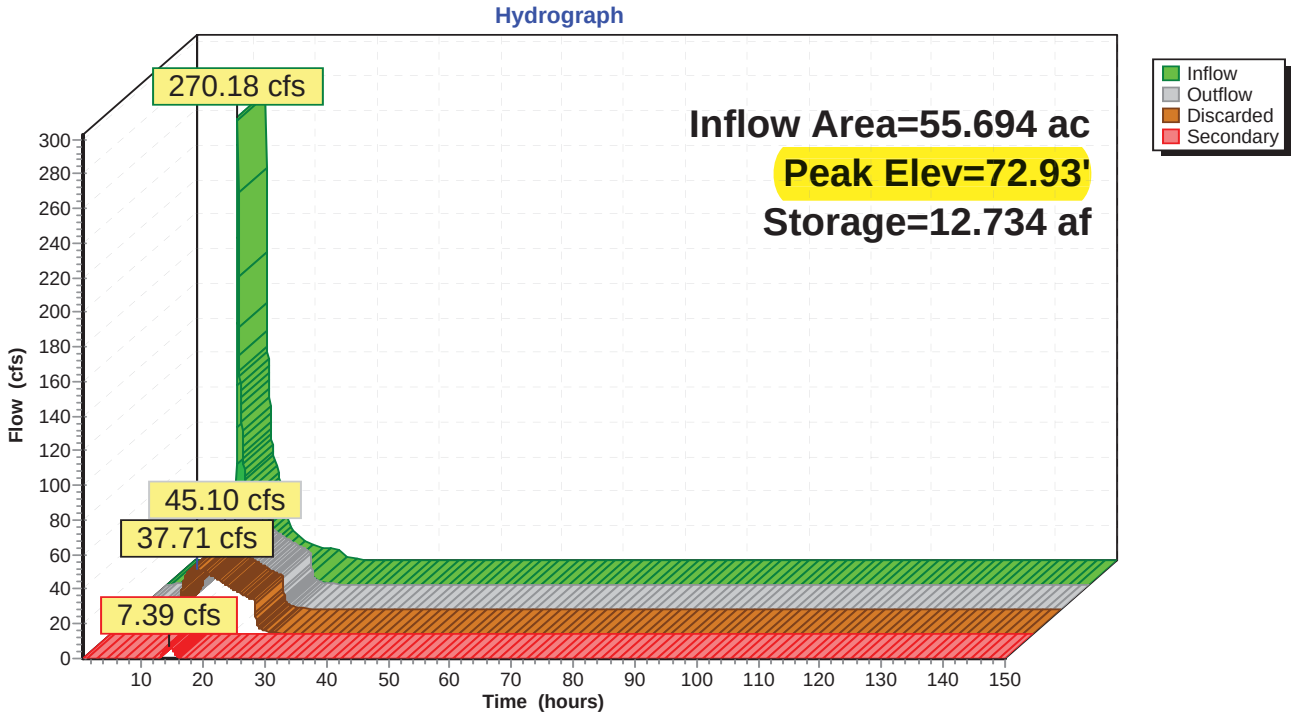
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
69.50	3.410	0.000	0.000
70.50	3.580	3.495	3.495
71.50	3.750	3.665	7.160
72.50	3.930	3.840	11.000
73.50	4.110	4.020	15.020

Device	Routing	Invert	Outlet Devices
#1	Discarded	69.50'	**5.510 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 65.00'
#2	Secondary	72.50'	**10.0' long x 11.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64

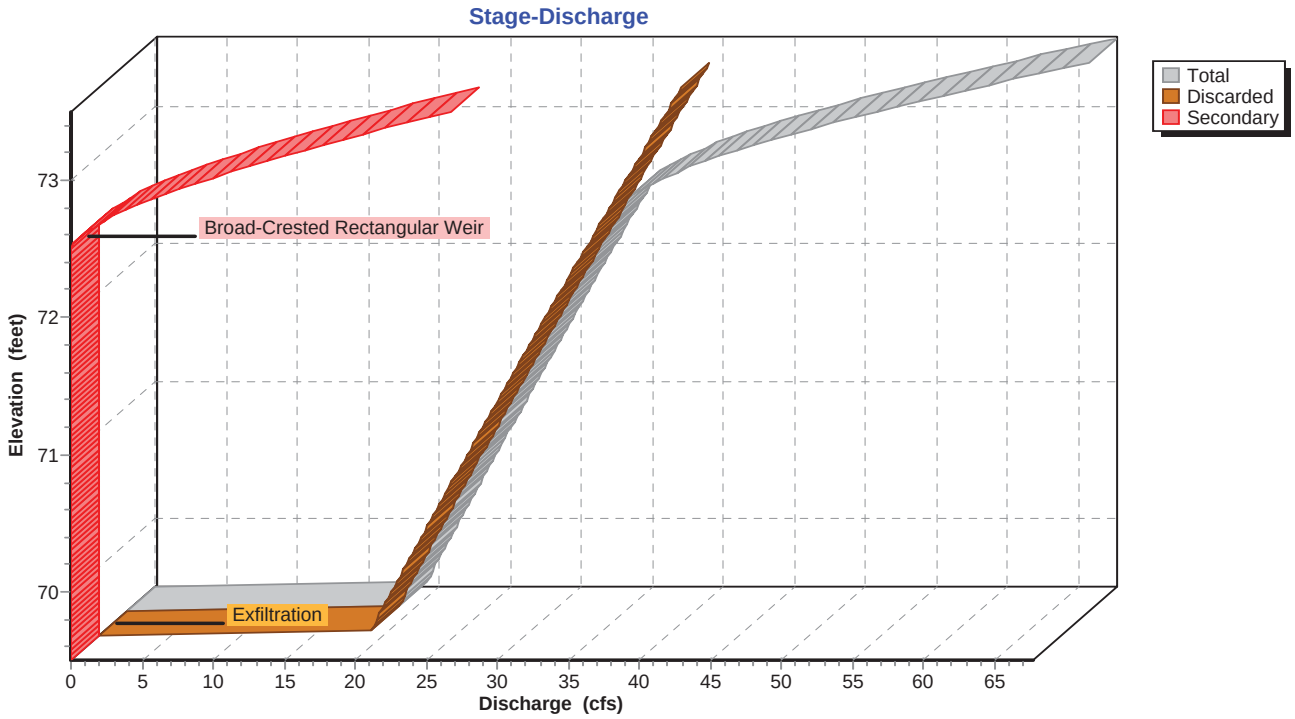
Discarded OutFlow Max=37.71 cfs @ 14.31 hrs HW=72.93' (Free Discharge)
↑**1=Exfiltration** (Controls 37.71 cfs)

Secondary OutFlow Max=7.38 cfs @ 14.31 hrs HW=72.93' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 7.38 cfs @ 1.71 fps)

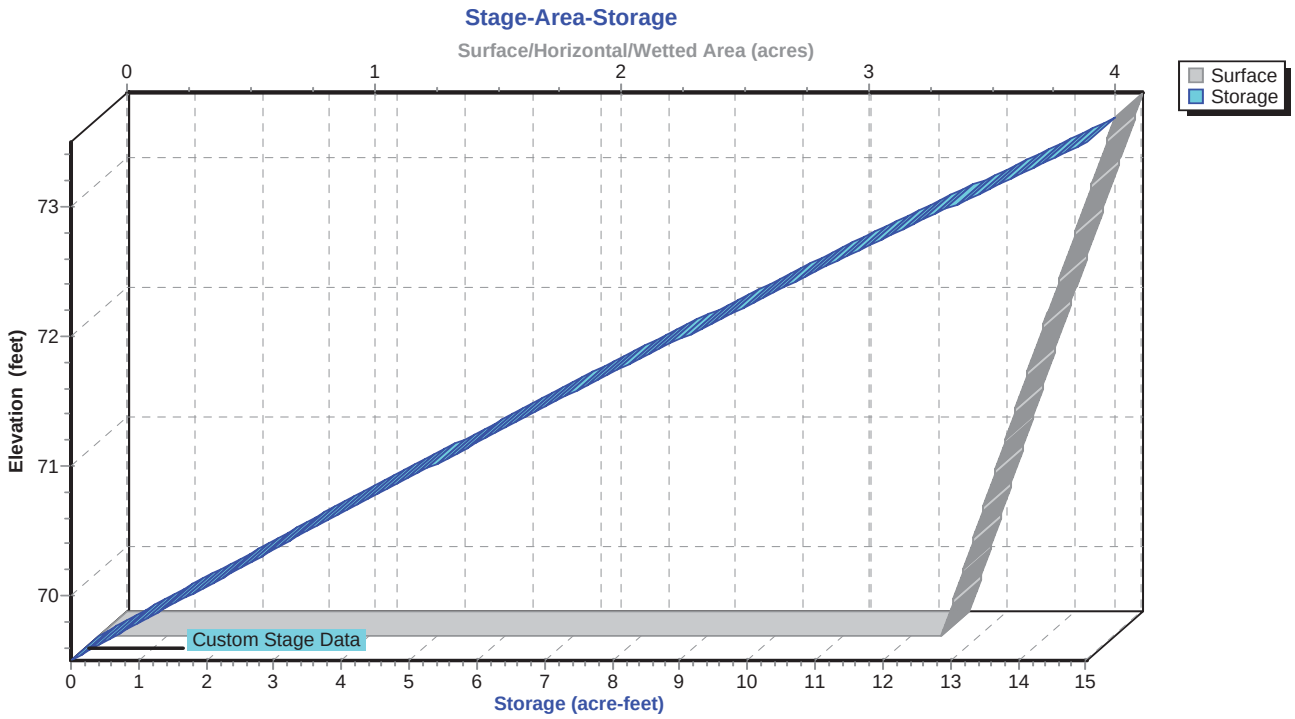
Pond 7P: Stormwater Pond



Pond 7P: Stormwater Pond



Pond 7P: Stormwater Pond



Hydrograph for Pond 7P: Stormwater Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
0.50	0.02	0.000	69.50	0.01	0.01	0.00
1.00	0.32	0.002	69.50	0.28	0.28	0.00
1.50	0.51	0.004	69.50	0.48	0.48	0.00
2.00	0.64	0.005	69.50	0.62	0.62	0.00
2.50	0.76	0.005	69.50	0.74	0.74	0.00
3.00	0.96	0.007	69.50	0.92	0.92	0.00
3.50	1.18	0.008	69.50	1.14	1.14	0.00
4.00	1.45	0.010	69.50	1.40	1.40	0.00
4.50	1.76	0.012	69.50	1.71	1.71	0.00
5.00	2.10	0.015	69.50	2.04	2.04	0.00
5.50	2.44	0.017	69.50	2.38	2.38	0.00
6.00	2.82	0.020	69.51	2.75	2.75	0.00
6.50	3.27	0.023	69.51	3.19	3.19	0.00
7.00	3.72	0.027	69.51	3.64	3.64	0.00
7.50	4.20	0.030	69.51	4.11	4.11	0.00
8.00	4.68	0.034	69.51	4.60	4.60	0.00
8.50	5.69	0.040	69.51	5.48	5.48	0.00
9.00	7.12	0.050	69.51	6.85	6.85	0.00
9.50	8.18	0.059	69.52	8.02	8.02	0.00
10.00	10.00	0.070	69.52	9.61	9.61	0.00
10.50	13.18	0.092	69.53	12.54	12.54	0.00
11.00	18.46	0.127	69.54	17.40	17.40	0.00
11.50	29.61	0.309	69.59	19.40	19.40	0.00
12.00	**268.46**	4.202	70.69	25.23	25.23	0.00
12.50	108.70	9.040	71.99	32.35	32.35	0.00
13.00	67.25	11.169	72.54	35.70	35.48	0.22
13.50	58.05	12.128	72.78	40.64	36.85	3.80
14.00	51.45	**12.643**	**72.91**	**44.36**	**37.58**	**6.78**
14.50	41.04	**12.704**	**72.92**	**44.86**	**37.67**	**7.19**
15.00	31.85	12.390	72.85	42.46	37.22	5.24
15.50	24.76	11.864	72.71	39.00	36.47	2.53
16.00	20.07	11.239	72.56	35.96	35.58	0.38
16.50	16.93	10.546	72.38	34.57	34.57	0.00
17.00	14.82	9.793	72.19	33.46	33.46	0.00
17.50	13.25	9.013	71.98	32.31	32.31	0.00
18.00	11.94	8.222	71.78	31.16	31.16	0.00
18.50	10.86	7.429	71.57	30.00	30.00	0.00
19.00	9.97	6.643	71.36	28.84	28.84	0.00
19.50	9.19	5.870	71.15	27.69	27.69	0.00
20.00	8.47	5.114	70.94	26.57	26.57	0.00
20.50	7.94	4.377	70.74	25.48	25.48	0.00
21.00	7.57	3.665	70.55	24.44	24.44	0.00
21.50	7.27	2.983	70.35	23.41	23.41	0.00
22.00	7.01	2.331	70.17	22.43	22.43	0.00
22.50	6.80	1.709	69.99	21.49	21.49	0.00
23.00	6.62	1.117	69.82	20.60	20.60	0.00
23.50	6.46	0.553	69.66	19.76	19.76	0.00
24.00	6.31	0.071	69.52	9.72	9.72	0.00
24.50	3.49	0.027	69.51	3.76	3.76	0.00
25.00	2.35	0.018	69.51	2.50	2.50	0.00
25.50	1.78	0.014	69.50	1.87	1.87	0.00
26.00	1.32	0.010	69.50	1.40	1.40	0.00
26.50	0.93	0.007	69.50	0.99	0.99	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
27.00	0.65	0.005	69.50	0.69	0.69	0.00
27.50	0.46	0.004	69.50	0.49	0.49	0.00
28.00	0.33	0.003	69.50	0.35	0.35	0.00
28.50	0.24	0.002	69.50	0.26	0.26	0.00
29.00	0.18	0.001	69.50	0.19	0.19	0.00
29.50	0.14	0.001	69.50	0.15	0.15	0.00
30.00	0.11	0.001	69.50	0.12	0.12	0.00
30.50	0.09	0.001	69.50	0.09	0.09	0.00
31.00	0.08	0.001	69.50	0.08	0.08	0.00
31.50	0.06	0.000	69.50	0.07	0.07	0.00
32.00	0.05	0.000	69.50	0.06	0.06	0.00
32.50	0.05	0.000	69.50	0.05	0.05	0.00
33.00	0.04	0.000	69.50	0.04	0.04	0.00
33.50	0.03	0.000	69.50	0.03	0.03	0.00
34.00	0.03	0.000	69.50	0.03	0.03	0.00
34.50	0.03	0.000	69.50	0.03	0.03	0.00
35.00	0.03	0.000	69.50	0.03	0.03	0.00
35.50	0.02	0.000	69.50	0.02	0.02	0.00
36.00	0.02	0.000	69.50	0.02	0.02	0.00
36.50	0.02	0.000	69.50	0.02	0.02	0.00
37.00	0.02	0.000	69.50	0.02	0.02	0.00
37.50	0.02	0.000	69.50	0.02	0.02	0.00
38.00	0.01	0.000	69.50	0.01	0.01	0.00
38.50	0.01	0.000	69.50	0.01	0.01	0.00
39.00	0.01	0.000	69.50	0.01	0.01	0.00
39.50	0.01	0.000	69.50	0.01	0.01	0.00
40.00	0.01	0.000	69.50	0.01	0.01	0.00
40.50	0.01	0.000	69.50	0.01	0.01	0.00
41.00	0.01	0.000	69.50	0.01	0.01	0.00
41.50	0.01	0.000	69.50	0.01	0.01	0.00
42.00	0.01	0.000	69.50	0.01	0.01	0.00
42.50	0.01	0.000	69.50	0.01	0.01	0.00
43.00	0.01	0.000	69.50	0.01	0.01	0.00
43.50	0.01	0.000	69.50	0.01	0.01	0.00
44.00	0.01	0.000	69.50	0.01	0.01	0.00
44.50	0.01	0.000	69.50	0.01	0.01	0.00
45.00	0.01	0.000	69.50	0.01	0.01	0.00
45.50	0.01	0.000	69.50	0.01	0.01	0.00
46.00	0.01	0.000	69.50	0.01	0.01	0.00
46.50	0.01	0.000	69.50	0.01	0.01	0.00
47.00	0.01	0.000	69.50	0.01	0.01	0.00
47.50	0.01	0.000	69.50	0.01	0.01	0.00
48.00	0.01	0.000	69.50	0.01	0.01	0.00
48.50	0.01	0.000	69.50	0.01	0.01	0.00
49.00	0.01	0.000	69.50	0.01	0.01	0.00
49.50	0.01	0.000	69.50	0.01	0.01	0.00
50.00	0.01	0.000	69.50	0.01	0.01	0.00
50.50	0.00	0.000	69.50	0.00	0.00	0.00
51.00	0.00	0.000	69.50	0.00	0.00	0.00
51.50	0.00	0.000	69.50	0.00	0.00	0.00
52.00	0.00	0.000	69.50	0.00	0.00	0.00
52.50	0.00	0.000	69.50	0.00	0.00	0.00
53.00	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
53.50	0.00	0.000	69.50	0.00	0.00	0.00
54.00	0.00	0.000	69.50	0.00	0.00	0.00
54.50	0.00	0.000	69.50	0.00	0.00	0.00
55.00	0.00	0.000	69.50	0.00	0.00	0.00
55.50	0.00	0.000	69.50	0.00	0.00	0.00
56.00	0.00	0.000	69.50	0.00	0.00	0.00
56.50	0.00	0.000	69.50	0.00	0.00	0.00
57.00	0.00	0.000	69.50	0.00	0.00	0.00
57.50	0.00	0.000	69.50	0.00	0.00	0.00
58.00	0.00	0.000	69.50	0.00	0.00	0.00
58.50	0.00	0.000	69.50	0.00	0.00	0.00
59.00	0.00	0.000	69.50	0.00	0.00	0.00
59.50	0.00	0.000	69.50	0.00	0.00	0.00
60.00	0.00	0.000	69.50	0.00	0.00	0.00
60.50	0.00	0.000	69.50	0.00	0.00	0.00
61.00	0.00	0.000	69.50	0.00	0.00	0.00
61.50	0.00	0.000	69.50	0.00	0.00	0.00
62.00	0.00	0.000	69.50	0.00	0.00	0.00
62.50	0.00	0.000	69.50	0.00	0.00	0.00
63.00	0.00	0.000	69.50	0.00	0.00	0.00
63.50	0.00	0.000	69.50	0.00	0.00	0.00
64.00	0.00	0.000	69.50	0.00	0.00	0.00
64.50	0.00	0.000	69.50	0.00	0.00	0.00
65.00	0.00	0.000	69.50	0.00	0.00	0.00
65.50	0.00	0.000	69.50	0.00	0.00	0.00
66.00	0.00	0.000	69.50	0.00	0.00	0.00
66.50	0.00	0.000	69.50	0.00	0.00	0.00
67.00	0.00	0.000	69.50	0.00	0.00	0.00
67.50	0.00	0.000	69.50	0.00	0.00	0.00
68.00	0.00	0.000	69.50	0.00	0.00	0.00
68.50	0.00	0.000	69.50	0.00	0.00	0.00
69.00	0.00	0.000	69.50	0.00	0.00	0.00
69.50	0.00	0.000	69.50	0.00	0.00	0.00
70.00	0.00	0.000	69.50	0.00	0.00	0.00
70.50	0.00	0.000	69.50	0.00	0.00	0.00
71.00	0.00	0.000	69.50	0.00	0.00	0.00
71.50	0.00	0.000	69.50	0.00	0.00	0.00
72.00	0.00	0.000	69.50	0.00	0.00	0.00
72.50	0.00	0.000	69.50	0.00	0.00	0.00
73.00	0.00	0.000	69.50	0.00	0.00	0.00
73.50	0.00	0.000	69.50	0.00	0.00	0.00
74.00	0.00	0.000	69.50	0.00	0.00	0.00
74.50	0.00	0.000	69.50	0.00	0.00	0.00
75.00	0.00	0.000	69.50	0.00	0.00	0.00
75.50	0.00	0.000	69.50	0.00	0.00	0.00
76.00	0.00	0.000	69.50	0.00	0.00	0.00
76.50	0.00	0.000	69.50	0.00	0.00	0.00
77.00	0.00	0.000	69.50	0.00	0.00	0.00
77.50	0.00	0.000	69.50	0.00	0.00	0.00
78.00	0.00	0.000	69.50	0.00	0.00	0.00
78.50	0.00	0.000	69.50	0.00	0.00	0.00
79.00	0.00	0.000	69.50	0.00	0.00	0.00
79.50	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
80.00	0.00	0.000	69.50	0.00	0.00	0.00
80.50	0.00	0.000	69.50	0.00	0.00	0.00
81.00	0.00	0.000	69.50	0.00	0.00	0.00
81.50	0.00	0.000	69.50	0.00	0.00	0.00
82.00	0.00	0.000	69.50	0.00	0.00	0.00
82.50	0.00	0.000	69.50	0.00	0.00	0.00
83.00	0.00	0.000	69.50	0.00	0.00	0.00
83.50	0.00	0.000	69.50	0.00	0.00	0.00
84.00	0.00	0.000	69.50	0.00	0.00	0.00
84.50	0.00	0.000	69.50	0.00	0.00	0.00
85.00	0.00	0.000	69.50	0.00	0.00	0.00
85.50	0.00	0.000	69.50	0.00	0.00	0.00
86.00	0.00	0.000	69.50	0.00	0.00	0.00
86.50	0.00	0.000	69.50	0.00	0.00	0.00
87.00	0.00	0.000	69.50	0.00	0.00	0.00
87.50	0.00	0.000	69.50	0.00	0.00	0.00
88.00	0.00	0.000	69.50	0.00	0.00	0.00
88.50	0.00	0.000	69.50	0.00	0.00	0.00
89.00	0.00	0.000	69.50	0.00	0.00	0.00
89.50	0.00	0.000	69.50	0.00	0.00	0.00
90.00	0.00	0.000	69.50	0.00	0.00	0.00
90.50	0.00	0.000	69.50	0.00	0.00	0.00
91.00	0.00	0.000	69.50	0.00	0.00	0.00
91.50	0.00	0.000	69.50	0.00	0.00	0.00
92.00	0.00	0.000	69.50	0.00	0.00	0.00
92.50	0.00	0.000	69.50	0.00	0.00	0.00
93.00	0.00	0.000	69.50	0.00	0.00	0.00
93.50	0.00	0.000	69.50	0.00	0.00	0.00
94.00	0.00	0.000	69.50	0.00	0.00	0.00
94.50	0.00	0.000	69.50	0.00	0.00	0.00
95.00	0.00	0.000	69.50	0.00	0.00	0.00
95.50	0.00	0.000	69.50	0.00	0.00	0.00
96.00	0.00	0.000	69.50	0.00	0.00	0.00
96.50	0.00	0.000	69.50	0.00	0.00	0.00
97.00	0.00	0.000	69.50	0.00	0.00	0.00
97.50	0.00	0.000	69.50	0.00	0.00	0.00
98.00	0.00	0.000	69.50	0.00	0.00	0.00
98.50	0.00	0.000	69.50	0.00	0.00	0.00
99.00	0.00	0.000	69.50	0.00	0.00	0.00
99.50	0.00	0.000	69.50	0.00	0.00	0.00
100.00	0.00	0.000	69.50	0.00	0.00	0.00
100.50	0.00	0.000	69.50	0.00	0.00	0.00
101.00	0.00	0.000	69.50	0.00	0.00	0.00
101.50	0.00	0.000	69.50	0.00	0.00	0.00
102.00	0.00	0.000	69.50	0.00	0.00	0.00
102.50	0.00	0.000	69.50	0.00	0.00	0.00
103.00	0.00	0.000	69.50	0.00	0.00	0.00
103.50	0.00	0.000	69.50	0.00	0.00	0.00
104.00	0.00	0.000	69.50	0.00	0.00	0.00
104.50	0.00	0.000	69.50	0.00	0.00	0.00
105.00	0.00	0.000	69.50	0.00	0.00	0.00
105.50	0.00	0.000	69.50	0.00	0.00	0.00
106.00	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
106.50	0.00	0.000	69.50	0.00	0.00	0.00
107.00	0.00	0.000	69.50	0.00	0.00	0.00
107.50	0.00	0.000	69.50	0.00	0.00	0.00
108.00	0.00	0.000	69.50	0.00	0.00	0.00
108.50	0.00	0.000	69.50	0.00	0.00	0.00
109.00	0.00	0.000	69.50	0.00	0.00	0.00
109.50	0.00	0.000	69.50	0.00	0.00	0.00
110.00	0.00	0.000	69.50	0.00	0.00	0.00
110.50	0.00	0.000	69.50	0.00	0.00	0.00
111.00	0.00	0.000	69.50	0.00	0.00	0.00
111.50	0.00	0.000	69.50	0.00	0.00	0.00
112.00	0.00	0.000	69.50	0.00	0.00	0.00
112.50	0.00	0.000	69.50	0.00	0.00	0.00
113.00	0.00	0.000	69.50	0.00	0.00	0.00
113.50	0.00	0.000	69.50	0.00	0.00	0.00
114.00	0.00	0.000	69.50	0.00	0.00	0.00
114.50	0.00	0.000	69.50	0.00	0.00	0.00
115.00	0.00	0.000	69.50	0.00	0.00	0.00
115.50	0.00	0.000	69.50	0.00	0.00	0.00
116.00	0.00	0.000	69.50	0.00	0.00	0.00
116.50	0.00	0.000	69.50	0.00	0.00	0.00
117.00	0.00	0.000	69.50	0.00	0.00	0.00
117.50	0.00	0.000	69.50	0.00	0.00	0.00
118.00	0.00	0.000	69.50	0.00	0.00	0.00
118.50	0.00	0.000	69.50	0.00	0.00	0.00
119.00	0.00	0.000	69.50	0.00	0.00	0.00
119.50	0.00	0.000	69.50	0.00	0.00	0.00
120.00	0.00	0.000	69.50	0.00	0.00	0.00
120.50	0.00	0.000	69.50	0.00	0.00	0.00
121.00	0.00	0.000	69.50	0.00	0.00	0.00
121.50	0.00	0.000	69.50	0.00	0.00	0.00
122.00	0.00	0.000	69.50	0.00	0.00	0.00
122.50	0.00	0.000	69.50	0.00	0.00	0.00
123.00	0.00	0.000	69.50	0.00	0.00	0.00
123.50	0.00	0.000	69.50	0.00	0.00	0.00
124.00	0.00	0.000	69.50	0.00	0.00	0.00
124.50	0.00	0.000	69.50	0.00	0.00	0.00
125.00	0.00	0.000	69.50	0.00	0.00	0.00
125.50	0.00	0.000	69.50	0.00	0.00	0.00
126.00	0.00	0.000	69.50	0.00	0.00	0.00
126.50	0.00	0.000	69.50	0.00	0.00	0.00
127.00	0.00	0.000	69.50	0.00	0.00	0.00
127.50	0.00	0.000	69.50	0.00	0.00	0.00
128.00	0.00	0.000	69.50	0.00	0.00	0.00
128.50	0.00	0.000	69.50	0.00	0.00	0.00
129.00	0.00	0.000	69.50	0.00	0.00	0.00
129.50	0.00	0.000	69.50	0.00	0.00	0.00
130.00	0.00	0.000	69.50	0.00	0.00	0.00
130.50	0.00	0.000	69.50	0.00	0.00	0.00
131.00	0.00	0.000	69.50	0.00	0.00	0.00
131.50	0.00	0.000	69.50	0.00	0.00	0.00
132.00	0.00	0.000	69.50	0.00	0.00	0.00
132.50	0.00	0.000	69.50	0.00	0.00	0.00

Hydrograph for Pond 7P: Stormwater Pond (continued)

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Secondary (cfs)
133.00	0.00	0.000	69.50	0.00	0.00	0.00
133.50	0.00	0.000	69.50	0.00	0.00	0.00
134.00	0.00	0.000	69.50	0.00	0.00	0.00
134.50	0.00	0.000	69.50	0.00	0.00	0.00
135.00	0.00	0.000	69.50	0.00	0.00	0.00
135.50	0.00	0.000	69.50	0.00	0.00	0.00
136.00	0.00	0.000	69.50	0.00	0.00	0.00
136.50	0.00	0.000	69.50	0.00	0.00	0.00
137.00	0.00	0.000	69.50	0.00	0.00	0.00
137.50	0.00	0.000	69.50	0.00	0.00	0.00
138.00	0.00	0.000	69.50	0.00	0.00	0.00
138.50	0.00	0.000	69.50	0.00	0.00	0.00
139.00	0.00	0.000	69.50	0.00	0.00	0.00
139.50	0.00	0.000	69.50	0.00	0.00	0.00
140.00	0.00	0.000	69.50	0.00	0.00	0.00
140.50	0.00	0.000	69.50	0.00	0.00	0.00
141.00	0.00	0.000	69.50	0.00	0.00	0.00
141.50	0.00	0.000	69.50	0.00	0.00	0.00
142.00	0.00	0.000	69.50	0.00	0.00	0.00
142.50	0.00	0.000	69.50	0.00	0.00	0.00
143.00	0.00	0.000	69.50	0.00	0.00	0.00
143.50	0.00	0.000	69.50	0.00	0.00	0.00
144.00	0.00	0.000	69.50	0.00	0.00	0.00
144.50	0.00	0.000	69.50	0.00	0.00	0.00
145.00	0.00	0.000	69.50	0.00	0.00	0.00
145.50	0.00	0.000	69.50	0.00	0.00	0.00
146.00	0.00	0.000	69.50	0.00	0.00	0.00
146.50	0.00	0.000	69.50	0.00	0.00	0.00
147.00	0.00	0.000	69.50	0.00	0.00	0.00
147.50	0.00	0.000	69.50	0.00	0.00	0.00
148.00	0.00	0.000	69.50	0.00	0.00	0.00
148.50	0.00	0.000	69.50	0.00	0.00	0.00
149.00	0.00	0.000	69.50	0.00	0.00	0.00
149.50	0.00	0.000	69.50	0.00	0.00	0.00
150.00	0.00	0.000	69.50	0.00	0.00	0.00

Stage-Discharge for Pond 7P: Stormwater Pond

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
69.50	0.00	0.00	0.00	70.03	21.70	21.70	0.00
69.51	19.00	19.00	0.00	70.04	21.76	21.76	0.00
69.52	19.05	19.05	0.00	70.05	21.81	21.81	0.00
69.53	19.10	19.10	0.00	70.06	21.86	21.86	0.00
69.54	19.15	19.15	0.00	70.07	21.91	21.91	0.00
69.55	19.20	19.20	0.00	70.08	21.97	21.97	0.00
69.56	19.26	19.26	0.00	70.09	22.02	22.02	0.00
69.57	19.31	19.31	0.00	70.10	22.07	22.07	0.00
69.58	19.36	19.36	0.00	70.11	22.12	22.12	0.00
69.59	19.41	19.41	0.00	70.12	22.18	22.18	0.00
69.60	19.46	19.46	0.00	70.13	22.23	22.23	0.00
69.61	19.51	19.51	0.00	70.14	22.28	22.28	0.00
69.62	19.57	19.57	0.00	70.15	22.34	22.34	0.00
69.63	19.62	19.62	0.00	70.16	22.39	22.39	0.00
69.64	19.67	19.67	0.00	70.17	22.44	22.44	0.00
69.65	19.72	19.72	0.00	70.18	22.49	22.49	0.00
69.66	19.77	19.77	0.00	70.19	22.55	22.55	0.00
69.67	19.82	19.82	0.00	70.20	22.60	22.60	0.00
69.68	19.88	19.88	0.00	70.21	22.65	22.65	0.00
69.69	19.93	19.93	0.00	70.22	22.71	22.71	0.00
69.70	19.98	19.98	0.00	70.23	22.76	22.76	0.00
69.71	20.03	20.03	0.00	70.24	22.81	22.81	0.00
69.72	20.08	20.08	0.00	70.25	22.86	22.86	0.00
69.73	20.14	20.14	0.00	70.26	22.92	22.92	0.00
69.74	20.19	20.19	0.00	70.27	22.97	22.97	0.00
69.75	20.24	20.24	0.00	70.28	23.02	23.02	0.00
69.76	20.29	20.29	0.00	70.29	23.08	23.08	0.00
69.77	20.34	20.34	0.00	70.30	23.13	23.13	0.00
69.78	20.40	20.40	0.00	70.31	23.18	23.18	0.00
69.79	20.45	20.45	0.00	70.32	23.24	23.24	0.00
69.80	20.50	20.50	0.00	70.33	23.29	23.29	0.00
69.81	20.55	20.55	0.00	70.34	23.34	23.34	0.00
69.82	20.60	20.60	0.00	70.35	23.40	23.40	0.00
69.83	20.66	20.66	0.00	70.36	23.45	23.45	0.00
69.84	20.71	20.71	0.00	70.37	23.50	23.50	0.00
69.85	20.76	20.76	0.00	70.38	23.55	23.55	0.00
69.86	20.81	20.81	0.00	70.39	23.61	23.61	0.00
69.87	20.87	20.87	0.00	70.40	23.66	23.66	0.00
69.88	20.92	20.92	0.00	70.41	23.71	23.71	0.00
69.89	20.97	20.97	0.00	70.42	23.77	23.77	0.00
69.90	21.02	21.02	0.00	70.43	23.82	23.82	0.00
69.91	21.07	21.07	0.00	70.44	23.87	23.87	0.00
69.92	21.13	21.13	0.00	70.45	23.93	23.93	0.00
69.93	21.18	21.18	0.00	70.46	23.98	23.98	0.00
69.94	21.23	21.23	0.00	70.47	24.03	24.03	0.00
69.95	21.28	21.28	0.00	70.48	24.09	24.09	0.00
69.96	21.34	21.34	0.00	70.49	24.14	24.14	0.00
69.97	21.39	21.39	0.00	70.50	24.19	24.19	0.00
69.98	21.44	21.44	0.00	70.51	24.25	24.25	0.00
69.99	21.49	21.49	0.00	70.52	24.30	24.30	0.00
70.00	21.55	21.55	0.00	70.53	24.35	24.35	0.00
70.01	21.60	21.60	0.00	70.54	24.41	24.41	0.00
70.02	21.65	21.65	0.00	70.55	24.46	24.46	0.00

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
70.56	24.51	24.51	0.00	71.09	27.37	27.37	0.00
70.57	24.57	24.57	0.00	71.10	27.43	27.43	0.00
70.58	24.62	24.62	0.00	71.11	27.48	27.48	0.00
70.59	24.68	24.68	0.00	71.12	27.54	27.54	0.00
70.60	24.73	24.73	0.00	71.13	27.59	27.59	0.00
70.61	24.78	24.78	0.00	71.14	27.65	27.65	0.00
70.62	24.84	24.84	0.00	71.15	27.70	27.70	0.00
70.63	24.89	24.89	0.00	71.16	27.75	27.75	0.00
70.64	24.94	24.94	0.00	71.17	27.81	27.81	0.00
70.65	25.00	25.00	0.00	71.18	27.86	27.86	0.00
70.66	25.05	25.05	0.00	71.19	27.92	27.92	0.00
70.67	25.10	25.10	0.00	71.20	27.97	27.97	0.00
70.68	25.16	25.16	0.00	71.21	28.03	28.03	0.00
70.69	25.21	25.21	0.00	71.22	28.08	28.08	0.00
70.70	25.27	25.27	0.00	71.23	28.14	28.14	0.00
70.71	25.32	25.32	0.00	71.24	28.19	28.19	0.00
70.72	25.37	25.37	0.00	71.25	28.25	28.25	0.00
70.73	25.43	25.43	0.00	71.26	28.30	28.30	0.00
70.74	25.48	25.48	0.00	71.27	28.35	28.35	0.00
70.75	25.53	25.53	0.00	71.28	28.41	28.41	0.00
70.76	25.59	25.59	0.00	71.29	28.46	28.46	0.00
70.77	25.64	25.64	0.00	71.30	28.52	28.52	0.00
70.78	25.70	25.70	0.00	71.31	28.57	28.57	0.00
70.79	25.75	25.75	0.00	71.32	28.63	28.63	0.00
70.80	25.80	25.80	0.00	71.33	28.68	28.68	0.00
70.81	25.86	25.86	0.00	71.34	28.74	28.74	0.00
70.82	25.91	25.91	0.00	71.35	28.79	28.79	0.00
70.83	25.97	25.97	0.00	71.36	28.85	28.85	0.00
70.84	26.02	26.02	0.00	71.37	28.90	28.90	0.00
70.85	26.07	26.07	0.00	71.38	28.96	28.96	0.00
70.86	26.13	26.13	0.00	71.39	29.01	29.01	0.00
70.87	26.18	26.18	0.00	71.40	29.07	29.07	0.00
70.88	26.24	26.24	0.00	71.41	29.12	29.12	0.00
70.89	26.29	26.29	0.00	71.42	29.18	29.18	0.00
70.90	26.34	26.34	0.00	71.43	29.23	29.23	0.00
70.91	26.40	26.40	0.00	71.44	29.29	29.29	0.00
70.92	26.45	26.45	0.00	71.45	29.34	29.34	0.00
70.93	26.51	26.51	0.00	71.46	29.40	29.40	0.00
70.94	26.56	26.56	0.00	71.47	29.45	29.45	0.00
70.95	26.61	26.61	0.00	71.48	29.51	29.51	0.00
70.96	26.67	26.67	0.00	71.49	29.56	29.56	0.00
70.97	26.72	26.72	0.00	71.50	29.62	29.62	0.00
70.98	26.78	26.78	0.00	71.51	29.67	29.67	0.00
70.99	26.83	26.83	0.00	71.52	29.73	29.73	0.00
71.00	26.88	26.88	0.00	71.53	29.78	29.78	0.00
71.01	26.94	26.94	0.00	71.54	29.84	29.84	0.00
71.02	26.99	26.99	0.00	71.55	29.89	29.89	0.00
71.03	27.05	27.05	0.00	71.56	29.95	29.95	0.00
71.04	27.10	27.10	0.00	71.57	30.00	30.00	0.00
71.05	27.16	27.16	0.00	71.58	30.06	30.06	0.00
71.06	27.21	27.21	0.00	71.59	30.12	30.12	0.00
71.07	27.26	27.26	0.00	71.60	30.17	30.17	0.00
71.08	27.32	27.32	0.00	71.61	30.23	30.23	0.00

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
71.62	30.28	30.28	0.00	72.15	33.26	33.26	0.00
71.63	30.34	30.34	0.00	72.16	33.31	33.31	0.00
71.64	30.39	30.39	0.00	72.17	33.37	33.37	0.00
71.65	30.45	30.45	0.00	72.18	33.43	33.43	0.00
71.66	30.51	30.51	0.00	72.19	33.48	33.48	0.00
71.67	30.56	30.56	0.00	72.20	33.54	33.54	0.00
71.68	30.62	30.62	0.00	72.21	33.60	33.60	0.00
71.69	30.67	30.67	0.00	72.22	33.65	33.65	0.00
71.70	30.73	30.73	0.00	72.23	33.71	33.71	0.00
71.71	30.78	30.78	0.00	72.24	33.77	33.77	0.00
71.72	30.84	30.84	0.00	72.25	33.82	33.82	0.00
71.73	30.90	30.90	0.00	72.26	33.88	33.88	0.00
71.74	30.95	30.95	0.00	72.27	33.94	33.94	0.00
71.75	31.01	31.01	0.00	72.28	33.99	33.99	0.00
71.76	31.06	31.06	0.00	72.29	34.05	34.05	0.00
71.77	31.12	31.12	0.00	72.30	34.11	34.11	0.00
71.78	31.18	31.18	0.00	72.31	34.16	34.16	0.00
71.79	31.23	31.23	0.00	72.32	34.22	34.22	0.00
71.80	31.29	31.29	0.00	72.33	34.28	34.28	0.00
71.81	31.34	31.34	0.00	72.34	34.33	34.33	0.00
71.82	31.40	31.40	0.00	72.35	34.39	34.39	0.00
71.83	31.46	31.46	0.00	72.36	34.45	34.45	0.00
71.84	31.51	31.51	0.00	72.37	34.50	34.50	0.00
71.85	31.57	31.57	0.00	72.38	34.56	34.56	0.00
71.86	31.62	31.62	0.00	72.39	34.62	34.62	0.00
71.87	31.68	31.68	0.00	72.40	34.67	34.67	0.00
71.88	31.74	31.74	0.00	72.41	34.73	34.73	0.00
71.89	31.79	31.79	0.00	72.42	34.79	34.79	0.00
71.90	31.85	31.85	0.00	72.43	34.84	34.84	0.00
71.91	31.90	31.90	0.00	72.44	34.90	34.90	0.00
71.92	31.96	31.96	0.00	72.45	34.96	34.96	0.00
71.93	32.02	32.02	0.00	72.46	35.01	35.01	0.00
71.94	32.07	32.07	0.00	72.47	35.07	35.07	0.00
71.95	32.13	32.13	0.00	72.48	35.13	35.13	0.00
71.96	32.19	32.19	0.00	72.49	35.18	35.18	0.00
71.97	32.24	32.24	0.00	72.50	35.24	35.24	0.00
71.98	32.30	32.30	0.00	72.51	35.32	35.30	0.03
71.99	32.35	32.35	0.00	72.52	35.43	35.36	0.07
72.00	32.41	32.41	0.00	72.53	35.54	35.41	0.13
72.01	32.47	32.47	0.00	72.54	35.67	35.47	0.20
72.02	32.52	32.52	0.00	72.55	35.81	35.53	0.28
72.03	32.58	32.58	0.00	72.56	35.96	35.58	0.37
72.04	32.64	32.64	0.00	72.57	36.11	35.64	0.47
72.05	32.69	32.69	0.00	72.58	36.27	35.70	0.57
72.06	32.75	32.75	0.00	72.59	36.44	35.75	0.68
72.07	32.80	32.80	0.00	72.60	36.61	35.81	0.80
72.08	32.86	32.86	0.00	72.61	36.79	35.87	0.92
72.09	32.92	32.92	0.00	72.62	36.98	35.93	1.05
72.10	32.97	32.97	0.00	72.63	37.17	35.98	1.19
72.11	33.03	33.03	0.00	72.64	37.37	36.04	1.33
72.12	33.09	33.09	0.00	72.65	37.57	36.10	1.47
72.13	33.14	33.14	0.00	72.66	37.77	36.15	1.62
72.14	33.20	33.20	0.00	72.67	37.99	36.21	1.77

Stage-Discharge for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Secondary (cfs)
72.68	38.20	36.27	1.93
72.69	38.42	36.33	2.10
72.70	38.65	36.38	2.26
72.71	38.88	36.44	2.44
72.72	39.11	36.50	2.62
72.73	39.36	36.56	2.80
72.74	39.60	36.61	2.99
72.75	39.85	36.67	3.18
72.76	40.11	36.73	3.38
72.77	40.36	36.78	3.58
72.78	40.63	36.84	3.78
72.79	40.89	36.90	3.99
72.80	41.16	36.96	4.21
72.81	41.44	37.01	4.42
72.82	41.72	37.07	4.64
72.83	42.00	37.13	4.87
72.84	42.29	37.19	5.10
72.85	42.58	37.24	5.33
72.86	42.87	37.30	5.57
72.87	43.17	37.36	5.81
72.88	43.47	37.42	6.05
72.89	43.77	37.47	6.30
72.90	44.08	37.53	6.55
72.91	44.40	37.59	6.81
72.92	44.73	37.65	7.08
72.93	45.05	37.70	7.35
72.94	45.38	37.76	7.62
72.95	45.72	37.82	7.90
72.96	46.06	37.88	8.18
72.97	46.40	37.93	8.47
72.98	46.75	37.99	8.76
72.99	47.10	38.05	9.05
73.00	47.46	38.11	9.35
73.01	47.82	38.16	9.65
73.02	48.18	38.22	9.96
73.03	48.55	38.28	10.27
73.04	48.92	38.34	10.58
73.05	49.30	38.39	10.90
73.06	49.67	38.45	11.22
73.07	50.06	38.51	11.55
73.08	50.45	38.57	11.88
73.09	50.84	38.63	12.21
73.10	51.23	38.68	12.55
73.11	51.60	38.74	12.86
73.12	51.97	38.80	13.17
73.13	52.34	38.86	13.49
73.14	52.72	38.91	13.80
73.15	53.09	38.97	14.12
73.16	53.47	39.03	14.44
73.17	53.86	39.09	14.77
73.18	54.24	39.15	15.10
73.19	54.63	39.20	15.42
73.20	55.02	39.26	15.75
73.21	55.41	39.32	16.09
73.22	55.80	39.38	16.42
73.23	56.19	39.43	16.76
73.24	56.59	39.49	17.10
73.25	56.99	39.55	17.44
73.26	57.39	39.61	17.78
73.27	57.79	39.67	18.13
73.28	58.20	39.72	18.48
73.29	58.61	39.78	18.83
73.30	59.02	39.84	19.18
73.31	59.43	39.90	19.53
73.32	59.85	39.96	19.89
73.33	60.27	40.01	20.25
73.34	60.69	40.07	20.62
73.35	61.11	40.13	20.98
73.36	61.54	40.19	21.35
73.37	61.97	40.25	21.72
73.38	62.39	40.30	22.09
73.39	62.83	40.36	22.46
73.40	63.26	40.42	22.84
73.41	63.70	40.48	23.22
73.42	64.13	40.54	23.60
73.43	64.57	40.59	23.98
73.44	65.01	40.65	24.36
73.45	65.46	40.71	24.75
73.46	65.90	40.77	25.13
73.47	66.35	40.83	25.52
73.48	66.80	40.89	25.91
73.49	67.25	40.94	26.31
73.50	**67.70**	**41.00**	**26.70**

Stage-Area-Storage for Pond 7P: Stormwater Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
69.50	3.410	0.000	70.03	3.500	1.852
69.51	3.412	0.035	70.04	3.502	1.887
69.52	3.413	0.070	70.05	3.503	1.922
69.53	3.415	0.105	70.06	3.505	1.957
69.54	3.417	0.140	70.07	3.507	1.992
69.55	3.418	0.175	70.08	3.509	2.027
69.56	3.420	0.210	70.09	3.510	2.062
69.57	3.422	0.245	70.10	3.512	2.097
69.58	3.424	0.280	70.11	3.514	2.132
69.59	3.425	0.315	70.12	3.515	2.167
69.60	3.427	0.349	70.13	3.517	2.202
69.61	3.429	0.384	70.14	3.519	2.237
69.62	3.430	0.419	70.15	3.521	2.272
69.63	3.432	0.454	70.16	3.522	2.307
69.64	3.434	0.489	70.17	3.524	2.342
69.65	3.436	0.524	70.18	3.526	2.377
69.66	3.437	0.559	70.19	3.527	2.412
69.67	3.439	0.594	70.20	3.529	2.447
69.68	3.441	0.629	70.21	3.531	2.481
69.69	3.442	0.664	70.22	3.532	2.516
69.70	3.444	0.699	70.23	3.534	2.551
69.71	3.446	0.734	70.24	3.536	2.586
69.72	3.447	0.769	70.25	3.537	2.621
69.73	3.449	0.804	70.26	3.539	2.656
69.74	3.451	0.839	70.27	3.541	2.691
69.75	3.452	0.874	70.28	3.543	2.726
69.76	3.454	0.909	70.29	3.544	2.761
69.77	3.456	0.944	70.30	3.546	2.796
69.78	3.458	0.979	70.31	3.548	2.831
69.79	3.459	1.014	70.32	3.549	2.866
69.80	3.461	1.048	70.33	3.551	2.901
69.81	3.463	1.083	70.34	3.553	2.936
69.82	3.464	1.118	70.35	3.554	2.971
69.83	3.466	1.153	70.36	3.556	3.006
69.84	3.468	1.188	70.37	3.558	3.041
69.85	3.469	1.223	70.38	3.560	3.076
69.86	3.471	1.258	70.39	3.561	3.111
69.87	3.473	1.293	70.40	3.563	3.146
69.88	3.475	1.328	70.41	3.565	3.180
69.89	3.476	1.363	70.42	3.566	3.215
69.90	3.478	1.398	70.43	3.568	3.250
69.91	3.480	1.433	70.44	3.570	3.285
69.92	3.481	1.468	70.45	3.572	3.320
69.93	3.483	1.503	70.46	3.573	3.355
69.94	3.485	1.538	70.47	3.575	3.390
69.95	3.487	1.573	70.48	3.577	3.425
69.96	3.488	1.608	70.49	3.578	3.460
69.97	3.490	1.643	70.50	3.580	3.495
69.98	3.492	1.678	70.51	3.582	3.532
69.99	3.493	1.713	70.52	3.583	3.568
70.00	3.495	1.748	70.53	3.585	3.605
70.01	3.497	1.782	70.54	3.587	3.642
70.02	3.498	1.817	70.55	3.588	3.678

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
70.56	3.590	3.715	71.09	3.680	5.657
70.57	3.592	3.752	71.10	3.682	5.694
70.58	3.594	3.788	71.11	3.684	5.731
70.59	3.595	3.825	71.12	3.685	5.767
70.60	3.597	3.861	71.13	3.687	5.804
70.61	3.599	3.898	71.14	3.689	5.841
70.62	3.600	3.935	71.15	3.691	5.877
70.63	3.602	3.971	71.16	3.692	5.914
70.64	3.604	4.008	71.17	3.694	5.951
70.65	3.606	4.045	71.18	3.696	5.987
70.66	3.607	4.081	71.19	3.697	6.024
70.67	3.609	4.118	71.20	3.699	6.061
70.68	3.611	4.155	71.21	3.701	6.097
70.69	3.612	4.191	71.22	3.702	6.134
70.70	3.614	4.228	71.23	3.704	6.170
70.71	3.616	4.265	71.24	3.706	6.207
70.72	3.617	4.301	71.25	3.708	6.244
70.73	3.619	4.338	71.26	3.709	6.280
70.74	3.621	4.375	71.27	3.711	6.317
70.75	3.622	4.411	71.28	3.713	6.354
70.76	3.624	4.448	71.29	3.714	6.390
70.77	3.626	4.485	71.30	3.716	6.427
70.78	3.628	4.521	71.31	3.718	6.464
70.79	3.629	4.558	71.32	3.719	6.500
70.80	3.631	4.594	71.33	3.721	6.537
70.81	3.633	4.631	71.34	3.723	6.574
70.82	3.634	4.668	71.35	3.724	6.610
70.83	3.636	4.704	71.36	3.726	6.647
70.84	3.638	4.741	71.37	3.728	6.684
70.85	3.639	4.778	71.38	3.730	6.720
70.86	3.641	4.814	71.39	3.731	6.757
70.87	3.643	4.851	71.40	3.733	6.794
70.88	3.645	4.888	71.41	3.735	6.830
70.89	3.646	4.924	71.42	3.736	6.867
70.90	3.648	4.961	71.43	3.738	6.903
70.91	3.650	4.998	71.44	3.740	6.940
70.92	3.651	5.034	71.45	3.742	6.977
70.93	3.653	5.071	71.46	3.743	7.013
70.94	3.655	5.108	71.47	3.745	7.050
70.95	3.657	5.144	71.48	3.747	7.087
70.96	3.658	5.181	71.49	3.748	7.123
70.97	3.660	5.218	71.50	3.750	7.160
70.98	3.662	5.254	71.51	3.752	7.198
70.99	3.663	5.291	71.52	3.754	7.237
71.00	3.665	5.327	71.53	3.755	7.275
71.01	3.667	5.364	71.54	3.757	7.314
71.02	3.668	5.401	71.55	3.759	7.352
71.03	3.670	5.437	71.56	3.761	7.390
71.04	3.672	5.474	71.57	3.763	7.429
71.05	3.673	5.511	71.58	3.764	7.467
71.06	3.675	5.547	71.59	3.766	7.506
71.07	3.677	5.584	71.60	3.768	7.544
71.08	3.679	5.621	71.61	3.770	7.582

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
71.62	3.772	7.621	72.15	3.867	9.656
71.63	3.773	7.659	72.16	3.869	9.694
71.64	3.775	7.698	72.17	3.871	9.733
71.65	3.777	7.736	72.18	3.872	9.771
71.66	3.779	7.774	72.19	3.874	9.810
71.67	3.781	7.813	72.20	3.876	9.848
71.68	3.782	7.851	72.21	3.878	9.886
71.69	3.784	7.890	72.22	3.880	9.925
71.70	3.786	7.928	72.23	3.881	9.963
71.71	3.788	7.966	72.24	3.883	10.002
71.72	3.790	8.005	72.25	3.885	10.040
71.73	3.791	8.043	72.26	3.887	10.078
71.74	3.793	8.082	72.27	3.889	10.117
71.75	3.795	8.120	72.28	3.890	10.155
71.76	3.797	8.158	72.29	3.892	10.194
71.77	3.799	8.197	72.30	3.894	10.232
71.78	3.800	8.235	72.31	3.896	10.270
71.79	3.802	8.274	72.32	3.898	10.309
71.80	3.804	8.312	72.33	3.899	10.347
71.81	3.806	8.350	72.34	3.901	10.386
71.82	3.808	8.389	72.35	3.903	10.424
71.83	3.809	8.427	72.36	3.905	10.462
71.84	3.811	8.466	72.37	3.907	10.501
71.85	3.813	8.504	72.38	3.908	10.539
71.86	3.815	8.542	72.39	3.910	10.578
71.87	3.817	8.581	72.40	3.912	10.616
71.88	3.818	8.619	72.41	3.914	10.654
71.89	3.820	8.658	72.42	3.916	10.693
71.90	3.822	8.696	72.43	3.917	10.731
71.91	3.824	8.734	72.44	3.919	10.770
71.92	3.826	8.773	72.45	3.921	10.808
71.93	3.827	8.811	72.46	3.923	10.846
71.94	3.829	8.850	72.47	3.925	10.885
71.95	3.831	8.888	72.48	3.926	10.923
71.96	3.833	8.926	72.49	3.928	10.962
71.97	3.835	8.965	72.50	3.930	11.000
71.98	3.836	9.003	72.51	3.932	11.040
71.99	3.838	9.042	72.52	3.934	11.080
72.00	3.840	9.080	72.53	3.935	11.121
72.01	3.842	9.118	72.54	3.937	11.161
72.02	3.844	9.157	72.55	3.939	11.201
72.03	3.845	9.195	72.56	3.941	11.241
72.04	3.847	9.234	72.57	3.943	11.281
72.05	3.849	9.272	72.58	3.944	11.322
72.06	3.851	9.310	72.59	3.946	11.362
72.07	3.853	9.349	72.60	3.948	11.402
72.08	3.854	9.387	72.61	3.950	11.442
72.09	3.856	9.426	72.62	3.952	11.482
72.10	3.858	9.464	72.63	3.953	11.523
72.11	3.860	9.502	72.64	3.955	11.563
72.12	3.862	9.541	72.65	3.957	11.603
72.13	3.863	9.579	72.66	3.959	11.643
72.14	3.865	9.618	72.67	3.961	11.683

Stage-Area-Storage for Pond 7P: Stormwater Pond (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
72.68	3.962	11.724
72.69	3.964	11.764
72.70	3.966	11.804
72.71	3.968	11.844
72.72	3.970	11.884
72.73	3.971	11.925
72.74	3.973	11.965
72.75	3.975	12.005
72.76	3.977	12.045
72.77	3.979	12.085
72.78	3.980	12.126
72.79	3.982	12.166
72.80	3.984	12.206
72.81	3.986	12.246
72.82	3.988	12.286
72.83	3.989	12.327
72.84	3.991	12.367
72.85	3.993	12.407
72.86	3.995	12.447
72.87	3.997	12.487
72.88	3.998	12.528
72.89	4.000	12.568
72.90	4.002	12.608
72.91	4.004	12.648
72.92	4.006	12.688
72.93	4.007	12.729
72.94	4.009	12.769
72.95	4.011	12.809
72.96	4.013	12.849
72.97	4.015	12.889
72.98	4.016	12.930
72.99	4.018	12.970
73.00	4.020	13.010
73.01	4.022	13.050
73.02	4.024	13.090
73.03	4.025	13.131
73.04	4.027	13.171
73.05	4.029	13.211
73.06	4.031	13.251
73.07	4.033	13.291
73.08	4.034	13.332
73.09	4.036	13.372
73.10	4.038	13.412
73.11	4.040	13.452
73.12	4.042	13.492
73.13	4.043	13.533
73.14	4.045	13.573
73.15	4.047	13.613
73.16	4.049	13.653
73.17	4.051	13.693
73.18	4.052	13.734
73.19	4.054	13.774
73.20	4.056	13.814
73.21	4.058	13.854
73.22	4.060	13.894
73.23	4.061	13.935
73.24	4.063	13.975
73.25	4.065	14.015
73.26	4.067	14.055
73.27	4.069	14.095
73.28	4.070	14.136
73.29	4.072	14.176
73.30	4.074	14.216
73.31	4.076	14.256
73.32	4.078	14.296
73.33	4.079	14.337
73.34	4.081	14.377
73.35	4.083	14.417
73.36	4.085	14.457
73.37	4.087	14.497
73.38	4.088	14.538
73.39	4.090	14.578
73.40	4.092	14.618
73.41	4.094	14.658
73.42	4.096	14.698
73.43	4.097	14.739
73.44	4.099	14.779
73.45	4.101	14.819
73.46	4.103	14.859
73.47	4.105	14.899
73.48	4.106	14.940
73.49	4.108	14.980
73.50	**4.110**	**15.020**

Summary for Pond 8P: Switch Yard Ditch

Inflow Area = 23.940 ac, 61.82% Impervious, Inflow Depth = 7.15" for 100yr-24hr event
Inflow = 82.72 cfs @ 11.97 hrs, Volume= 14.255 af
Outflow = 43.79 cfs @ 12.07 hrs, Volume= 14.255 af, Atten= 47%, Lag= 6.3 min
Primary = 43.79 cfs @ 12.07 hrs, Volume= 14.255 af

Routing by Stor-Ind method, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs
Peak Elev= 77.04' @ 12.07 hrs Surf.Area= 0 sf Storage= 57,303 cf

Plug-Flow detention time= 33.6 min calculated for 14.250 af (100% of inflow)
Center-of-Mass det. time= 34.5 min (901.3 - 866.8)

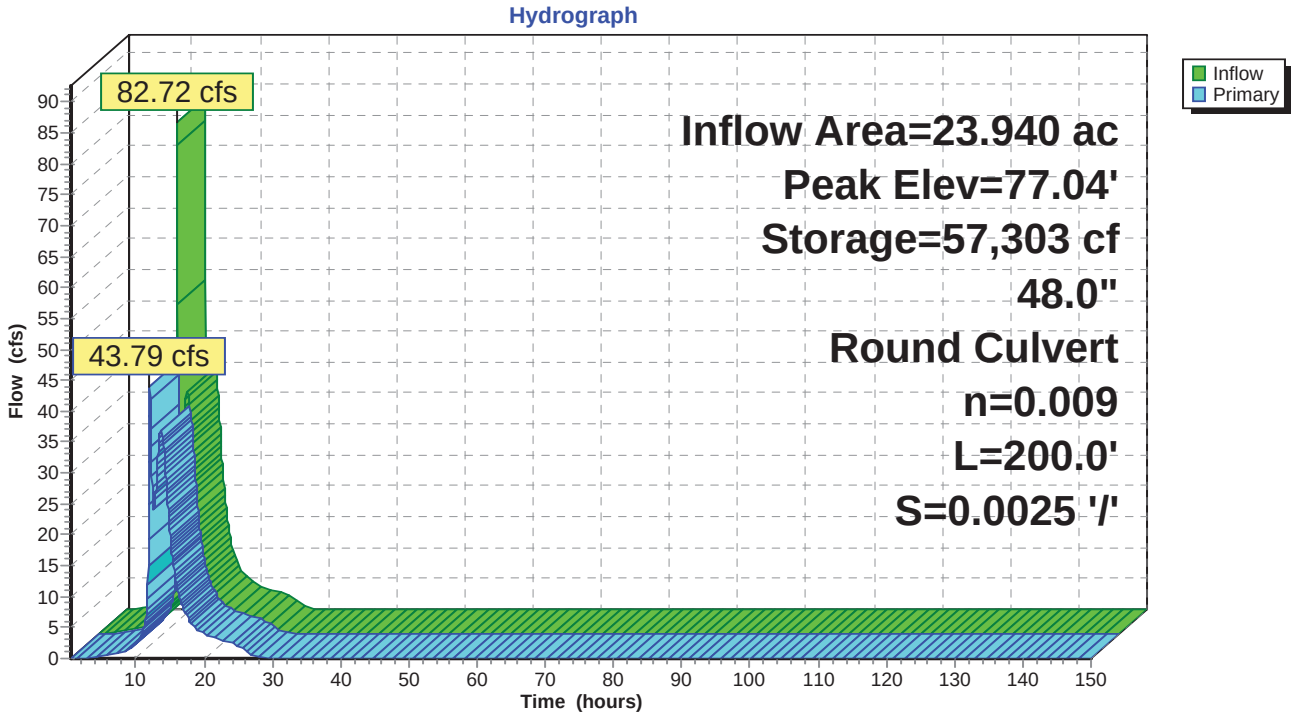
Volume	Invert	Avail.Storage	Storage Description
#1	74.00'	85,305 cf	**Custom Stage Data** Listed below

Elevation (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
74.00	0	0
75.00	13,622	13,622
76.00	18,598	32,220
77.00	23,771	55,991
78.00	29,314	85,305

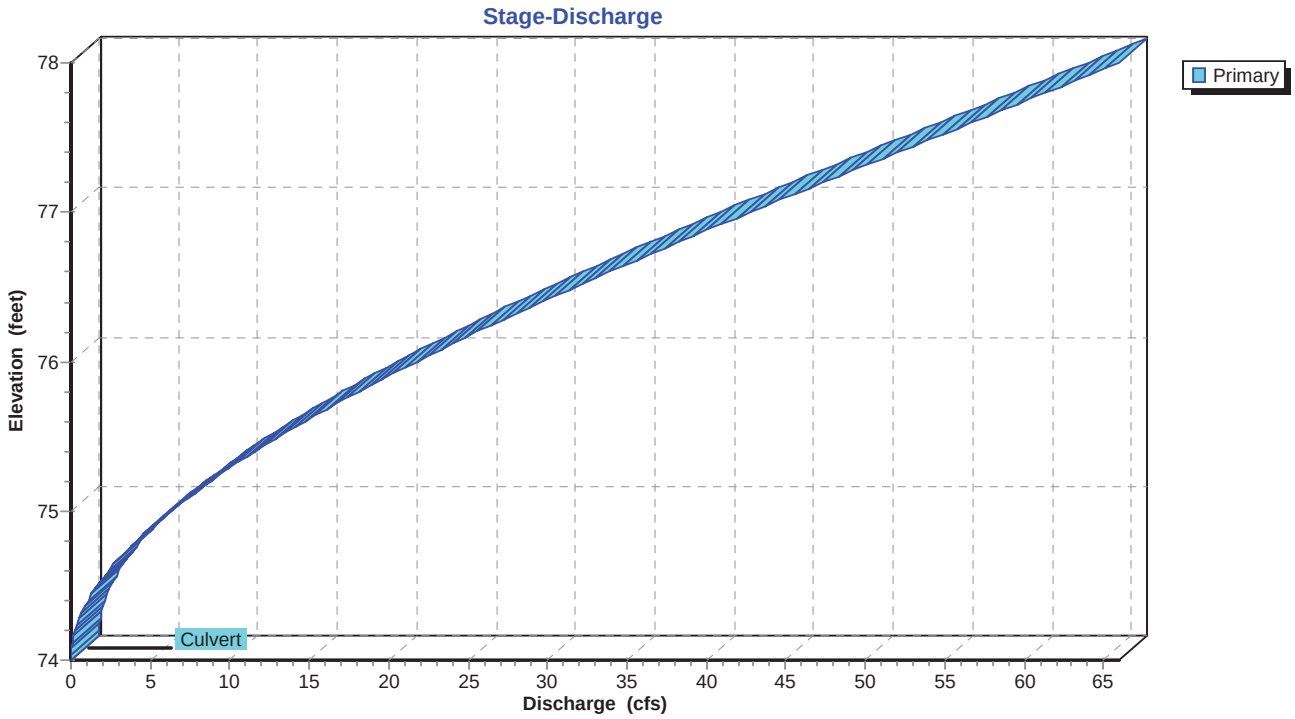
Device	Routing	Invert	Outlet Devices
#1	Primary	74.00'	**48.0" Round Culvert** L= 200.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 74.00' / 73.50' S= 0.0025 '/' Cc= 0.900 n= 0.009 PVC, smooth interior, Flow Area= 12.57 sf

Primary OutFlow Max=43.26 cfs @ 12.07 hrs HW=77.02' (Free Discharge)
1=Culvert (Barrel Controls 43.26 cfs @ 5.89 fps)

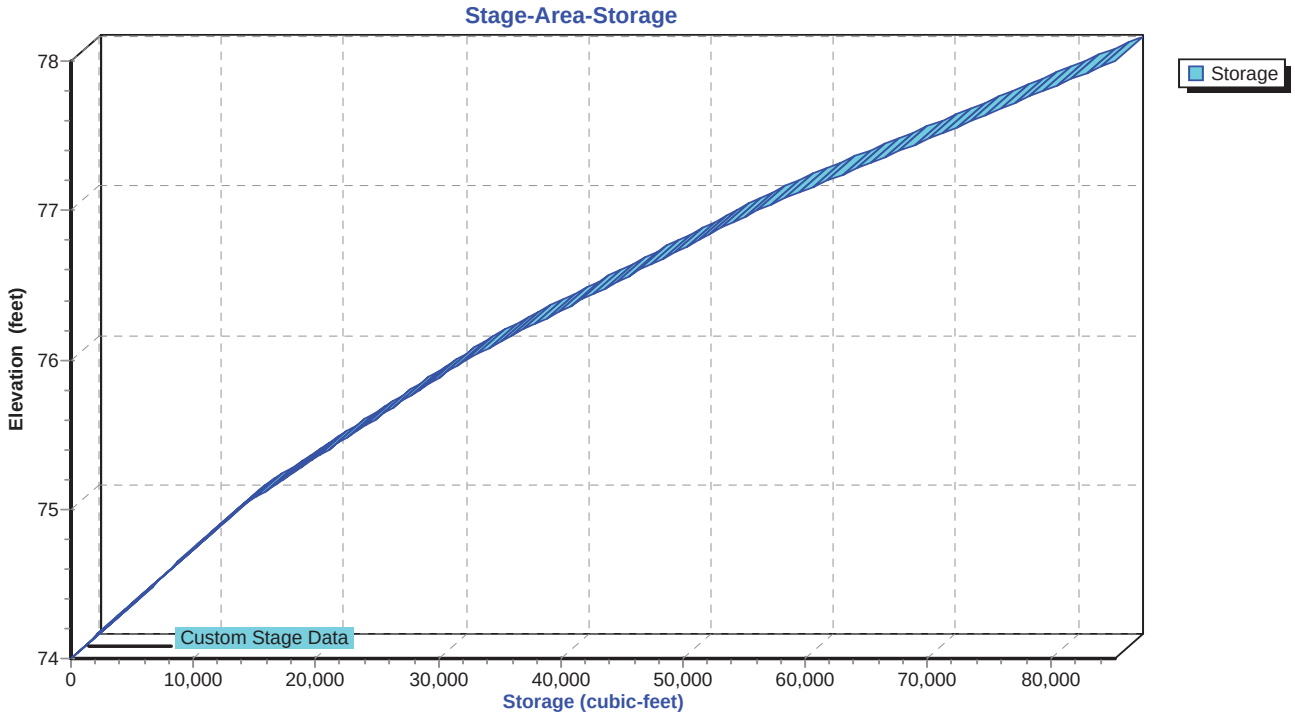
Pond 8P: Switch Yard Ditch



Pond 8P: Switch Yard Ditch



Pond 8P: Switch Yard Ditch



Hydrograph for Pond 8P: Switch Yard Ditch

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.50	0.00	0	74.00	0.00
1.00	0.00	0	74.00	0.00
1.50	0.11	86	74.01	0.00
2.00	0.22	378	74.03	0.01
2.50	0.31	836	74.06	0.02
3.00	0.40	1,399	74.10	0.07
3.50	0.47	2,000	74.15	0.14
4.00	0.54	2,575	74.19	0.23
4.50	0.61	3,093	74.23	0.34
5.00	0.69	3,557	74.26	0.45
5.50	0.77	3,961	74.29	0.56
6.00	0.85	4,308	74.32	0.67
6.50	0.92	4,611	74.34	0.77
7.00	1.00	4,876	74.36	0.86
7.50	1.09	5,122	74.38	0.95
8.00	1.21	5,382	74.40	1.05
8.50	1.54	5,800	74.43	1.22
9.00	1.97	6,503	74.48	1.53
9.50	2.25	7,245	74.53	1.89
10.00	2.89	8,053	74.59	2.32
10.50	3.88	9,307	74.68	3.07
11.00	5.40	11,065	74.81	4.26
11.50	**8.59**	13,935	75.02	6.48
12.00	**78.98**	**52,238**	**76.84**	**39.22**
12.50	19.41	**36,805**	**76.19**	**25.47**
13.00	33.78	39,179	76.29	27.47
13.50	39.01	48,919	76.70	36.13
14.00	32.58	48,446	76.68	35.69
14.50	22.75	39,942	76.32	28.12
15.00	16.55	31,142	75.94	20.68
15.50	12.45	25,216	75.62	15.11
16.00	9.76	21,143	75.40	11.67
16.50	8.02	18,192	75.25	9.40
17.00	6.82	16,034	75.13	7.87
17.50	5.94	14,367	75.04	6.76
18.00	5.31	13,112	74.96	5.86
18.50	4.81	12,298	74.90	5.20
19.00	4.39	11,662	74.86	4.71
19.50	4.07	11,154	74.82	4.33
20.00	3.77	10,713	74.79	4.01
20.50	3.53	10,317	74.76	3.73
21.00	3.32	9,971	74.73	3.50
21.50	3.13	9,659	74.71	3.29
22.00	2.99	9,396	74.69	3.12
22.50	2.89	9,189	74.67	2.99
23.00	2.81	9,026	74.66	2.89
23.50	2.74	8,892	74.65	2.81
24.00	2.68	8,777	74.64	2.74
24.50	1.96	8,046	74.59	2.32
25.00	1.71	7,502	74.55	2.02
25.50	1.23	6,823	74.50	1.68
26.00	0.73	5,918	74.43	1.27
26.50	0.40	4,974	74.37	0.89

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
27.00	0.22	4,163	74.31	0.63
27.50	0.12	3,512	74.26	0.44
28.00	0.06	2,998	74.22	0.32
28.50	0.03	2,592	74.19	0.24
29.00	0.02	2,268	74.17	0.18
29.50	0.01	2,009	74.15	0.14
30.00	0.00	1,796	74.13	0.11
30.50	0.00	1,623	74.12	0.09
31.00	0.00	1,479	74.11	0.07
31.50	0.00	1,357	74.10	0.06
32.00	0.00	1,254	74.09	0.05
32.50	0.00	1,167	74.09	0.04
33.00	0.00	1,093	74.08	0.04
33.50	0.00	1,029	74.08	0.03
34.00	0.00	971	74.07	0.03
34.50	0.00	918	74.07	0.03
35.00	0.00	870	74.06	0.03
35.50	0.00	826	74.06	0.02
36.00	0.00	786	74.06	0.02
36.50	0.00	750	74.06	0.02
37.00	0.00	717	74.05	0.02
37.50	0.00	687	74.05	0.02
38.00	0.00	659	74.05	0.01
38.50	0.00	635	74.05	0.01
39.00	0.00	612	74.04	0.01
39.50	0.00	592	74.04	0.01
40.00	0.00	573	74.04	0.01
40.50	0.00	556	74.04	0.01
41.00	0.00	541	74.04	0.01
41.50	0.00	526	74.04	0.01
42.00	0.00	512	74.04	0.01
42.50	0.00	498	74.04	0.01
43.00	0.00	484	74.04	0.01
43.50	0.00	471	74.03	0.01
44.00	0.00	458	74.03	0.01
44.50	0.00	445	74.03	0.01
45.00	0.00	433	74.03	0.01
45.50	0.00	421	74.03	0.01
46.00	0.00	410	74.03	0.01
46.50	0.00	399	74.03	0.01
47.00	0.00	388	74.03	0.01
47.50	0.00	377	74.03	0.01
48.00	0.00	367	74.03	0.01
48.50	0.00	357	74.03	0.01
49.00	0.00	347	74.03	0.01
49.50	0.00	338	74.02	0.01
50.00	0.00	329	74.02	0.01
50.50	0.00	320	74.02	0.00
51.00	0.00	311	74.02	0.00
51.50	0.00	302	74.02	0.00
52.00	0.00	294	74.02	0.00
52.50	0.00	286	74.02	0.00
53.00	0.00	278	74.02	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
53.50	0.00	271	74.02	0.00
54.00	0.00	263	74.02	0.00
54.50	0.00	256	74.02	0.00
55.00	0.00	249	74.02	0.00
55.50	0.00	242	74.02	0.00
56.00	0.00	236	74.02	0.00
56.50	0.00	229	74.02	0.00
57.00	0.00	223	74.02	0.00
57.50	0.00	217	74.02	0.00
58.00	0.00	211	74.02	0.00
58.50	0.00	205	74.02	0.00
59.00	0.00	200	74.01	0.00
59.50	0.00	194	74.01	0.00
60.00	0.00	189	74.01	0.00
60.50	0.00	184	74.01	0.00
61.00	0.00	179	74.01	0.00
61.50	0.00	174	74.01	0.00
62.00	0.00	169	74.01	0.00
62.50	0.00	165	74.01	0.00
63.00	0.00	160	74.01	0.00
63.50	0.00	156	74.01	0.00
64.00	0.00	151	74.01	0.00
64.50	0.00	147	74.01	0.00
65.00	0.00	143	74.01	0.00
65.50	0.00	139	74.01	0.00
66.00	0.00	136	74.01	0.00
66.50	0.00	132	74.01	0.00
67.00	0.00	128	74.01	0.00
67.50	0.00	125	74.01	0.00
68.00	0.00	121	74.01	0.00
68.50	0.00	118	74.01	0.00
69.00	0.00	115	74.01	0.00
69.50	0.00	112	74.01	0.00
70.00	0.00	109	74.01	0.00
70.50	0.00	106	74.01	0.00
71.00	0.00	103	74.01	0.00
71.50	0.00	100	74.01	0.00
72.00	0.00	97	74.01	0.00
72.50	0.00	95	74.01	0.00
73.00	0.00	92	74.01	0.00
73.50	0.00	90	74.01	0.00
74.00	0.00	87	74.01	0.00
74.50	0.00	85	74.01	0.00
75.00	0.00	82	74.01	0.00
75.50	0.00	80	74.01	0.00
76.00	0.00	78	74.01	0.00
76.50	0.00	76	74.01	0.00
77.00	0.00	74	74.01	0.00
77.50	0.00	72	74.01	0.00
78.00	0.00	70	74.01	0.00
78.50	0.00	68	74.00	0.00
79.00	0.00	66	74.00	0.00
79.50	0.00	64	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
80.00	0.00	63	74.00	0.00
80.50	0.00	61	74.00	0.00
81.00	0.00	59	74.00	0.00
81.50	0.00	58	74.00	0.00
82.00	0.00	56	74.00	0.00
82.50	0.00	54	74.00	0.00
83.00	0.00	53	74.00	0.00
83.50	0.00	52	74.00	0.00
84.00	0.00	50	74.00	0.00
84.50	0.00	49	74.00	0.00
85.00	0.00	47	74.00	0.00
85.50	0.00	46	74.00	0.00
86.00	0.00	45	74.00	0.00
86.50	0.00	44	74.00	0.00
87.00	0.00	42	74.00	0.00
87.50	0.00	41	74.00	0.00
88.00	0.00	40	74.00	0.00
88.50	0.00	39	74.00	0.00
89.00	0.00	38	74.00	0.00
89.50	0.00	37	74.00	0.00
90.00	0.00	36	74.00	0.00
90.50	0.00	35	74.00	0.00
91.00	0.00	34	74.00	0.00
91.50	0.00	33	74.00	0.00
92.00	0.00	32	74.00	0.00
92.50	0.00	31	74.00	0.00
93.00	0.00	30	74.00	0.00
93.50	0.00	30	74.00	0.00
94.00	0.00	29	74.00	0.00
94.50	0.00	28	74.00	0.00
95.00	0.00	27	74.00	0.00
95.50	0.00	27	74.00	0.00
96.00	0.00	26	74.00	0.00
96.50	0.00	25	74.00	0.00
97.00	0.00	24	74.00	0.00
97.50	0.00	24	74.00	0.00
98.00	0.00	23	74.00	0.00
98.50	0.00	22	74.00	0.00
99.00	0.00	22	74.00	0.00
99.50	0.00	21	74.00	0.00
100.00	0.00	21	74.00	0.00
100.50	0.00	20	74.00	0.00
101.00	0.00	20	74.00	0.00
101.50	0.00	19	74.00	0.00
102.00	0.00	19	74.00	0.00
102.50	0.00	18	74.00	0.00
103.00	0.00	18	74.00	0.00
103.50	0.00	17	74.00	0.00
104.00	0.00	17	74.00	0.00
104.50	0.00	16	74.00	0.00
105.00	0.00	16	74.00	0.00
105.50	0.00	15	74.00	0.00
106.00	0.00	15	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
106.50	0.00	14	74.00	0.00
107.00	0.00	14	74.00	0.00
107.50	0.00	14	74.00	0.00
108.00	0.00	13	74.00	0.00
108.50	0.00	13	74.00	0.00
109.00	0.00	13	74.00	0.00
109.50	0.00	12	74.00	0.00
110.00	0.00	12	74.00	0.00
110.50	0.00	12	74.00	0.00
111.00	0.00	11	74.00	0.00
111.50	0.00	11	74.00	0.00
112.00	0.00	11	74.00	0.00
112.50	0.00	10	74.00	0.00
113.00	0.00	10	74.00	0.00
113.50	0.00	10	74.00	0.00
114.00	0.00	10	74.00	0.00
114.50	0.00	9	74.00	0.00
115.00	0.00	9	74.00	0.00
115.50	0.00	9	74.00	0.00
116.00	0.00	9	74.00	0.00
116.50	0.00	8	74.00	0.00
117.00	0.00	8	74.00	0.00
117.50	0.00	8	74.00	0.00
118.00	0.00	8	74.00	0.00
118.50	0.00	7	74.00	0.00
119.00	0.00	7	74.00	0.00
119.50	0.00	7	74.00	0.00
120.00	0.00	7	74.00	0.00
120.50	0.00	7	74.00	0.00
121.00	0.00	6	74.00	0.00
121.50	0.00	6	74.00	0.00
122.00	0.00	6	74.00	0.00
122.50	0.00	6	74.00	0.00
123.00	0.00	6	74.00	0.00
123.50	0.00	6	74.00	0.00
124.00	0.00	5	74.00	0.00
124.50	0.00	5	74.00	0.00
125.00	0.00	5	74.00	0.00
125.50	0.00	5	74.00	0.00
126.00	0.00	5	74.00	0.00
126.50	0.00	5	74.00	0.00
127.00	0.00	5	74.00	0.00
127.50	0.00	5	74.00	0.00
128.00	0.00	4	74.00	0.00
128.50	0.00	4	74.00	0.00
129.00	0.00	4	74.00	0.00
129.50	0.00	4	74.00	0.00
130.00	0.00	4	74.00	0.00
130.50	0.00	4	74.00	0.00
131.00	0.00	4	74.00	0.00
131.50	0.00	4	74.00	0.00
132.00	0.00	4	74.00	0.00
132.50	0.00	3	74.00	0.00

Hydrograph for Pond 8P: Switch Yard Ditch (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
133.00	0.00	3	74.00	0.00
133.50	0.00	3	74.00	0.00
134.00	0.00	3	74.00	0.00
134.50	0.00	3	74.00	0.00
135.00	0.00	3	74.00	0.00
135.50	0.00	3	74.00	0.00
136.00	0.00	3	74.00	0.00
136.50	0.00	3	74.00	0.00
137.00	0.00	3	74.00	0.00
137.50	0.00	3	74.00	0.00
138.00	0.00	3	74.00	0.00
138.50	0.00	2	74.00	0.00
139.00	0.00	2	74.00	0.00
139.50	0.00	2	74.00	0.00
140.00	0.00	2	74.00	0.00
140.50	0.00	2	74.00	0.00
141.00	0.00	2	74.00	0.00
141.50	0.00	2	74.00	0.00
142.00	0.00	2	74.00	0.00
142.50	0.00	2	74.00	0.00
143.00	0.00	2	74.00	0.00
143.50	0.00	2	74.00	0.00
144.00	0.00	2	74.00	0.00
144.50	0.00	2	74.00	0.00
145.00	0.00	2	74.00	0.00
145.50	0.00	2	74.00	0.00
146.00	0.00	2	74.00	0.00
146.50	0.00	2	74.00	0.00
147.00	0.00	2	74.00	0.00
147.50	0.00	1	74.00	0.00
148.00	0.00	1	74.00	0.00
148.50	0.00	1	74.00	0.00
149.00	0.00	1	74.00	0.00
149.50	0.00	1	74.00	0.00
150.00	0.00	1	74.00	0.00

Stage-Discharge for Pond 8P: Switch Yard Ditch

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
74.00	0.00	74.53	1.87	75.06	7.00	75.59	14.56
74.01	0.00	74.54	1.94	75.07	7.12	75.60	14.73
74.02	0.00	74.55	2.02	75.08	7.24	75.61	14.89
74.03	0.00	74.56	2.09	75.09	7.37	75.62	15.05
74.04	0.01	74.57	2.16	75.10	7.49	75.63	15.22
74.05	0.01	74.58	2.23	75.11	7.62	75.64	15.38
74.06	0.02	74.59	2.31	75.12	7.74	75.65	15.55
74.07	0.03	74.60	2.39	75.13	7.87	75.66	15.72
74.08	0.04	74.61	2.46	75.14	8.00	75.67	15.88
74.09	0.05	74.62	2.54	75.15	8.13	75.68	16.05
74.10	0.06	74.63	2.62	75.16	8.26	75.69	16.22
74.11	0.07	74.64	2.70	75.17	8.39	75.70	16.39
74.12	0.09	74.65	2.79	75.18	8.52	75.71	16.56
74.13	0.10	74.66	2.87	75.19	8.65	75.72	16.73
74.14	0.12	74.67	2.95	75.20	8.78	75.73	16.90
74.15	0.14	74.68	3.04	75.21	8.92	75.74	17.07
74.16	0.16	74.69	3.12	75.22	9.05	75.75	17.24
74.17	0.18	74.70	3.21	75.23	9.19	75.76	17.42
74.18	0.21	74.71	3.30	75.24	9.32	75.77	17.59
74.19	0.23	74.72	3.39	75.25	9.46	75.78	17.77
74.20	0.26	74.73	3.48	75.26	9.60	75.79	17.94
74.21	0.29	74.74	3.57	75.27	9.74	75.80	18.12
74.22	0.32	74.75	3.66	75.28	9.88	75.81	18.29
74.23	0.35	74.76	3.76	75.29	10.02	75.82	18.47
74.24	0.38	74.77	3.85	75.30	10.16	75.83	18.65
74.25	0.41	74.78	3.95	75.31	10.30	75.84	18.82
74.26	0.45	74.79	4.04	75.32	10.44	75.85	19.00
74.27	0.48	74.80	4.14	75.33	10.58	75.86	19.18
74.28	0.52	74.81	4.24	75.34	10.73	75.87	19.36
74.29	0.56	74.82	4.34	75.35	10.87	75.88	19.54
74.30	0.60	74.83	4.44	75.36	11.02	75.89	19.72
74.31	0.64	74.84	4.54	75.37	11.16	75.90	19.90
74.32	0.68	74.85	4.64	75.38	11.31	75.91	20.09
74.33	0.73	74.86	4.74	75.39	11.46	75.92	20.27
74.34	0.77	74.87	4.85	75.40	11.61	75.93	20.45
74.35	0.82	74.88	4.95	75.41	11.76	75.94	20.64
74.36	0.87	74.89	5.06	75.42	11.91	75.95	20.82
74.37	0.92	74.90	5.17	75.43	12.06	75.96	21.01
74.38	0.97	74.91	5.27	75.44	12.21	75.97	21.19
74.39	1.02	74.92	5.38	75.45	12.36	75.98	21.38
74.40	1.07	74.93	5.49	75.46	12.51	75.99	21.57
74.41	1.13	74.94	5.60	75.47	12.67	76.00	21.75
74.42	1.18	74.95	5.71	75.48	12.82	76.01	21.94
74.43	1.24	74.96	5.83	75.49	12.98	76.02	22.13
74.44	1.30	74.97	5.94	75.50	13.13	76.03	22.32
74.45	1.36	74.98	6.05	75.51	13.29	76.04	22.51
74.46	1.42	74.99	6.17	75.52	13.44	76.05	22.70
74.47	1.48	75.00	6.28	75.53	13.60	76.06	22.89
74.48	1.54	75.01	6.40	75.54	13.76	76.07	23.08
74.49	1.61	75.02	6.52	75.55	13.92	76.08	23.27
74.50	1.67	75.03	6.64	75.56	14.08	76.09	23.46
74.51	1.74	75.04	6.76	75.57	14.24	76.10	23.66
74.52	1.81	75.05	6.88	75.58	14.40	76.11	23.85

Stage-Discharge for Pond 8P: Switch Yard Ditch (continued)

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
76.12	24.04	76.65	34.98	77.18	46.91	77.71	59.26
76.13	24.24	76.66	35.20	77.19	47.14	77.72	59.50
76.14	24.43	76.67	35.42	77.20	47.37	77.73	59.73
76.15	24.63	76.68	35.64	77.21	47.60	77.74	59.96
76.16	24.82	76.69	35.85	77.22	47.83	77.75	60.19
76.17	25.02	76.70	36.07	77.23	48.06	77.76	60.43
76.18	25.22	76.71	36.29	77.24	48.30	77.77	60.66
76.19	25.41	76.72	36.51	77.25	48.53	77.78	60.89
76.20	25.61	76.73	36.73	77.26	48.76	77.79	61.12
76.21	25.81	76.74	36.95	77.27	48.99	77.80	61.36
76.22	26.01	76.75	37.17	77.28	49.22	77.81	61.59
76.23	26.21	76.76	37.39	77.29	49.46	77.82	61.82
76.24	26.41	76.77	37.61	77.30	49.69	77.83	62.05
76.25	26.61	76.78	37.84	77.31	49.92	77.84	62.28
76.26	26.81	76.79	38.06	77.32	50.15	77.85	62.51
76.27	27.01	76.80	38.28	77.33	50.39	77.86	62.75
76.28	27.21	76.81	38.50	77.34	50.62	77.87	62.98
76.29	27.41	76.82	38.72	77.35	50.85	77.88	63.21
76.30	27.62	76.83	38.95	77.36	51.09	77.89	63.44
76.31	27.82	76.84	39.17	77.37	51.32	77.90	63.67
76.32	28.02	76.85	39.39	77.38	51.55	77.91	63.90
76.33	28.23	76.86	39.62	77.39	51.79	77.92	64.13
76.34	28.43	76.87	39.84	77.40	52.02	77.93	64.36
76.35	28.64	76.88	40.07	77.41	52.25	77.94	64.59
76.36	28.84	76.89	40.29	77.42	52.49	77.95	64.82
76.37	29.05	76.90	40.52	77.43	52.72	77.96	65.05
76.38	29.26	76.91	40.74	77.44	52.95	77.97	65.28
76.39	29.46	76.92	40.97	77.45	53.19	77.98	65.51
76.40	29.67	76.93	41.19	77.46	53.42	77.99	65.73
76.41	29.88	76.94	41.42	77.47	53.65	78.00	**65.96**
76.42	30.09	76.95	41.64	77.48	53.89		
76.43	30.29	76.96	41.87	77.49	54.12		
76.44	30.50	76.97	42.10	77.50	54.36		
76.45	30.71	76.98	42.32	77.51	54.59		
76.46	30.92	76.99	42.55	77.52	54.82		
76.47	31.13	77.00	42.78	77.53	55.06		
76.48	31.34	77.01	43.01	77.54	55.29		
76.49	31.55	77.02	43.23	77.55	55.53		
76.50	31.77	77.03	43.46	77.56	55.76		
76.51	31.98	77.04	43.69	77.57	55.99		
76.52	32.19	77.05	43.92	77.58	56.23		
76.53	32.40	77.06	44.15	77.59	56.46		
76.54	32.61	77.07	44.38	77.60	56.69		
76.55	32.83	77.08	44.61	77.61	56.93		
76.56	33.04	77.09	44.84	77.62	57.16		
76.57	33.26	77.10	45.06	77.63	57.40		
76.58	33.47	77.11	45.29	77.64	57.63		
76.59	33.69	77.12	45.52	77.65	57.86		
76.60	33.90	77.13	45.75	77.66	58.10		
76.61	34.12	77.14	45.98	77.67	58.33		
76.62	34.33	77.15	46.22	77.68	58.56		
76.63	34.55	77.16	46.45	77.69	58.80		
76.64	34.77	77.17	46.68	77.70	59.03		

Stage-Area-Storage for Pond 8P: Switch Yard Ditch

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
74.00	0	74.53	7,220	75.06	14,738
74.01	136	74.54	7,356	75.07	14,924
74.02	272	74.55	7,492	75.08	15,110
74.03	409	74.56	7,628	75.09	15,296
74.04	545	74.57	7,765	75.10	15,482
74.05	681	74.58	7,901	75.11	15,668
74.06	817	74.59	8,037	75.12	15,854
74.07	954	74.60	8,173	75.13	16,040
74.08	1,090	74.61	8,309	75.14	16,226
74.09	1,226	74.62	8,446	75.15	16,412
74.10	1,362	74.63	8,582	75.16	16,598
74.11	1,498	74.64	8,718	75.17	16,784
74.12	1,635	74.65	8,854	75.18	16,970
74.13	1,771	74.66	8,991	75.19	17,156
74.14	1,907	74.67	9,127	75.20	17,342
74.15	2,043	74.68	9,263	75.21	17,528
74.16	2,180	74.69	9,399	75.22	17,714
74.17	2,316	74.70	9,535	75.23	17,900
74.18	2,452	74.71	9,672	75.24	18,086
74.19	2,588	74.72	9,808	75.25	18,272
74.20	2,724	74.73	9,944	75.26	18,457
74.21	2,861	74.74	10,080	75.27	18,643
74.22	2,997	74.75	10,217	75.28	18,829
74.23	3,133	74.76	10,353	75.29	19,015
74.24	3,269	74.77	10,489	75.30	19,201
74.25	3,406	74.78	10,625	75.31	19,387
74.26	3,542	74.79	10,761	75.32	19,573
74.27	3,678	74.80	10,898	75.33	19,759
74.28	3,814	74.81	11,034	75.34	19,945
74.29	3,950	74.82	11,170	75.35	20,131
74.30	4,087	74.83	11,306	75.36	20,317
74.31	4,223	74.84	11,442	75.37	20,503
74.32	4,359	74.85	11,579	75.38	20,689
74.33	4,495	74.86	11,715	75.39	20,875
74.34	4,631	74.87	11,851	75.40	21,061
74.35	4,768	74.88	11,987	75.41	21,247
74.36	4,904	74.89	12,124	75.42	21,433
74.37	5,040	74.90	12,260	75.43	21,619
74.38	5,176	74.91	12,396	75.44	21,805
74.39	5,313	74.92	12,532	75.45	21,991
74.40	5,449	74.93	12,668	75.46	22,177
74.41	5,585	74.94	12,805	75.47	22,363
74.42	5,721	74.95	12,941	75.48	22,549
74.43	5,857	74.96	13,077	75.49	22,735
74.44	5,994	74.97	13,213	75.50	22,921
74.45	6,130	74.98	13,350	75.51	23,107
74.46	6,266	74.99	13,486	75.52	23,293
74.47	6,402	75.00	13,622	75.53	23,479
74.48	6,539	75.01	13,808	75.54	23,665
74.49	6,675	75.02	13,994	75.55	23,851
74.50	6,811	75.03	14,180	75.56	24,037
74.51	6,947	75.04	14,366	75.57	24,223
74.52	7,083	75.05	14,552	75.58	24,409

Stage-Area-Storage for Pond 8P: Switch Yard Ditch (continued)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
75.59	24,595	76.12	35,073	76.65	47,671
75.60	24,781	76.13	35,310	76.66	47,909
75.61	24,967	76.14	35,548	76.67	48,147
75.62	25,153	76.15	35,786	76.68	48,384
75.63	25,339	76.16	36,023	76.69	48,622
75.64	25,525	76.17	36,261	76.70	48,860
75.65	25,711	76.18	36,499	76.71	49,097
75.66	25,897	76.19	36,736	76.72	49,335
75.67	26,083	76.20	36,974	76.73	49,573
75.68	26,269	76.21	37,212	76.74	49,811
75.69	26,455	76.22	37,450	76.75	50,048
75.70	26,641	76.23	37,687	76.76	50,286
75.71	26,827	76.24	37,925	76.77	50,524
75.72	27,013	76.25	38,163	76.78	50,761
75.73	27,199	76.26	38,400	76.79	50,999
75.74	27,385	76.27	38,638	76.80	51,237
75.75	27,571	76.28	38,876	76.81	51,475
75.76	27,756	76.29	39,114	76.82	51,712
75.77	27,942	76.30	39,351	76.83	51,950
75.78	28,128	76.31	39,589	76.84	52,188
75.79	28,314	76.32	39,827	76.85	52,425
75.80	28,500	76.33	40,064	76.86	52,663
75.81	28,686	76.34	40,302	76.87	52,901
75.82	28,872	76.35	40,540	76.88	53,138
75.83	29,058	76.36	40,778	76.89	53,376
75.84	29,244	76.37	41,015	76.90	53,614
75.85	29,430	76.38	41,253	76.91	53,852
75.86	29,616	76.39	41,491	76.92	54,089
75.87	29,802	76.40	41,728	76.93	54,327
75.88	29,988	76.41	41,966	76.94	54,565
75.89	30,174	76.42	42,204	76.95	54,802
75.90	30,360	76.43	42,442	76.96	55,040
75.91	30,546	76.44	42,679	76.97	55,278
75.92	30,732	76.45	42,917	76.98	55,516
75.93	30,918	76.46	43,155	76.99	55,753
75.94	31,104	76.47	43,392	77.00	55,991
75.95	31,290	76.48	43,630	77.01	56,284
75.96	31,476	76.49	43,868	77.02	56,577
75.97	31,662	76.50	44,106	77.03	56,870
75.98	31,848	76.51	44,343	77.04	57,164
75.99	32,034	76.52	44,581	77.05	57,457
76.00	32,220	76.53	44,819	77.06	57,750
76.01	32,458	76.54	45,056	77.07	58,043
76.02	32,695	76.55	45,294	77.08	58,336
76.03	32,933	76.56	45,532	77.09	58,629
76.04	33,171	76.57	45,769	77.10	58,922
76.05	33,409	76.58	46,007	77.11	59,216
76.06	33,646	76.59	46,245	77.12	59,509
76.07	33,884	76.60	46,483	77.13	59,802
76.08	34,122	76.61	46,720	77.14	60,095
76.09	34,359	76.62	46,958	77.15	60,388
76.10	34,597	76.63	47,196	77.16	60,681
76.11	34,835	76.64	47,433	77.17	60,974

Stage-Area-Storage for Pond 8P: Switch Yard Ditch (continued)

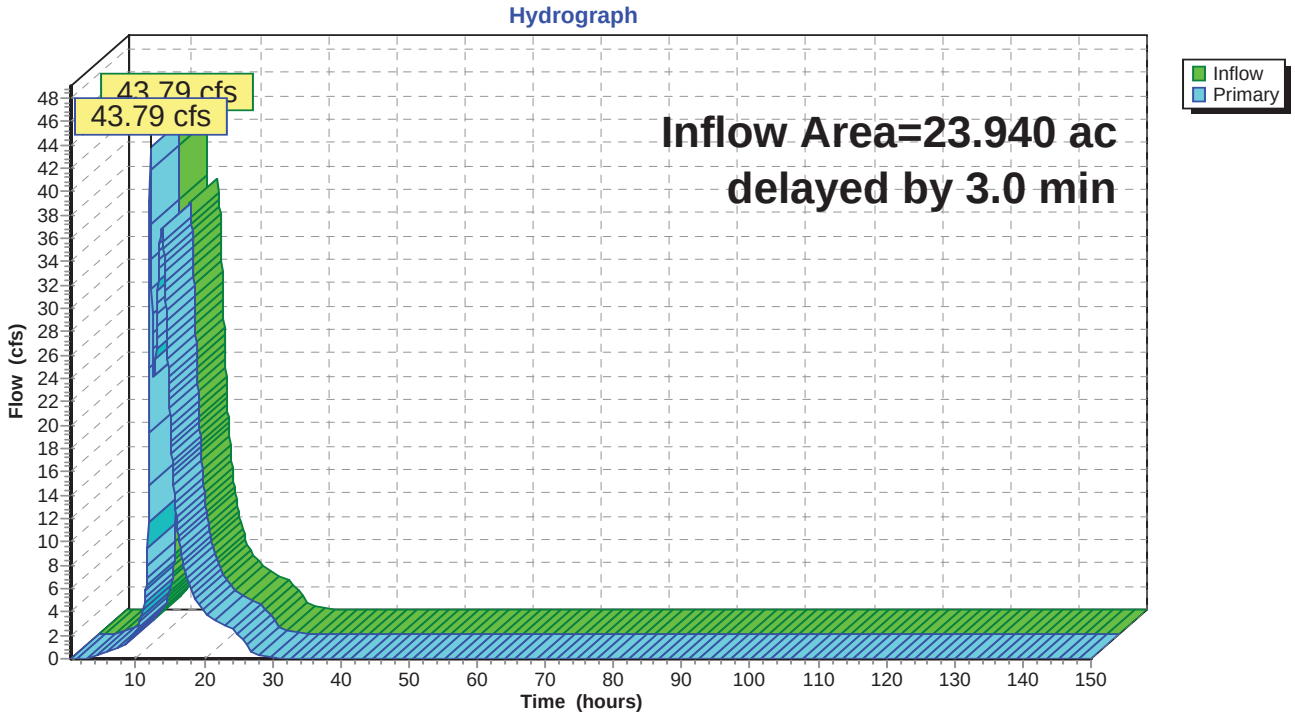
Elevation (feet)	Storage (cubic-feet)
77.18	61,268
77.19	61,561
77.20	61,854
77.21	62,147
77.22	62,440
77.23	62,733
77.24	63,026
77.25	63,320
77.26	63,613
77.27	63,906
77.28	64,199
77.29	64,492
77.30	64,785
77.31	65,078
77.32	65,371
77.33	65,665
77.34	65,958
77.35	66,251
77.36	66,544
77.37	66,837
77.38	67,130
77.39	67,423
77.40	67,717
77.41	68,010
77.42	68,303
77.43	68,596
77.44	68,889
77.45	69,182
77.46	69,475
77.47	69,769
77.48	70,062
77.49	70,355
77.50	70,648
77.51	70,941
77.52	71,234
77.53	71,527
77.54	71,821
77.55	72,114
77.56	72,407
77.57	72,700
77.58	72,993
77.59	73,286
77.60	73,579
77.61	73,873
77.62	74,166
77.63	74,459
77.64	74,752
77.65	75,045
77.66	75,338
77.67	75,631
77.68	75,925
77.69	76,218
77.70	76,511
77.71	76,804
77.72	77,097
77.73	77,390
77.74	77,683
77.75	77,977
77.76	78,270
77.77	78,563
77.78	78,856
77.79	79,149
77.80	79,442
77.81	79,735
77.82	80,028
77.83	80,322
77.84	80,615
77.85	80,908
77.86	81,201
77.87	81,494
77.88	81,787
77.89	82,080
77.90	82,374
77.91	82,667
77.92	82,960
77.93	83,253
77.94	83,546
77.95	83,839
77.96	84,132
77.97	84,426
77.98	84,719
77.99	85,012
78.00	**85,305**

Summary for Link 10L: Stormwater Piping

Inflow Area = 23.940 ac, 61.82% Impervious, Inflow Depth = 7.15" for 100yr-24hr event
Inflow = 43.79 cfs @ 12.07 hrs, Volume= 14.255 af
Primary = 43.79 cfs @ 12.12 hrs, Volume= 14.255 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow delayed by 3.0 min, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs

Link 10L: Stormwater Piping



Hydrograph for Link 10L: Stormwater Piping

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.50	0.00	**0.00**	0.00	13.75	37.19	0.00	37.20
0.75	0.00	0.00	0.00	14.00	35.69	0.00	36.17
1.00	0.00	0.00	0.00	14.25	32.32	0.00	33.11
1.25	0.00	0.00	0.00	14.50	28.12	0.00	28.96
1.50	0.00	0.00	0.00	14.75	24.22	0.00	24.96
1.75	0.00	0.00	0.00	15.00	20.68	0.00	21.44
2.00	0.01	0.00	0.01	15.25	17.52	0.00	18.08
2.25	0.01	0.00	0.01	15.50	15.11	0.00	15.54
2.50	0.02	0.00	0.02	15.75	13.21	0.00	13.56
2.75	0.04	0.00	0.04	16.00	11.67	0.00	11.96
3.00	0.07	0.00	0.06	16.25	10.42	0.00	10.65
3.25	0.10	0.00	0.09	16.50	9.40	0.00	9.59
3.50	0.14	0.00	0.13	16.75	8.57	0.00	8.72
3.75	0.18	0.00	0.17	17.00	7.87	0.00	8.00
4.00	0.23	0.00	0.22	17.25	7.27	0.00	7.38
4.25	0.28	0.00	0.27	17.50	6.76	0.00	6.85
4.50	0.34	0.00	0.33	17.75	6.32	0.00	6.40
4.75	0.40	0.00	0.38	18.00	5.86	0.00	5.94
5.00	0.45	0.00	0.44	18.25	5.50	0.00	5.56
5.25	0.51	0.00	0.50	18.50	5.20	0.00	5.25
5.50	0.56	0.00	0.55	18.75	4.94	0.00	4.99
5.75	0.62	0.00	0.61	19.00	4.71	0.00	4.75
6.00	0.67	0.00	0.66	19.25	4.50	0.00	4.54
6.25	0.72	0.00	0.71	19.50	4.33	0.00	4.36
6.50	0.77	0.00	0.76	19.75	4.16	0.00	4.20
6.75	0.82	0.00	0.81	20.00	4.01	0.00	4.04
7.00	0.86	0.00	0.85	20.25	3.86	0.00	3.89
7.25	0.90	0.00	0.90	20.50	3.73	0.00	3.76
7.50	0.95	0.00	0.94	20.75	3.61	0.00	3.64
7.75	1.00	0.00	0.99	21.00	3.50	0.00	3.52
8.00	1.05	0.00	1.04	21.25	3.39	0.00	3.41
8.25	1.11	0.00	1.10	21.50	3.29	0.00	3.31
8.50	1.22	0.00	1.19	21.75	3.20	0.00	3.22
8.75	1.36	0.00	1.33	22.00	3.12	0.00	3.14
9.00	1.53	0.00	1.49	22.25	3.05	0.00	3.07
9.25	1.72	0.00	1.68	22.50	2.99	0.00	3.00
9.50	1.89	0.00	1.86	22.75	2.94	0.00	2.95
9.75	2.07	0.00	2.03	23.00	2.89	0.00	2.90
10.00	2.32	0.00	2.27	23.25	2.85	0.00	2.86
10.25	2.65	0.00	2.58	23.50	2.81	0.00	2.82
10.50	3.07	0.00	2.98	23.75	2.77	0.00	2.78
10.75	3.59	0.00	3.47	24.00	2.74	0.00	2.75
11.00	4.26	0.00	4.11	24.25	2.54	0.00	2.59
11.25	5.17	0.00	4.95	24.50	2.32	0.00	2.35
11.50	6.48	0.00	6.24	24.75	2.16	0.00	2.19
11.75	11.76	0.00	9.50	25.00	2.02	0.00	2.05
12.00	**39.22**	0.00	**31.84**	25.25	1.86	0.00	1.90
12.25	**34.19**	0.00	**37.19**	25.50	1.68	0.00	1.72
12.50	25.47	0.00	26.52	25.75	1.48	0.00	1.52
12.75	24.03	0.00	23.85	26.00	1.27	0.00	1.31
13.00	27.47	0.00	26.54	26.25	1.07	0.00	1.11
13.25	32.47	0.00	31.51	26.50	0.89	0.00	0.93
13.50	36.13	0.00	35.60	26.75	0.75	0.00	0.78

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
27.00	0.63	0.00	0.65	40.25	0.01	0.00	0.01
27.25	0.52	0.00	0.54	40.50	0.01	0.00	0.01
27.50	0.44	0.00	0.46	40.75	0.01	0.00	0.01
27.75	0.37	0.00	0.38	41.00	0.01	0.00	0.01
28.00	0.32	0.00	0.33	41.25	0.01	0.00	0.01
28.25	0.27	0.00	0.28	41.50	0.01	0.00	0.01
28.50	0.24	0.00	0.24	41.75	0.01	0.00	0.01
28.75	0.21	0.00	0.21	42.00	0.01	0.00	0.01
29.00	0.18	0.00	0.18	42.25	0.01	0.00	0.01
29.25	0.16	0.00	0.16	42.50	0.01	0.00	0.01
29.50	0.14	0.00	0.14	42.75	0.01	0.00	0.01
29.75	0.12	0.00	0.13	43.00	0.01	0.00	0.01
30.00	0.11	0.00	0.11	43.25	0.01	0.00	0.01
30.25	0.10	0.00	0.10	43.50	0.01	0.00	0.01
30.50	0.09	0.00	0.09	43.75	0.01	0.00	0.01
30.75	0.08	0.00	0.08	44.00	0.01	0.00	0.01
31.00	0.07	0.00	0.08	44.25	0.01	0.00	0.01
31.25	0.07	0.00	0.07	44.50	0.01	0.00	0.01
31.50	0.06	0.00	0.06	44.75	0.01	0.00	0.01
31.75	0.06	0.00	0.06	45.00	0.01	0.00	0.01
32.00	0.05	0.00	0.05	45.25	0.01	0.00	0.01
32.25	0.05	0.00	0.05	45.50	0.01	0.00	0.01
32.50	0.04	0.00	0.05	45.75	0.01	0.00	0.01
32.75	0.04	0.00	0.04	46.00	0.01	0.00	0.01
33.00	0.04	0.00	0.04	46.25	0.01	0.00	0.01
33.25	0.04	0.00	0.04	46.50	0.01	0.00	0.01
33.50	0.03	0.00	0.03	46.75	0.01	0.00	0.01
33.75	0.03	0.00	0.03	47.00	0.01	0.00	0.01
34.00	0.03	0.00	0.03	47.25	0.01	0.00	0.01
34.25	0.03	0.00	0.03	47.50	0.01	0.00	0.01
34.50	0.03	0.00	0.03	47.75	0.01	0.00	0.01
34.75	0.03	0.00	0.03	48.00	0.01	0.00	0.01
35.00	0.03	0.00	0.03	48.25	0.01	0.00	0.01
35.25	0.02	0.00	0.02	48.50	0.01	0.00	0.01
35.50	0.02	0.00	0.02	48.75	0.01	0.00	0.01
35.75	0.02	0.00	0.02	49.00	0.01	0.00	0.01
36.00	0.02	0.00	0.02	49.25	0.01	0.00	0.01
36.25	0.02	0.00	0.02	49.50	0.01	0.00	0.01
36.50	0.02	0.00	0.02	49.75	0.01	0.00	0.01
36.75	0.02	0.00	0.02	50.00	0.01	0.00	0.01
37.00	0.02	0.00	0.02	50.25	0.00	0.00	0.00
37.25	0.02	0.00	0.02	50.50	0.00	0.00	0.00
37.50	0.02	0.00	0.02	50.75	0.00	0.00	0.00
37.75	0.02	0.00	0.02	51.00	0.00	0.00	0.00
38.00	0.01	0.00	0.01	51.25	0.00	0.00	0.00
38.25	0.01	0.00	0.01	51.50	0.00	0.00	0.00
38.50	0.01	0.00	0.01	51.75	0.00	0.00	0.00
38.75	0.01	0.00	0.01	52.00	0.00	0.00	0.00
39.00	0.01	0.00	0.01	52.25	0.00	0.00	0.00
39.25	0.01	0.00	0.01	52.50	0.00	0.00	0.00
39.50	0.01	0.00	0.01	52.75	0.00	0.00	0.00
39.75	0.01	0.00	0.01	53.00	0.00	0.00	0.00
40.00	0.01	0.00	0.01	53.25	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
53.50	0.00	0.00	0.00	66.75	0.00	0.00	0.00
53.75	0.00	0.00	0.00	67.00	0.00	0.00	0.00
54.00	0.00	0.00	0.00	67.25	0.00	0.00	0.00
54.25	0.00	0.00	0.00	67.50	0.00	0.00	0.00
54.50	0.00	0.00	0.00	67.75	0.00	0.00	0.00
54.75	0.00	0.00	0.00	68.00	0.00	0.00	0.00
55.00	0.00	0.00	0.00	68.25	0.00	0.00	0.00
55.25	0.00	0.00	0.00	68.50	0.00	0.00	0.00
55.50	0.00	0.00	0.00	68.75	0.00	0.00	0.00
55.75	0.00	0.00	0.00	69.00	0.00	0.00	0.00
56.00	0.00	0.00	0.00	69.25	0.00	0.00	0.00
56.25	0.00	0.00	0.00	69.50	0.00	0.00	0.00
56.50	0.00	0.00	0.00	69.75	0.00	0.00	0.00
56.75	0.00	0.00	0.00	70.00	0.00	0.00	0.00
57.00	0.00	0.00	0.00	70.25	0.00	0.00	0.00
57.25	0.00	0.00	0.00	70.50	0.00	0.00	0.00
57.50	0.00	0.00	0.00	70.75	0.00	0.00	0.00
57.75	0.00	0.00	0.00	71.00	0.00	0.00	0.00
58.00	0.00	0.00	0.00	71.25	0.00	0.00	0.00
58.25	0.00	0.00	0.00	71.50	0.00	0.00	0.00
58.50	0.00	0.00	0.00	71.75	0.00	0.00	0.00
58.75	0.00	0.00	0.00	72.00	0.00	0.00	0.00
59.00	0.00	0.00	0.00	72.25	0.00	0.00	0.00
59.25	0.00	0.00	0.00	72.50	0.00	0.00	0.00
59.50	0.00	0.00	0.00	72.75	0.00	0.00	0.00
59.75	0.00	0.00	0.00	73.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	73.25	0.00	0.00	0.00
60.25	0.00	0.00	0.00	73.50	0.00	0.00	0.00
60.50	0.00	0.00	0.00	73.75	0.00	0.00	0.00
60.75	0.00	0.00	0.00	74.00	0.00	0.00	0.00
61.00	0.00	0.00	0.00	74.25	0.00	0.00	0.00
61.25	0.00	0.00	0.00	74.50	0.00	0.00	0.00
61.50	0.00	0.00	0.00	74.75	0.00	0.00	0.00
61.75	0.00	0.00	0.00	75.00	0.00	0.00	0.00
62.00	0.00	0.00	0.00	75.25	0.00	0.00	0.00
62.25	0.00	0.00	0.00	75.50	0.00	0.00	0.00
62.50	0.00	0.00	0.00	75.75	0.00	0.00	0.00
62.75	0.00	0.00	0.00	76.00	0.00	0.00	0.00
63.00	0.00	0.00	0.00	76.25	0.00	0.00	0.00
63.25	0.00	0.00	0.00	76.50	0.00	0.00	0.00
63.50	0.00	0.00	0.00	76.75	0.00	0.00	0.00
63.75	0.00	0.00	0.00	77.00	0.00	0.00	0.00
64.00	0.00	0.00	0.00	77.25	0.00	0.00	0.00
64.25	0.00	0.00	0.00	77.50	0.00	0.00	0.00
64.50	0.00	0.00	0.00	77.75	0.00	0.00	0.00
64.75	0.00	0.00	0.00	78.00	0.00	0.00	0.00
65.00	0.00	0.00	0.00	78.25	0.00	0.00	0.00
65.25	0.00	0.00	0.00	78.50	0.00	0.00	0.00
65.50	0.00	0.00	0.00	78.75	0.00	0.00	0.00
65.75	0.00	0.00	0.00	79.00	0.00	0.00	0.00
66.00	0.00	0.00	0.00	79.25	0.00	0.00	0.00
66.25	0.00	0.00	0.00	79.50	0.00	0.00	0.00
66.50	0.00	0.00	0.00	79.75	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
80.00	0.00	0.00	0.00	93.25	0.00	0.00	0.00
80.25	0.00	0.00	0.00	93.50	0.00	0.00	0.00
80.50	0.00	0.00	0.00	93.75	0.00	0.00	0.00
80.75	0.00	0.00	0.00	94.00	0.00	0.00	0.00
81.00	0.00	0.00	0.00	94.25	0.00	0.00	0.00
81.25	0.00	0.00	0.00	94.50	0.00	0.00	0.00
81.50	0.00	0.00	0.00	94.75	0.00	0.00	0.00
81.75	0.00	0.00	0.00	95.00	0.00	0.00	0.00
82.00	0.00	0.00	0.00	95.25	0.00	0.00	0.00
82.25	0.00	0.00	0.00	95.50	0.00	0.00	0.00
82.50	0.00	0.00	0.00	95.75	0.00	0.00	0.00
82.75	0.00	0.00	0.00	96.00	0.00	0.00	0.00
83.00	0.00	0.00	0.00	96.25	0.00	0.00	0.00
83.25	0.00	0.00	0.00	96.50	0.00	0.00	0.00
83.50	0.00	0.00	0.00	96.75	0.00	0.00	0.00
83.75	0.00	0.00	0.00	97.00	0.00	0.00	0.00
84.00	0.00	0.00	0.00	97.25	0.00	0.00	0.00
84.25	0.00	0.00	0.00	97.50	0.00	0.00	0.00
84.50	0.00	0.00	0.00	97.75	0.00	0.00	0.00
84.75	0.00	0.00	0.00	98.00	0.00	0.00	0.00
85.00	0.00	0.00	0.00	98.25	0.00	0.00	0.00
85.25	0.00	0.00	0.00	98.50	0.00	0.00	0.00
85.50	0.00	0.00	0.00	98.75	0.00	0.00	0.00
85.75	0.00	0.00	0.00	99.00	0.00	0.00	0.00
86.00	0.00	0.00	0.00	99.25	0.00	0.00	0.00
86.25	0.00	0.00	0.00	99.50	0.00	0.00	0.00
86.50	0.00	0.00	0.00	99.75	0.00	0.00	0.00
86.75	0.00	0.00	0.00	100.00	0.00	0.00	0.00
87.00	0.00	0.00	0.00	100.25	0.00	0.00	0.00
87.25	0.00	0.00	0.00	100.50	0.00	0.00	0.00
87.50	0.00	0.00	0.00	100.75	0.00	0.00	0.00
87.75	0.00	0.00	0.00	101.00	0.00	0.00	0.00
88.00	0.00	0.00	0.00	101.25	0.00	0.00	0.00
88.25	0.00	0.00	0.00	101.50	0.00	0.00	0.00
88.50	0.00	0.00	0.00	101.75	0.00	0.00	0.00
88.75	0.00	0.00	0.00	102.00	0.00	0.00	0.00
89.00	0.00	0.00	0.00	102.25	0.00	0.00	0.00
89.25	0.00	0.00	0.00	102.50	0.00	0.00	0.00
89.50	0.00	0.00	0.00	102.75	0.00	0.00	0.00
89.75	0.00	0.00	0.00	103.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	103.25	0.00	0.00	0.00
90.25	0.00	0.00	0.00	103.50	0.00	0.00	0.00
90.50	0.00	0.00	0.00	103.75	0.00	0.00	0.00
90.75	0.00	0.00	0.00	104.00	0.00	0.00	0.00
91.00	0.00	0.00	0.00	104.25	0.00	0.00	0.00
91.25	0.00	0.00	0.00	104.50	0.00	0.00	0.00
91.50	0.00	0.00	0.00	104.75	0.00	0.00	0.00
91.75	0.00	0.00	0.00	105.00	0.00	0.00	0.00
92.00	0.00	0.00	0.00	105.25	0.00	0.00	0.00
92.25	0.00	0.00	0.00	105.50	0.00	0.00	0.00
92.50	0.00	0.00	0.00	105.75	0.00	0.00	0.00
92.75	0.00	0.00	0.00	106.00	0.00	0.00	0.00
93.00	0.00	0.00	0.00	106.25	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
106.50	0.00	0.00	0.00	119.75	0.00	0.00	0.00
106.75	0.00	0.00	0.00	120.00	0.00	0.00	0.00
107.00	0.00	0.00	0.00	120.25	0.00	0.00	0.00
107.25	0.00	0.00	0.00	120.50	0.00	0.00	0.00
107.50	0.00	0.00	0.00	120.75	0.00	0.00	0.00
107.75	0.00	0.00	0.00	121.00	0.00	0.00	0.00
108.00	0.00	0.00	0.00	121.25	0.00	0.00	0.00
108.25	0.00	0.00	0.00	121.50	0.00	0.00	0.00
108.50	0.00	0.00	0.00	121.75	0.00	0.00	0.00
108.75	0.00	0.00	0.00	122.00	0.00	0.00	0.00
109.00	0.00	0.00	0.00	122.25	0.00	0.00	0.00
109.25	0.00	0.00	0.00	122.50	0.00	0.00	0.00
109.50	0.00	0.00	0.00	122.75	0.00	0.00	0.00
109.75	0.00	0.00	0.00	123.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	123.25	0.00	0.00	0.00
110.25	0.00	0.00	0.00	123.50	0.00	0.00	0.00
110.50	0.00	0.00	0.00	123.75	0.00	0.00	0.00
110.75	0.00	0.00	0.00	124.00	0.00	0.00	0.00
111.00	0.00	0.00	0.00	124.25	0.00	0.00	0.00
111.25	0.00	0.00	0.00	124.50	0.00	0.00	0.00
111.50	0.00	0.00	0.00	124.75	0.00	0.00	0.00
111.75	0.00	0.00	0.00	125.00	0.00	0.00	0.00
112.00	0.00	0.00	0.00	125.25	0.00	0.00	0.00
112.25	0.00	0.00	0.00	125.50	0.00	0.00	0.00
112.50	0.00	0.00	0.00	125.75	0.00	0.00	0.00
112.75	0.00	0.00	0.00	126.00	0.00	0.00	0.00
113.00	0.00	0.00	0.00	126.25	0.00	0.00	0.00
113.25	0.00	0.00	0.00	126.50	0.00	0.00	0.00
113.50	0.00	0.00	0.00	126.75	0.00	0.00	0.00
113.75	0.00	0.00	0.00	127.00	0.00	0.00	0.00
114.00	0.00	0.00	0.00	127.25	0.00	0.00	0.00
114.25	0.00	0.00	0.00	127.50	0.00	0.00	0.00
114.50	0.00	0.00	0.00	127.75	0.00	0.00	0.00
114.75	0.00	0.00	0.00	128.00	0.00	0.00	0.00
115.00	0.00	0.00	0.00	128.25	0.00	0.00	0.00
115.25	0.00	0.00	0.00	128.50	0.00	0.00	0.00
115.50	0.00	0.00	0.00	128.75	0.00	0.00	0.00
115.75	0.00	0.00	0.00	129.00	0.00	0.00	0.00
116.00	0.00	0.00	0.00	129.25	0.00	0.00	0.00
116.25	0.00	0.00	0.00	129.50	0.00	0.00	0.00
116.50	0.00	0.00	0.00	129.75	0.00	0.00	0.00
116.75	0.00	0.00	0.00	130.00	0.00	0.00	0.00
117.00	0.00	0.00	0.00	130.25	0.00	0.00	0.00
117.25	0.00	0.00	0.00	130.50	0.00	0.00	0.00
117.50	0.00	0.00	0.00	130.75	0.00	0.00	0.00
117.75	0.00	0.00	0.00	131.00	0.00	0.00	0.00
118.00	0.00	0.00	0.00	131.25	0.00	0.00	0.00
118.25	0.00	0.00	0.00	131.50	0.00	0.00	0.00
118.50	0.00	0.00	0.00	131.75	0.00	0.00	0.00
118.75	0.00	0.00	0.00	132.00	0.00	0.00	0.00
119.00	0.00	0.00	0.00	132.25	0.00	0.00	0.00
119.25	0.00	0.00	0.00	132.50	0.00	0.00	0.00
119.50	0.00	0.00	0.00	132.75	0.00	0.00	0.00

Hydrograph for Link 10L: Stormwater Piping (continued)

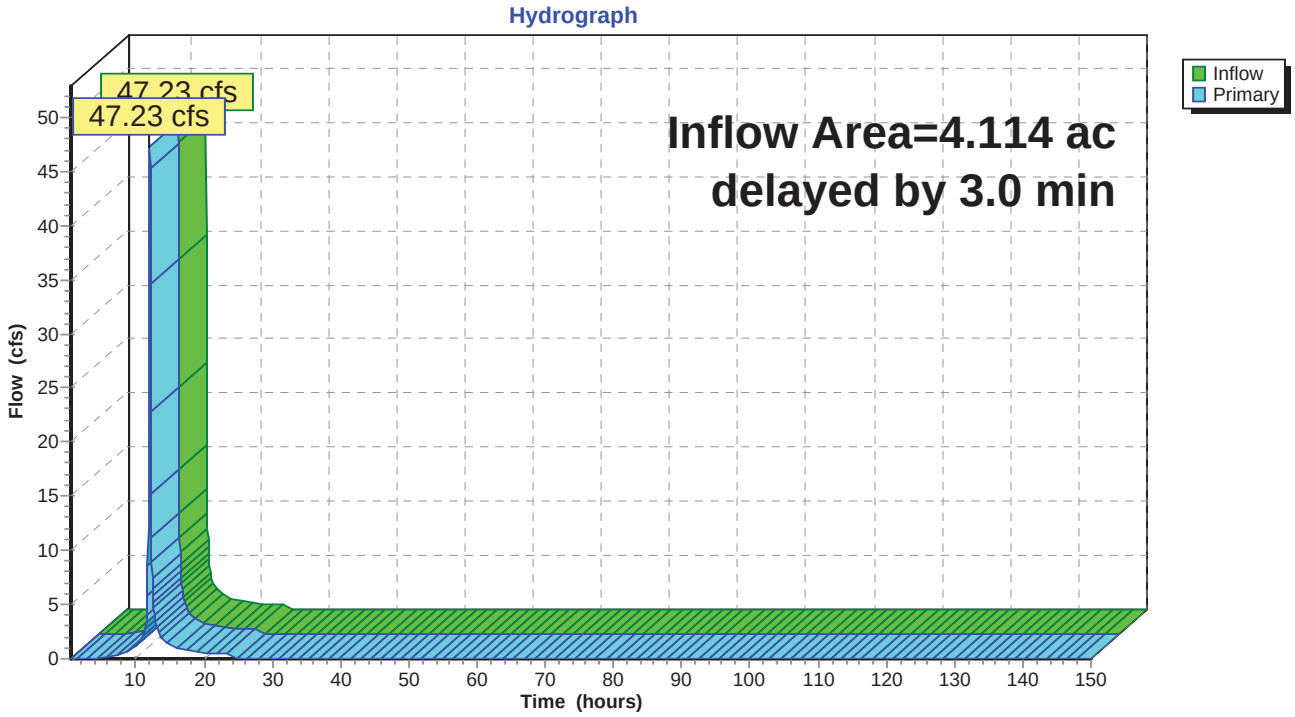
Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
133.00	0.00	0.00	0.00
133.25	0.00	0.00	0.00
133.50	0.00	0.00	0.00
133.75	0.00	0.00	0.00
134.00	0.00	0.00	0.00
134.25	0.00	0.00	0.00
134.50	0.00	0.00	0.00
134.75	0.00	0.00	0.00
135.00	0.00	0.00	0.00
135.25	0.00	0.00	0.00
135.50	0.00	0.00	0.00
135.75	0.00	0.00	0.00
136.00	0.00	0.00	0.00
136.25	0.00	0.00	0.00
136.50	0.00	0.00	0.00
136.75	0.00	0.00	0.00
137.00	0.00	0.00	0.00
137.25	0.00	0.00	0.00
137.50	0.00	0.00	0.00
137.75	0.00	0.00	0.00
138.00	0.00	0.00	0.00
138.25	0.00	0.00	0.00
138.50	0.00	0.00	0.00
138.75	0.00	0.00	0.00
139.00	0.00	0.00	0.00
139.25	0.00	0.00	0.00
139.50	0.00	0.00	0.00
139.75	0.00	0.00	0.00
140.00	0.00	0.00	0.00
140.25	0.00	0.00	0.00
140.50	0.00	0.00	0.00
140.75	0.00	0.00	0.00
141.00	0.00	0.00	0.00
141.25	0.00	0.00	0.00
141.50	0.00	0.00	0.00
141.75	0.00	0.00	0.00
142.00	0.00	0.00	0.00
142.25	0.00	0.00	0.00
142.50	0.00	0.00	0.00
142.75	0.00	0.00	0.00
143.00	0.00	0.00	0.00
143.25	0.00	0.00	0.00
143.50	0.00	0.00	0.00
143.75	0.00	0.00	0.00
144.00	0.00	0.00	0.00
144.25	0.00	0.00	0.00
144.50	0.00	0.00	0.00
144.75	0.00	0.00	0.00
145.00	0.00	0.00	0.00
145.25	0.00	0.00	0.00
145.50	0.00	0.00	0.00
145.75	0.00	0.00	0.00
146.00	0.00	0.00	0.00
146.25	0.00	0.00	0.00
146.50	0.00	0.00	0.00
146.75	0.00	0.00	0.00
147.00	0.00	0.00	0.00
147.25	0.00	0.00	0.00
147.50	0.00	0.00	0.00
147.75	0.00	0.00	0.00
148.00	0.00	0.00	0.00
148.25	0.00	0.00	0.00
148.50	0.00	0.00	0.00
148.75	0.00	0.00	0.00
149.00	0.00	0.00	0.00
149.25	0.00	0.00	0.00
149.50	0.00	0.00	0.00
149.75	0.00	0.00	0.00
150.00	0.00	0.00	0.00

Summary for Link 11L: Power Block SW Piping

Inflow Area = 4.114 ac, 76.91% Impervious, Inflow Depth = 8.32" for 100yr-24hr event
Inflow = 47.23 cfs @ 12.02 hrs, Volume= 2.853 af
Primary = 47.23 cfs @ 12.07 hrs, Volume= 2.853 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow delayed by 3.0 min, Time Span= 0.50-150.00 hrs, dt= 0.05 hrs

Link 11L: Power Block SW Piping



Hydrograph for Link 11L: Power Block SW Piping

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.50	0.00	**0.00**	0.00	13.75	1.87	0.00	1.91
0.75	0.00	0.00	0.00	14.00	1.66	0.00	1.70
1.00	0.00	0.00	0.00	14.25	1.50	0.00	1.52
1.25	0.00	0.00	0.00	14.50	1.43	0.00	1.44
1.50	0.00	0.00	0.00	14.75	1.36	0.00	1.37
1.75	0.00	0.00	0.00	15.00	1.29	0.00	1.30
2.00	0.00	0.00	0.00	15.25	1.21	0.00	1.23
2.25	0.00	0.00	0.00	15.50	1.14	0.00	1.16
2.50	0.00	0.00	0.00	15.75	1.07	0.00	1.09
2.75	0.00	0.00	0.00	16.00	1.00	0.00	1.01
3.00	0.00	0.00	0.00	16.25	0.94	0.00	0.95
3.25	0.00	0.00	0.00	16.50	0.92	0.00	0.92
3.50	0.01	0.00	0.01	16.75	0.89	0.00	0.90
3.75	0.03	0.00	0.03	17.00	0.87	0.00	0.87
4.00	0.05	0.00	0.05	17.25	0.84	0.00	0.85
4.25	0.07	0.00	0.07	17.50	0.81	0.00	0.82
4.50	0.09	0.00	0.09	17.75	0.79	0.00	0.79
4.75	0.12	0.00	0.11	18.00	0.76	0.00	0.77
5.00	0.14	0.00	0.14	18.25	0.74	0.00	0.74
5.25	0.17	0.00	0.16	18.50	0.71	0.00	0.72
5.50	0.19	0.00	0.19	18.75	0.69	0.00	0.69
5.75	0.22	0.00	0.21	19.00	0.66	0.00	0.67
6.00	0.24	0.00	0.24	19.25	0.63	0.00	0.64
6.25	0.27	0.00	0.27	19.50	0.61	0.00	0.61
6.50	0.30	0.00	0.29	19.75	0.58	0.00	0.59
6.75	0.33	0.00	0.32	20.00	0.56	0.00	0.56
7.00	0.36	0.00	0.35	20.25	0.54	0.00	0.54
7.25	0.38	0.00	0.38	20.50	0.53	0.00	0.53
7.50	0.41	0.00	0.41	20.75	0.53	0.00	0.53
7.75	0.44	0.00	0.44	21.00	0.52	0.00	0.52
8.00	0.47	0.00	0.47	21.25	0.52	0.00	0.52
8.25	0.52	0.00	0.51	21.50	0.51	0.00	0.51
8.50	0.60	0.00	0.58	21.75	0.51	0.00	0.51
8.75	0.68	0.00	0.66	22.00	0.50	0.00	0.50
9.00	0.77	0.00	0.75	22.25	0.50	0.00	0.50
9.25	0.84	0.00	0.83	22.50	0.49	0.00	0.49
9.50	0.87	0.00	0.86	22.75	0.49	0.00	0.49
9.75	0.93	0.00	0.91	23.00	0.48	0.00	0.48
10.00	1.07	0.00	1.04	23.25	0.48	0.00	0.48
10.25	1.24	0.00	1.20	23.50	0.47	0.00	0.47
10.50	1.46	0.00	1.41	23.75	0.47	0.00	0.47
10.75	1.73	0.00	1.67	24.00	0.46	0.00	0.46
11.00	2.10	0.00	2.02	24.25	0.06	0.00	0.12
11.25	2.67	0.00	2.51	24.50	0.00	0.00	0.00
11.50	3.55	0.00	3.37	24.75	0.00	0.00	0.00
11.75	12.16	0.00	8.59	25.00	0.00	0.00	0.00
12.00	**46.65**	0.00	**38.73**	25.25	0.00	0.00	0.00
12.25	11.15	0.00	**15.26**	25.50	0.00	0.00	0.00
12.50	5.17	0.00	5.77	25.75	0.00	0.00	0.00
12.75	3.45	0.00	3.62	26.00	0.00	0.00	0.00
13.00	2.85	0.00	2.96	26.25	0.00	0.00	0.00
13.25	2.42	0.00	2.48	26.50	0.00	0.00	0.00
13.50	2.12	0.00	2.18	26.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
27.00	0.00	0.00	0.00	40.25	0.00	0.00	0.00
27.25	0.00	0.00	0.00	40.50	0.00	0.00	0.00
27.50	0.00	0.00	0.00	40.75	0.00	0.00	0.00
27.75	0.00	0.00	0.00	41.00	0.00	0.00	0.00
28.00	0.00	0.00	0.00	41.25	0.00	0.00	0.00
28.25	0.00	0.00	0.00	41.50	0.00	0.00	0.00
28.50	0.00	0.00	0.00	41.75	0.00	0.00	0.00
28.75	0.00	0.00	0.00	42.00	0.00	0.00	0.00
29.00	0.00	0.00	0.00	42.25	0.00	0.00	0.00
29.25	0.00	0.00	0.00	42.50	0.00	0.00	0.00
29.50	0.00	0.00	0.00	42.75	0.00	0.00	0.00
29.75	0.00	0.00	0.00	43.00	0.00	0.00	0.00
30.00	0.00	0.00	0.00	43.25	0.00	0.00	0.00
30.25	0.00	0.00	0.00	43.50	0.00	0.00	0.00
30.50	0.00	0.00	0.00	43.75	0.00	0.00	0.00
30.75	0.00	0.00	0.00	44.00	0.00	0.00	0.00
31.00	0.00	0.00	0.00	44.25	0.00	0.00	0.00
31.25	0.00	0.00	0.00	44.50	0.00	0.00	0.00
31.50	0.00	0.00	0.00	44.75	0.00	0.00	0.00
31.75	0.00	0.00	0.00	45.00	0.00	0.00	0.00
32.00	0.00	0.00	0.00	45.25	0.00	0.00	0.00
32.25	0.00	0.00	0.00	45.50	0.00	0.00	0.00
32.50	0.00	0.00	0.00	45.75	0.00	0.00	0.00
32.75	0.00	0.00	0.00	46.00	0.00	0.00	0.00
33.00	0.00	0.00	0.00	46.25	0.00	0.00	0.00
33.25	0.00	0.00	0.00	46.50	0.00	0.00	0.00
33.50	0.00	0.00	0.00	46.75	0.00	0.00	0.00
33.75	0.00	0.00	0.00	47.00	0.00	0.00	0.00
34.00	0.00	0.00	0.00	47.25	0.00	0.00	0.00
34.25	0.00	0.00	0.00	47.50	0.00	0.00	0.00
34.50	0.00	0.00	0.00	47.75	0.00	0.00	0.00
34.75	0.00	0.00	0.00	48.00	0.00	0.00	0.00
35.00	0.00	0.00	0.00	48.25	0.00	0.00	0.00
35.25	0.00	0.00	0.00	48.50	0.00	0.00	0.00
35.50	0.00	0.00	0.00	48.75	0.00	0.00	0.00
35.75	0.00	0.00	0.00	49.00	0.00	0.00	0.00
36.00	0.00	0.00	0.00	49.25	0.00	0.00	0.00
36.25	0.00	0.00	0.00	49.50	0.00	0.00	0.00
36.50	0.00	0.00	0.00	49.75	0.00	0.00	0.00
36.75	0.00	0.00	0.00	50.00	0.00	0.00	0.00
37.00	0.00	0.00	0.00	50.25	0.00	0.00	0.00
37.25	0.00	0.00	0.00	50.50	0.00	0.00	0.00
37.50	0.00	0.00	0.00	50.75	0.00	0.00	0.00
37.75	0.00	0.00	0.00	51.00	0.00	0.00	0.00
38.00	0.00	0.00	0.00	51.25	0.00	0.00	0.00
38.25	0.00	0.00	0.00	51.50	0.00	0.00	0.00
38.50	0.00	0.00	0.00	51.75	0.00	0.00	0.00
38.75	0.00	0.00	0.00	52.00	0.00	0.00	0.00
39.00	0.00	0.00	0.00	52.25	0.00	0.00	0.00
39.25	0.00	0.00	0.00	52.50	0.00	0.00	0.00
39.50	0.00	0.00	0.00	52.75	0.00	0.00	0.00
39.75	0.00	0.00	0.00	53.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	53.25	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
53.50	0.00	0.00	0.00	66.75	0.00	0.00	0.00
53.75	0.00	0.00	0.00	67.00	0.00	0.00	0.00
54.00	0.00	0.00	0.00	67.25	0.00	0.00	0.00
54.25	0.00	0.00	0.00	67.50	0.00	0.00	0.00
54.50	0.00	0.00	0.00	67.75	0.00	0.00	0.00
54.75	0.00	0.00	0.00	68.00	0.00	0.00	0.00
55.00	0.00	0.00	0.00	68.25	0.00	0.00	0.00
55.25	0.00	0.00	0.00	68.50	0.00	0.00	0.00
55.50	0.00	0.00	0.00	68.75	0.00	0.00	0.00
55.75	0.00	0.00	0.00	69.00	0.00	0.00	0.00
56.00	0.00	0.00	0.00	69.25	0.00	0.00	0.00
56.25	0.00	0.00	0.00	69.50	0.00	0.00	0.00
56.50	0.00	0.00	0.00	69.75	0.00	0.00	0.00
56.75	0.00	0.00	0.00	70.00	0.00	0.00	0.00
57.00	0.00	0.00	0.00	70.25	0.00	0.00	0.00
57.25	0.00	0.00	0.00	70.50	0.00	0.00	0.00
57.50	0.00	0.00	0.00	70.75	0.00	0.00	0.00
57.75	0.00	0.00	0.00	71.00	0.00	0.00	0.00
58.00	0.00	0.00	0.00	71.25	0.00	0.00	0.00
58.25	0.00	0.00	0.00	71.50	0.00	0.00	0.00
58.50	0.00	0.00	0.00	71.75	0.00	0.00	0.00
58.75	0.00	0.00	0.00	72.00	0.00	0.00	0.00
59.00	0.00	0.00	0.00	72.25	0.00	0.00	0.00
59.25	0.00	0.00	0.00	72.50	0.00	0.00	0.00
59.50	0.00	0.00	0.00	72.75	0.00	0.00	0.00
59.75	0.00	0.00	0.00	73.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	73.25	0.00	0.00	0.00
60.25	0.00	0.00	0.00	73.50	0.00	0.00	0.00
60.50	0.00	0.00	0.00	73.75	0.00	0.00	0.00
60.75	0.00	0.00	0.00	74.00	0.00	0.00	0.00
61.00	0.00	0.00	0.00	74.25	0.00	0.00	0.00
61.25	0.00	0.00	0.00	74.50	0.00	0.00	0.00
61.50	0.00	0.00	0.00	74.75	0.00	0.00	0.00
61.75	0.00	0.00	0.00	75.00	0.00	0.00	0.00
62.00	0.00	0.00	0.00	75.25	0.00	0.00	0.00
62.25	0.00	0.00	0.00	75.50	0.00	0.00	0.00
62.50	0.00	0.00	0.00	75.75	0.00	0.00	0.00
62.75	0.00	0.00	0.00	76.00	0.00	0.00	0.00
63.00	0.00	0.00	0.00	76.25	0.00	0.00	0.00
63.25	0.00	0.00	0.00	76.50	0.00	0.00	0.00
63.50	0.00	0.00	0.00	76.75	0.00	0.00	0.00
63.75	0.00	0.00	0.00	77.00	0.00	0.00	0.00
64.00	0.00	0.00	0.00	77.25	0.00	0.00	0.00
64.25	0.00	0.00	0.00	77.50	0.00	0.00	0.00
64.50	0.00	0.00	0.00	77.75	0.00	0.00	0.00
64.75	0.00	0.00	0.00	78.00	0.00	0.00	0.00
65.00	0.00	0.00	0.00	78.25	0.00	0.00	0.00
65.25	0.00	0.00	0.00	78.50	0.00	0.00	0.00
65.50	0.00	0.00	0.00	78.75	0.00	0.00	0.00
65.75	0.00	0.00	0.00	79.00	0.00	0.00	0.00
66.00	0.00	0.00	0.00	79.25	0.00	0.00	0.00
66.25	0.00	0.00	0.00	79.50	0.00	0.00	0.00
66.50	0.00	0.00	0.00	79.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
80.00	0.00	0.00	0.00	93.25	0.00	0.00	0.00
80.25	0.00	0.00	0.00	93.50	0.00	0.00	0.00
80.50	0.00	0.00	0.00	93.75	0.00	0.00	0.00
80.75	0.00	0.00	0.00	94.00	0.00	0.00	0.00
81.00	0.00	0.00	0.00	94.25	0.00	0.00	0.00
81.25	0.00	0.00	0.00	94.50	0.00	0.00	0.00
81.50	0.00	0.00	0.00	94.75	0.00	0.00	0.00
81.75	0.00	0.00	0.00	95.00	0.00	0.00	0.00
82.00	0.00	0.00	0.00	95.25	0.00	0.00	0.00
82.25	0.00	0.00	0.00	95.50	0.00	0.00	0.00
82.50	0.00	0.00	0.00	95.75	0.00	0.00	0.00
82.75	0.00	0.00	0.00	96.00	0.00	0.00	0.00
83.00	0.00	0.00	0.00	96.25	0.00	0.00	0.00
83.25	0.00	0.00	0.00	96.50	0.00	0.00	0.00
83.50	0.00	0.00	0.00	96.75	0.00	0.00	0.00
83.75	0.00	0.00	0.00	97.00	0.00	0.00	0.00
84.00	0.00	0.00	0.00	97.25	0.00	0.00	0.00
84.25	0.00	0.00	0.00	97.50	0.00	0.00	0.00
84.50	0.00	0.00	0.00	97.75	0.00	0.00	0.00
84.75	0.00	0.00	0.00	98.00	0.00	0.00	0.00
85.00	0.00	0.00	0.00	98.25	0.00	0.00	0.00
85.25	0.00	0.00	0.00	98.50	0.00	0.00	0.00
85.50	0.00	0.00	0.00	98.75	0.00	0.00	0.00
85.75	0.00	0.00	0.00	99.00	0.00	0.00	0.00
86.00	0.00	0.00	0.00	99.25	0.00	0.00	0.00
86.25	0.00	0.00	0.00	99.50	0.00	0.00	0.00
86.50	0.00	0.00	0.00	99.75	0.00	0.00	0.00
86.75	0.00	0.00	0.00	100.00	0.00	0.00	0.00
87.00	0.00	0.00	0.00	100.25	0.00	0.00	0.00
87.25	0.00	0.00	0.00	100.50	0.00	0.00	0.00
87.50	0.00	0.00	0.00	100.75	0.00	0.00	0.00
87.75	0.00	0.00	0.00	101.00	0.00	0.00	0.00
88.00	0.00	0.00	0.00	101.25	0.00	0.00	0.00
88.25	0.00	0.00	0.00	101.50	0.00	0.00	0.00
88.50	0.00	0.00	0.00	101.75	0.00	0.00	0.00
88.75	0.00	0.00	0.00	102.00	0.00	0.00	0.00
89.00	0.00	0.00	0.00	102.25	0.00	0.00	0.00
89.25	0.00	0.00	0.00	102.50	0.00	0.00	0.00
89.50	0.00	0.00	0.00	102.75	0.00	0.00	0.00
89.75	0.00	0.00	0.00	103.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	103.25	0.00	0.00	0.00
90.25	0.00	0.00	0.00	103.50	0.00	0.00	0.00
90.50	0.00	0.00	0.00	103.75	0.00	0.00	0.00
90.75	0.00	0.00	0.00	104.00	0.00	0.00	0.00
91.00	0.00	0.00	0.00	104.25	0.00	0.00	0.00
91.25	0.00	0.00	0.00	104.50	0.00	0.00	0.00
91.50	0.00	0.00	0.00	104.75	0.00	0.00	0.00
91.75	0.00	0.00	0.00	105.00	0.00	0.00	0.00
92.00	0.00	0.00	0.00	105.25	0.00	0.00	0.00
92.25	0.00	0.00	0.00	105.50	0.00	0.00	0.00
92.50	0.00	0.00	0.00	105.75	0.00	0.00	0.00
92.75	0.00	0.00	0.00	106.00	0.00	0.00	0.00
93.00	0.00	0.00	0.00	106.25	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
106.50	0.00	0.00	0.00	119.75	0.00	0.00	0.00
106.75	0.00	0.00	0.00	120.00	0.00	0.00	0.00
107.00	0.00	0.00	0.00	120.25	0.00	0.00	0.00
107.25	0.00	0.00	0.00	120.50	0.00	0.00	0.00
107.50	0.00	0.00	0.00	120.75	0.00	0.00	0.00
107.75	0.00	0.00	0.00	121.00	0.00	0.00	0.00
108.00	0.00	0.00	0.00	121.25	0.00	0.00	0.00
108.25	0.00	0.00	0.00	121.50	0.00	0.00	0.00
108.50	0.00	0.00	0.00	121.75	0.00	0.00	0.00
108.75	0.00	0.00	0.00	122.00	0.00	0.00	0.00
109.00	0.00	0.00	0.00	122.25	0.00	0.00	0.00
109.25	0.00	0.00	0.00	122.50	0.00	0.00	0.00
109.50	0.00	0.00	0.00	122.75	0.00	0.00	0.00
109.75	0.00	0.00	0.00	123.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	123.25	0.00	0.00	0.00
110.25	0.00	0.00	0.00	123.50	0.00	0.00	0.00
110.50	0.00	0.00	0.00	123.75	0.00	0.00	0.00
110.75	0.00	0.00	0.00	124.00	0.00	0.00	0.00
111.00	0.00	0.00	0.00	124.25	0.00	0.00	0.00
111.25	0.00	0.00	0.00	124.50	0.00	0.00	0.00
111.50	0.00	0.00	0.00	124.75	0.00	0.00	0.00
111.75	0.00	0.00	0.00	125.00	0.00	0.00	0.00
112.00	0.00	0.00	0.00	125.25	0.00	0.00	0.00
112.25	0.00	0.00	0.00	125.50	0.00	0.00	0.00
112.50	0.00	0.00	0.00	125.75	0.00	0.00	0.00
112.75	0.00	0.00	0.00	126.00	0.00	0.00	0.00
113.00	0.00	0.00	0.00	126.25	0.00	0.00	0.00
113.25	0.00	0.00	0.00	126.50	0.00	0.00	0.00
113.50	0.00	0.00	0.00	126.75	0.00	0.00	0.00
113.75	0.00	0.00	0.00	127.00	0.00	0.00	0.00
114.00	0.00	0.00	0.00	127.25	0.00	0.00	0.00
114.25	0.00	0.00	0.00	127.50	0.00	0.00	0.00
114.50	0.00	0.00	0.00	127.75	0.00	0.00	0.00
114.75	0.00	0.00	0.00	128.00	0.00	0.00	0.00
115.00	0.00	0.00	0.00	128.25	0.00	0.00	0.00
115.25	0.00	0.00	0.00	128.50	0.00	0.00	0.00
115.50	0.00	0.00	0.00	128.75	0.00	0.00	0.00
115.75	0.00	0.00	0.00	129.00	0.00	0.00	0.00
116.00	0.00	0.00	0.00	129.25	0.00	0.00	0.00
116.25	0.00	0.00	0.00	129.50	0.00	0.00	0.00
116.50	0.00	0.00	0.00	129.75	0.00	0.00	0.00
116.75	0.00	0.00	0.00	130.00	0.00	0.00	0.00
117.00	0.00	0.00	0.00	130.25	0.00	0.00	0.00
117.25	0.00	0.00	0.00	130.50	0.00	0.00	0.00
117.50	0.00	0.00	0.00	130.75	0.00	0.00	0.00
117.75	0.00	0.00	0.00	131.00	0.00	0.00	0.00
118.00	0.00	0.00	0.00	131.25	0.00	0.00	0.00
118.25	0.00	0.00	0.00	131.50	0.00	0.00	0.00
118.50	0.00	0.00	0.00	131.75	0.00	0.00	0.00
118.75	0.00	0.00	0.00	132.00	0.00	0.00	0.00
119.00	0.00	0.00	0.00	132.25	0.00	0.00	0.00
119.25	0.00	0.00	0.00	132.50	0.00	0.00	0.00
119.50	0.00	0.00	0.00	132.75	0.00	0.00	0.00

Hydrograph for Link 11L: Power Block SW Piping (continued)

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
133.00	0.00	0.00	0.00
133.25	0.00	0.00	0.00
133.50	0.00	0.00	0.00
133.75	0.00	0.00	0.00
134.00	0.00	0.00	0.00
134.25	0.00	0.00	0.00
134.50	0.00	0.00	0.00
134.75	0.00	0.00	0.00
135.00	0.00	0.00	0.00
135.25	0.00	0.00	0.00
135.50	0.00	0.00	0.00
135.75	0.00	0.00	0.00
136.00	0.00	0.00	0.00
136.25	0.00	0.00	0.00
136.50	0.00	0.00	0.00
136.75	0.00	0.00	0.00
137.00	0.00	0.00	0.00
137.25	0.00	0.00	0.00
137.50	0.00	0.00	0.00
137.75	0.00	0.00	0.00
138.00	0.00	0.00	0.00
138.25	0.00	0.00	0.00
138.50	0.00	0.00	0.00
138.75	0.00	0.00	0.00
139.00	0.00	0.00	0.00
139.25	0.00	0.00	0.00
139.50	0.00	0.00	0.00
139.75	0.00	0.00	0.00
140.00	0.00	0.00	0.00
140.25	0.00	0.00	0.00
140.50	0.00	0.00	0.00
140.75	0.00	0.00	0.00
141.00	0.00	0.00	0.00
141.25	0.00	0.00	0.00
141.50	0.00	0.00	0.00
141.75	0.00	0.00	0.00
142.00	0.00	0.00	0.00
142.25	0.00	0.00	0.00
142.50	0.00	0.00	0.00
142.75	0.00	0.00	0.00
143.00	0.00	0.00	0.00
143.25	0.00	0.00	0.00
143.50	0.00	0.00	0.00
143.75	0.00	0.00	0.00
144.00	0.00	0.00	0.00
144.25	0.00	0.00	0.00
144.50	0.00	0.00	0.00
144.75	0.00	0.00	0.00
145.00	0.00	0.00	0.00
145.25	0.00	0.00	0.00
145.50	0.00	0.00	0.00
145.75	0.00	0.00	0.00
146.00	0.00	0.00	0.00
146.25	0.00	0.00	0.00
146.50	0.00	0.00	0.00
146.75	0.00	0.00	0.00
147.00	0.00	0.00	0.00
147.25	0.00	0.00	0.00
147.50	0.00	0.00	0.00
147.75	0.00	0.00	0.00
148.00	0.00	0.00	0.00
148.25	0.00	0.00	0.00
148.50	0.00	0.00	0.00
148.75	0.00	0.00	0.00
149.00	0.00	0.00	0.00
149.25	0.00	0.00	0.00
149.50	0.00	0.00	0.00
149.75	0.00	0.00	0.00
150.00	0.00	0.00	0.00

TEMPORARY CRAFT AREA
POND TREATMENT VOLUME ANALYSIS

BLACK & VEATCH
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CALCULATION RECORD

Client Name Seminole Electric Cooperative Inc (SECI) Page 1 of 7

Project Name P2021 Combined Cycle Study Project No. 190285

Calculation Title Temporary Craft Parking Area Pond Treatment Volume Analysis

Calculation No./File No. 58.5406.1103

Verification Method: ☒ Check and Review ☐ Alternate Calculations

Objective: The purpose of this calculation is to determine the required treatment pond volume for the Temporary Craft Parking Area for the Seminole Electric Cooperative P2021 Combined Cycle Project.

Unverified Assumptions Requiring Subsequent Verification

No.	Assumption	Verified By	Date
	N/A		

Refer to Page N/A of this calculation for additional assumptions.

This Section Used for Software-Generated Calculations

Program Name/Number HydroCAD Version 10.00

Standard B&V Application Used? ☒ Yes ☐ No

If no, list approved deviation permit number below and attach approved deviation permit.

Review and Approval

Rev	Prepared By	Date	Verified By	Date	Approved By	Date
0	J C Barranco, Jr	12/2/2016	O Jankauskaite	12/8/16	J C Barranco, Jr	12/8/16
1	J C Barranco, Jr	12/16/16	O Jankauskaite	12/20/16		

JOHN C. BARRANCO, JR. ★ LICENSE No 72091 ★ 20/DEC/2016 STATE OF FLORIDA ★ PROFESSIONAL ENGINEER ★

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1.0 Purpose

The purpose of this calculation is to determine the required treatment pond volume for the Temporary Craft Parking Area for the Seminole Electric Cooperative P2021 Combined Cycle Project.

2.0 References

2.1 St. Johns River Water Management District, Permit Information Manual. October 1, 2013
2.2 B&V Dwg Number 190285-DS-1102, "Proposed Stormwater Management Plan"
2.3 Ellis & Associates report titled "Geotechnical Exploration Seminole Electric - Combined Cycle Study Putnam County, FL", June 17, 2016
2.4 Urban Hydrology for Small watersheds, US Department of Agriculture, Soil Conservation Service, Technical Release 55, 1986
2.5 AutoCAD Civil 3D 2014
2.6 HydroCAD Ver. 10.0, HydroCAD Software Solutions, LLC

3.0 Conclusions

3.4 The actual provided treatment volume is 1.06 acre-ft and the required treatment volume is 0.81 ac-ft, therefore the actual treatment volume is greater than the required treatment volume for Temporary Craft Parking Area Pond

3.5 The Treatment Volume is draw down within 24.3 hours, meeting the criteria the pond must provide the required treatment volume for the second storm event within 72 hours of the first.

4.0 Procedure/Methodology of Design

4.1 The Temporary Craft Parking area will be designed as a dry retention pond. Only the required treatment volume of the pond is considered in the design, and not pre vs post attenuation since the Craft Parking area is temporary, and will be removed at the end of Construction. The Temporary Craft Parking Area also falls within an existing on site stormwater management system.

The required treatment volume is the greater of the following: (Ref 2.1)

(a) Off-line Retention of the first one-half of runoff or 1.25 inches of runoff from the impervious area, whichever is greater.

(b) On-Line retention of an additional one-half inch of runoff from the drainage area over that volume specified for offline treatment.

4.2 The rules of Reference 2.1 require that the retention system must provide the capacity for the appropriate treatment volume within 72 hours following the first storm event.

5.0 Definitions of Units and Constants

Units and Constants are defined within the Analysis section

6.0 Analysis

6.1 Treatment Volume Calculation

For discharges to Class III receiving water bodies, the dry detention system shall provide off-line detention of the first one inch of runoff over the entire site or 2.5 inches of runoff from the impervious area, whichever is greater. (Ref 2.1)

Ground Water Elevation

Boring SB-1, SB-2 and SB-3 (Reference 2.3) are the closest borings to the proposed temporary retention pond. The Geotechnical Investigation Report (Reference 2.3) indicates that the Season High Ground Water averages between 5-7 ft below existing grade. The existing grade at the proposed retention pond is 80 ft on average, therefore a season high ground water of 75.0 ft will conservatively be used for this calculation. The top of pond is designed at an elevation of 80.0 ft, and will be 3 ft in depth for a bottom of pond elevation of 77.0 ft. Based on this, the criteria for retention ponds to be a minimum of 1 ft above the Season High Water Table will be met.

Treatment Volume (Option A)

TV_{Req} = Treatment Volume Required
TV_{actual} = Actual Provided Treatment Volume in the Proposed Pond

TV_{Req} = (1/2 inch + 1/2 for On-line Treatment) x DA

DA = Drainage Area $DA := 5.6acre$ (Reference 2.2)

RO = Runoff $RO_A := 0.5 \cdot in + 0.5 \cdot in$

$TV_{Req.A} := (RO_A \cdot DA)$ $TV_{Req.A} = 0.47\,ft \cdot acre$

Treatment Volume (Option B)

TV_{Req} = (1.25 inches + 1/2 inch for on-line treatment) * IA

IA = Impervious Area $IA := 5.6acre$

RO_B = Impervious Runoff $RO_B := 1.25in + 0.5 \cdot in$

$TV_{Req.B} := RO_B \cdot IA$ $TV_{Req.B} = 0.82\,ft \cdot acre$

Treatment Volume Option B governs, therefore the required treatment volume is 0.81 acre-ft

$TV_{Req} := TV_{Req.B}$ $TV_{Req.B} = 0.817 \cdot acre \cdot ft$

Provided Treatment Volume

The actual Treatment Volume Provided, is the volume of available storage below the overflow weir elevation. The pond is designed as a prismatoid with the following parameters ((Reference 2.2):

$Pond_{Bot.El} := 77 \cdot ft$

$Pond_{Top.El} := 80 \cdot ft$

$Pond_{Overflow.Weir.El} := 79.5 \cdot ft$

$Pond_{Avg.Surf.Area} := 18496.4 \cdot ft^2$

$Pond_{Avg.Surf.Area} = 0.425 \cdot acre$

Calculate Pond Bottom Provided Below the Weir

$Pond_{Vol.Provided} := \left(Pond_{Top.El} - Pond_{Bot.El}\right) \cdot Pond_{Avg.Surf.Area}$

$Pond_{Vol.Provided} = 1.274 \cdot acre \cdot ft$

$TV_{actual} := \left(Pond_{Overflow.Weir.El} - Pond_{Bot.El}\right) \cdot Pond_{Avg.Surf.Area}$

$TV_{actual} = 1.062 \cdot acre \cdot ft$

Actual Treatment Volume Provided is 1.062 acre*ft
Therefore, $TV_{actual} > TV_{required}$

Recovery Time Calculation

The retention system must provide the capacity for the appropriate treatment volume within 72 hours following the first storm event (Ref 2.1). The proposed retention pond will use natural soil infiltration to draw down the treatment volume. The Geotechnical Investigation Report (Ref 2.3) provides infiltration rates of 52.9 ft/day and 44.1 ft/day and recommends a factor of safety of 2 applied to these values. Since the test points are not relatively close to the proposed Temporary Craft Parking Retention Pond, a factor of safety of 4 of the lowest field measured vertical infiltration rate will be used for this calculation.

$K_{measured} := 44.1 \cdot \frac{ft}{day}$

$FS_K := 4$

$K := \frac{K_{measured}}{FS_K}$ $\quad K = 11.025 \cdot \frac{ft}{day}$ $\quad K = 5.513 \cdot \frac{in}{hr}$

The HydroCAD report (Ref 2.6, Attach 3) represents that the pond is drawn down within 24.1 hours of the start of the event. Therefore the requirement for the pond to be drawn down within 72 hours is met.

Since the pond is only designed to handle the Treatment Volume, an overflow structure will be used to direct additional runoff to the existing adjacent on site ditch. The top of ditch elevation is 75 ft (Ref 4), and the top of ditch elevation will be conservatively used as the tailwater elevation for the overflow structure.

$TW_{existing.ditch} := 75 \cdot ft$

Although pre vs post attenuation is not required for the temporary pond, the annual average storm event and the 25year - 24 hour storm event is handled within the pond without overtopping the pond banks. The 25 year - 24 hour storm discharges across the overflow weir to the existing adjacent on site ditch. The HydroCAD report (Ref 2.6, Attach 3) represents that the Annual Average storm event will be drawdown within 24.2 hours and not impact the treatment volume for the next storm.

Attachments

Attachment 1

Rainfall Maps

NOAA Atlas 14, Volume 9, Version 2
Location name: Palatka, Florida, USA*
Latitude: 29.7446°, Longitude: -81.6425°
Elevation: 54.62 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

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	**0.527** (0.427-0.643)	**0.595** (0.482-0.726)	**0.702** (0.566-0.859)	**0.787** (0.631-0.966)	**0.898** (0.695-1.12)	**0.979** (0.743-1.24)	**1.06** (0.777-1.36)	**1.13** (0.800-1.50)	**1.23** (0.834-1.66)	**1.29** (0.861-1.78)
10-min	**0.772** (0.626-0.942)	**0.871** (0.705-1.06)	**1.03** (0.829-1.26)	**1.15** (0.925-1.41)	**1.31** (1.02-1.64)	**1.43** (1.09-1.81)	**1.55** (1.14-2.00)	**1.66** (1.17-2.19)	**1.79** (1.22-2.43)	**1.89** (1.26-2.60)
15-min	**0.941** (0.763-1.15)	**1.06** (0.860-1.30)	**1.25** (1.01-1.53)	**1.41** (1.13-1.73)	**1.60** (1.24-2.00)	**1.75** (1.33-2.21)	**1.89** (1.39-2.44)	**2.02** (1.43-2.67)	**2.19** (1.49-2.96)	**2.30** (1.54-3.18)
30-min	**1.42** (1.15-1.73)	**1.61** (1.30-1.97)	**1.91** (1.54-2.34)	**2.15** (1.72-2.64)	**2.45** (1.90-3.06)	**2.68** (2.03-3.39)	**2.89** (2.12-3.73)	**3.09** (2.19-4.08)	**3.34** (2.28-4.52)	**3.52** (2.35-4.85)
60-min	**1.82** (1.48-2.22)	**2.08** (1.69-2.54)	**2.51** (2.02-3.07)	**2.87** (2.30-3.52)	**3.36** (2.62-4.24)	**3.75** (2.86-4.78)	**4.14** (3.05-5.38)	**4.54** (3.22-6.04)	**5.08** (3.47-6.91)	**5.49** (3.66-7.56)
2-hr	**2.23** (1.82-2.69)	**2.55** (2.08-3.09)	**3.11** (2.53-3.77)	**3.59** (2.90-4.37)	**4.27** (3.36-5.37)	**4.82** (3.71-6.12)	**5.39** (4.01-6.99)	**5.99** (4.29-7.94)	**6.81** (4.69-9.23)	**7.45** (5.00-10.2)
3-hr	**2.42** (1.98-2.91)	**2.77** (2.28-3.35)	**3.41** (2.79-4.12)	**3.98** (3.24-4.83)	**4.83** (3.84-6.08)	**5.54** (4.29-7.04)	**6.29** (4.71-8.15)	**7.09** (5.11-9.40)	**8.23** (5.71-11.2)	**9.15** (6.16-12.5)
6-hr	**2.80** (2.32-3.35)	**3.20** (2.65-3.82)	**3.94** (3.25-4.71)	**4.63** (3.80-5.57)	**5.71** (4.61-7.20)	**6.65** (5.21-8.44)	**7.67** (5.81-9.93)	**8.80** (6.40-11.6)	**10.4** (7.30-14.1)	**11.8** (7.97-15.9)
12-hr	**3.31** (2.77-3.92)	**3.72** (3.11-4.42)	**4.52** (3.76-5.37)	**5.30** (4.38-6.32)	**6.54** (5.33-8.20)	**7.62** (6.04-9.62)	**8.83** (6.75-11.4)	**10.2** (7.47-13.4)	**12.1** (8.56-16.3)	**13.8** (9.39-18.5)
24-hr	**3.85** (3.25-4.52)	**4.35** (3.67-5.12)	**5.31** (4.46-6.25)	**6.22** (5.20-7.36)	**7.68** (6.30-9.55)	**8.95** (7.14-11.2)	**10.3** (7.97-13.2)	**11.9** (8.79-15.5)	**14.2** (10.1-18.9)	**16.0** (11.0-21.4)
2-day	**4.39** (3.74-5.11)	**5.09** (4.33-5.93)	**6.38** (5.40-7.45)	**7.58** (6.38-8.88)	**9.41** (7.76-11.6)	**11.0** (8.81-13.6)	**12.7** (9.82-16.0)	**14.5** (10.8-18.8)	**17.2** (12.3-22.8)	**19.4** (13.4-25.8)
3-day	**4.83** (4.13-5.59)	**5.63** (4.81-6.52)	**7.08** (6.03-8.22)	**8.42** (7.13-9.82)	**10.5** (8.67-12.8)	**12.2** (9.84-15.0)	**14.1** (11.0-17.7)	**16.1** (12.0-20.8)	**19.1** (13.7-25.1)	**21.5** (14.9-28.4)
4-day	**5.24** (4.50-6.05)	**6.06** (5.20-7.01)	**7.57** (6.47-8.77)	**8.97** (7.63-10.4)	**11.1** (9.24-13.5)	**12.9** (10.5-15.9)	**14.9** (11.6-18.7)	**17.1** (12.8-21.9)	**20.2** (14.5-26.5)	**22.7** (15.8-30.0)
7-day	**6.35** (5.50-7.28)	**7.15** (6.18-8.21)	**8.63** (7.43-9.93)	**10.0** (8.58-11.6)	**12.2** (10.2-14.7)	**14.0** (11.4-17.1)	**16.0** (12.6-20.0)	**18.2** (13.7-23.3)	**21.4** (15.5-28.0)	**24.0** (16.8-31.6)
10-day	**7.31** (6.36-8.35)	**8.13** (7.05-9.28)	**9.62** (8.32-11.0)	**11.0** (9.46-12.6)	**13.1** (11.0-15.8)	**14.9** (12.2-18.1)	**16.9** (13.3-20.9)	**19.1** (14.4-24.2)	**22.1** (16.1-28.8)	**24.7** (17.3-32.3)
20-day	**9.93** (8.71-11.2)	**11.0** (9.65-12.5)	**12.8** (11.2-14.6)	**14.4** (12.5-16.4)	**16.6** (14.0-19.6)	**18.4** (15.1-21.9)	**20.3** (16.0-24.7)	**22.2** (16.8-27.7)	**24.8** (18.1-31.8)	**26.9** (19.0-34.9)
30-day	**12.1** (10.7-13.7)	**13.5** (11.9-15.2)	**15.7** (13.8-17.7)	**17.5** (15.2-19.8)	**19.9** (16.7-23.1)	**21.7** (17.8-25.6)	**23.5** (18.6-28.3)	**25.3** (19.2-31.3)	**27.6** (20.1-35.1)	**29.3** (20.8-38.0)
45-day	**15.0** (13.3-16.8)	**16.7** (14.8-18.7)	**19.3** (17.0-21.7)	**21.4** (18.7-24.1)	**24.0** (20.2-27.6)	**25.9** (21.4-30.3)	**27.7** (22.1-33.2)	**29.5** (22.4-36.2)	**31.5** (23.0-39.8)	**33.0** (23.5-42.5)
60-day	**17.6** (15.6-19.6)	**19.5** (17.3-21.7)	**22.4** (19.9-25.1)	**24.7** (21.7-27.7)	**27.6** (23.3-31.5)	**29.6** (24.5-34.4)	**31.5** (25.1-37.4)	**33.2** (25.3-40.5)	**35.2** (25.7-44.2)	**36.5** (26.1-46.9)

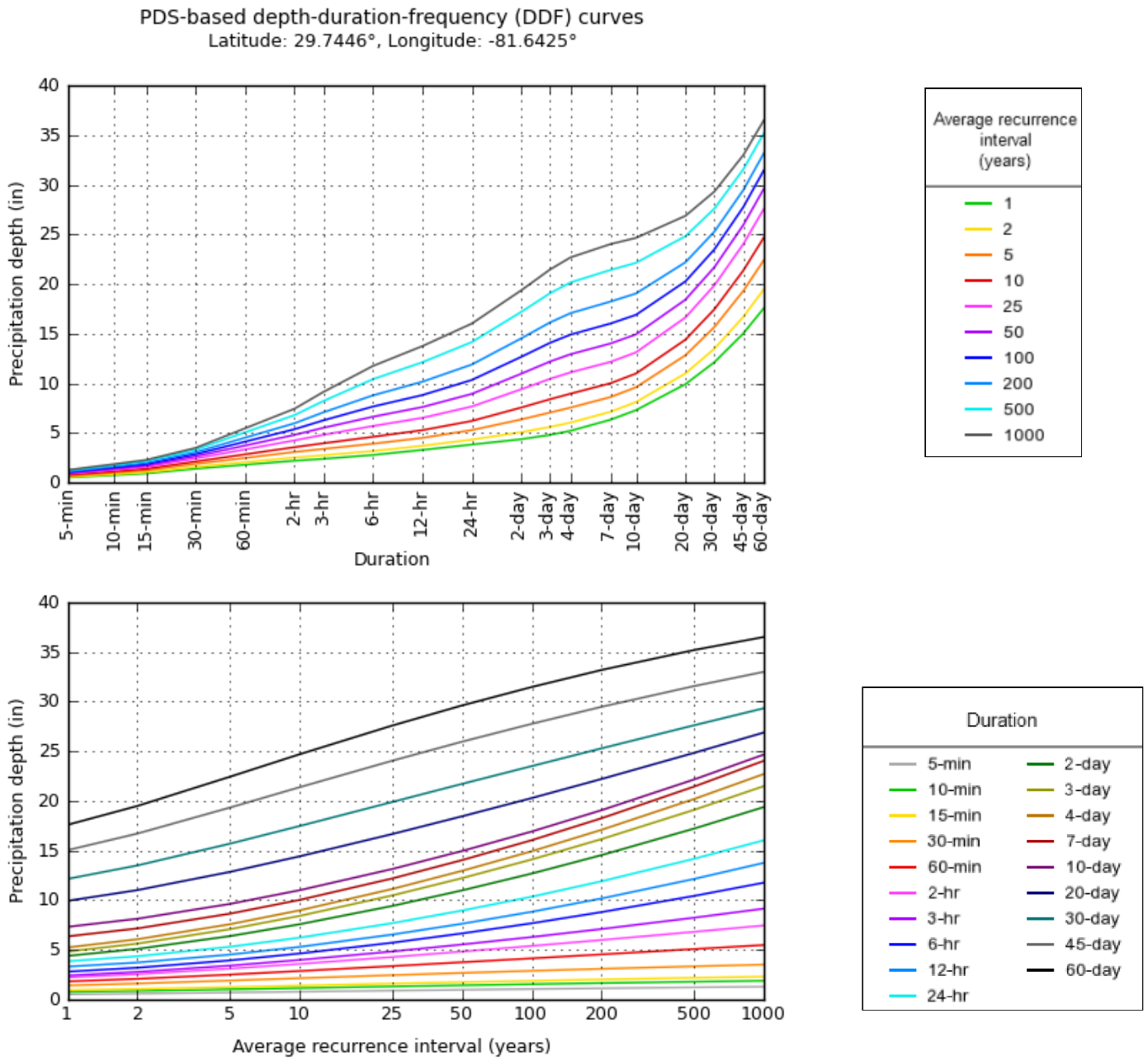
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



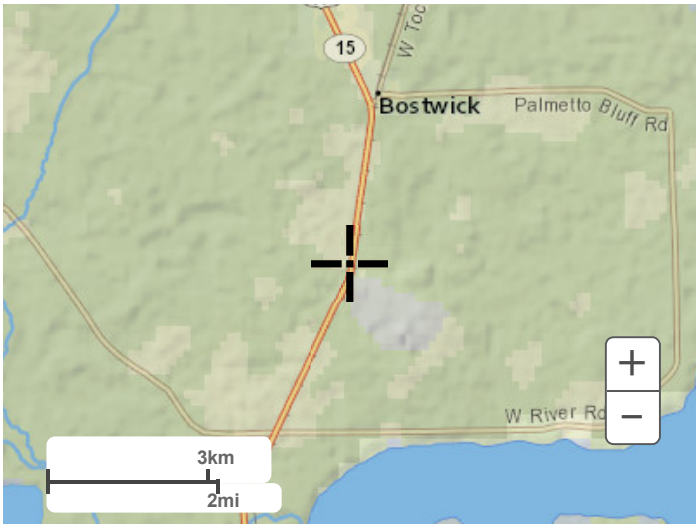
NOAA Atlas 14, Volume 9, Version 2

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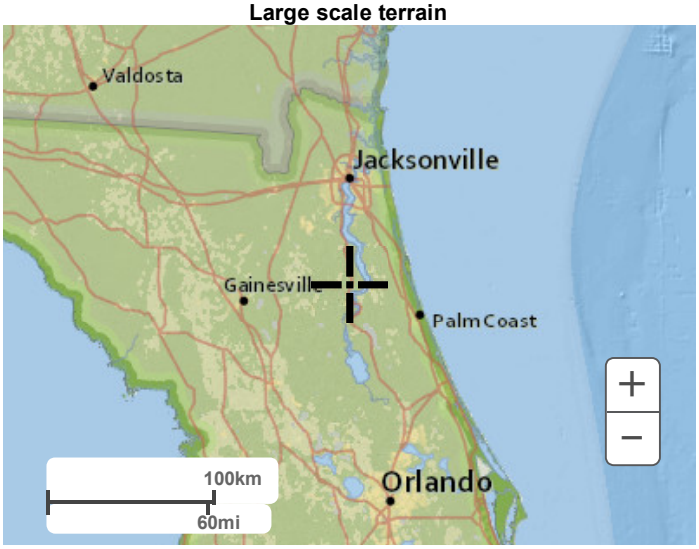
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Maps & aerials

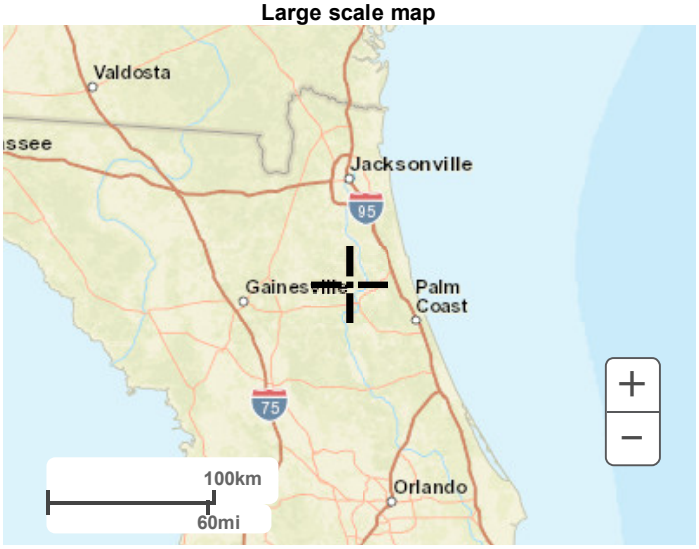
Small scale terrain



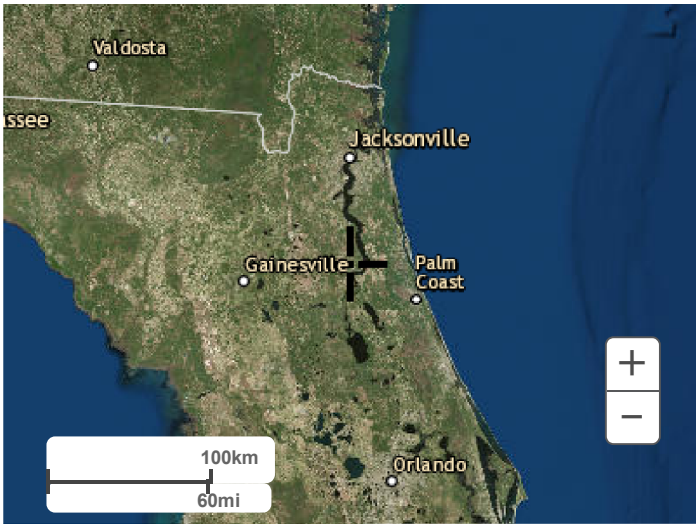
Large scale terrain



Large scale map



Large scale aerial



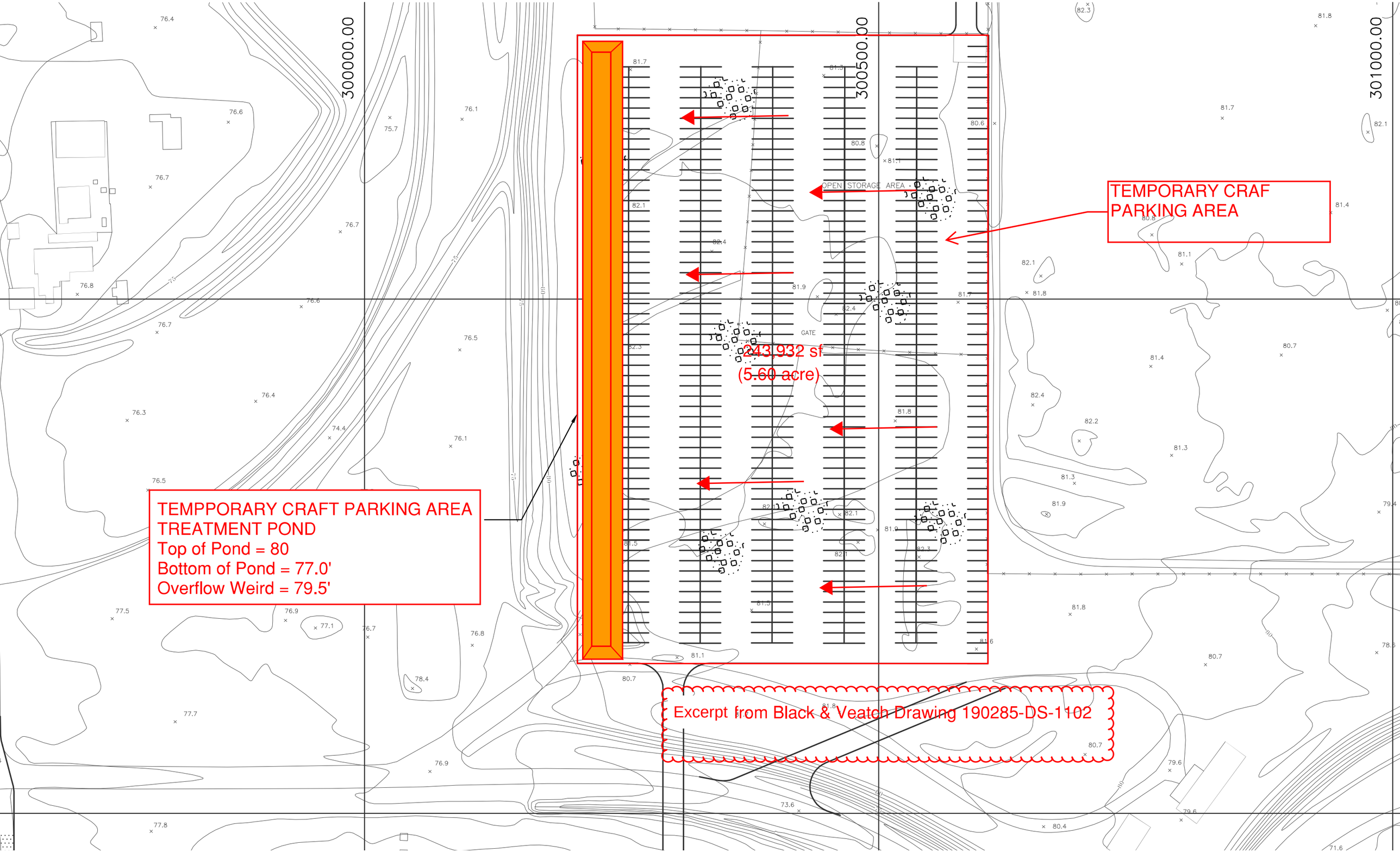
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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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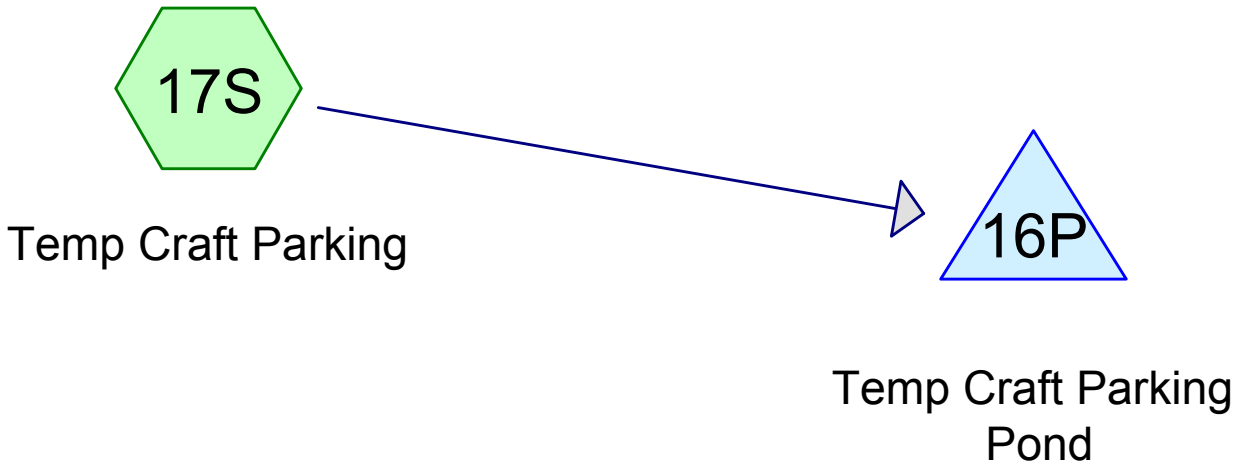
Attachment 2

Basin Sketch


300000.00
300500.00
301000.00
OPEN STORAGE AREA
GATE
TEMPORARY CRAF
PARKING AREA
243,932 sf
(5.60 acre)
TEMPPORARY CRAFT PARKING AREA
TREATMENT POND
Top of Pond = 80
Bottom of Pond = 77.0'
Overflow Weird = 79.5'
Excerpt from Black & Veatch Drawing 190285-DS-1102

Attachment 3

HydroCAD Files



Subcat Reach Pond Link

Routing Diagram for 58.5406.1103 Temp Craft Parking Area Treatment Volume Analysis
Prepared by Black & Veatch, Printed 12/20/2016
HydroCAD® 10.00 s/n 05108 © 2012 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.600	98	Paved parking, HSG A (17S)
5.600	**98**	**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.10 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment17S: Temp Craft Parking Runoff Area=5.600 ac 100.00% Impervious Runoff Depth=4.21"
Flow Length=350' Slope=0.0050 '/' Tc=10.0 min CN=98 Runoff=29.83 cfs 1.967 af

Pond 16P: Temp Craft Parking Pond Peak Elev=78.96' Storage=0.709 af Inflow=29.83 cfs 1.967 af
Primary=0.00 cfs 0.000 af Secondary=4.45 cfs 1.967 af Outflow=4.45 cfs 1.967 af

Total Runoff Area = 5.600 ac Runoff Volume = 1.967 af Average Runoff Depth = 4.21"
0.00% Pervious = 0.000 ac 100.00% Impervious = 5.600 ac

Summary for Subcatchment 17S: Temp Craft Parking

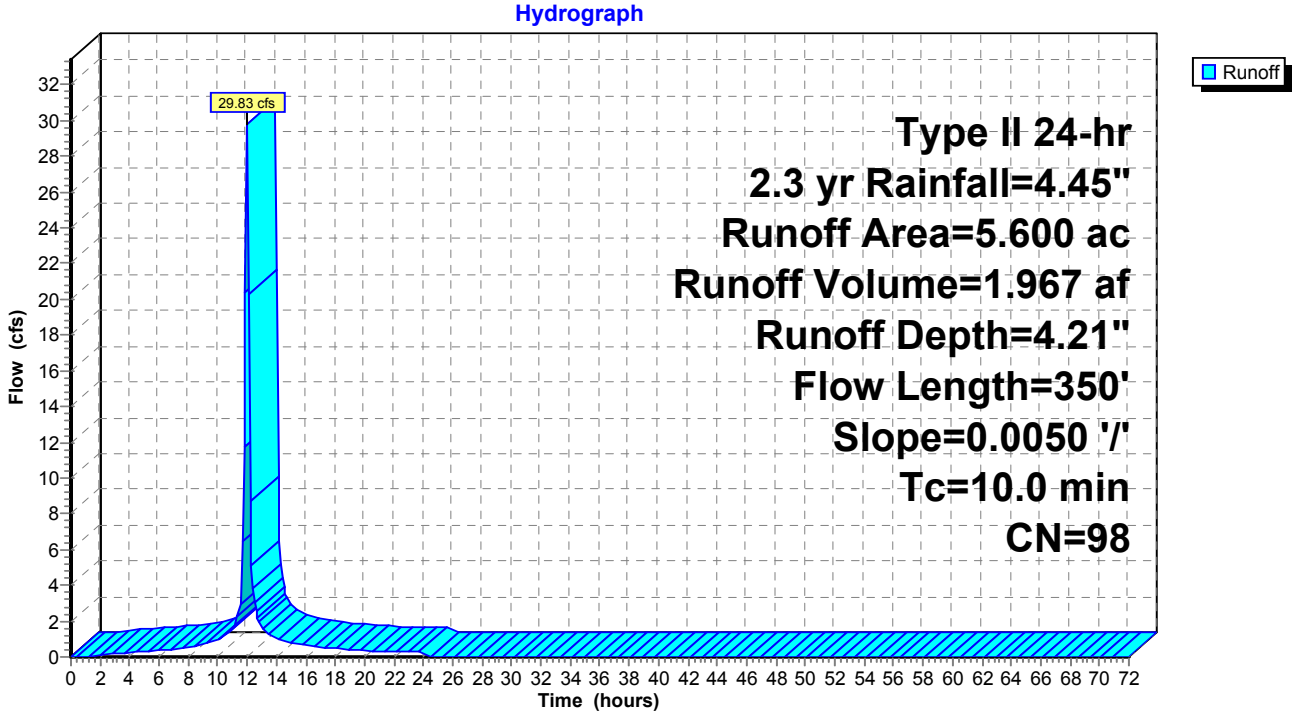
Runoff = 29.83 cfs @ 12.00 hrs, Volume= 1.967 af, Depth= 4.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type II 24-hr 2.3 yr Rainfall=4.45"

Area (ac)	CN	Description
5.600	98	Paved parking, HSG A
5.600		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	350	0.0050	1.44		**Shallow Concentrated Flow, Runoff Across Parking Lot** Paved Kv= 20.3 fps
4.1	350	Total, Increased to minimum Tc = 10.0 min			

Subcatchment 17S: Temp Craft Parking



Hydrograph for Subcatchment 17S: Temp Craft Parking

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.01	0.10
3.00	0.15	0.04	0.18
4.00	0.21	0.08	0.24
5.00	0.28	0.13	0.31
6.00	0.36	0.19	0.37
7.00	0.44	0.26	0.44
8.00	0.53	0.35	0.50
9.00	0.65	0.46	0.71
10.00	0.81	0.60	0.90
11.00	1.05	0.84	1.60
12.00	2.95	2.72	**29.83**
13.00	3.44	3.20	1.73
14.00	3.65	3.42	1.00
15.00	3.80	3.56	0.78
16.00	3.92	3.68	0.60
17.00	4.01	3.78	0.52
18.00	4.10	3.86	0.46
19.00	4.17	3.94	0.40
20.00	4.24	4.00	0.34
21.00	4.29	4.06	0.32
22.00	4.35	4.11	0.30
23.00	4.40	4.16	0.29
24.00	**4.45**	**4.21**	0.28
25.00	4.45	4.21	0.00
26.00	4.45	4.21	0.00
27.00	4.45	4.21	0.00
28.00	4.45	4.21	0.00
29.00	4.45	4.21	0.00
30.00	4.45	4.21	0.00
31.00	4.45	4.21	0.00
32.00	4.45	4.21	0.00
33.00	4.45	4.21	0.00
34.00	4.45	4.21	0.00
35.00	4.45	4.21	0.00
36.00	4.45	4.21	0.00
37.00	4.45	4.21	0.00
38.00	4.45	4.21	0.00
39.00	4.45	4.21	0.00
40.00	4.45	4.21	0.00
41.00	4.45	4.21	0.00
42.00	4.45	4.21	0.00
43.00	4.45	4.21	0.00
44.00	4.45	4.21	0.00
45.00	4.45	4.21	0.00
46.00	4.45	4.21	0.00
47.00	4.45	4.21	0.00
48.00	4.45	4.21	0.00
49.00	4.45	4.21	0.00
50.00	4.45	4.21	0.00
51.00	4.45	4.21	0.00
52.00	4.45	4.21	0.00
53.00	4.45	4.21	0.00
54.00	4.45	4.21	0.00
55.00	4.45	4.21	0.00
56.00	4.45	4.21	0.00
57.00	4.45	4.21	0.00
58.00	4.45	4.21	0.00
59.00	4.45	4.21	0.00
60.00	4.45	4.21	0.00
61.00	4.45	4.21	0.00
62.00	4.45	4.21	0.00
63.00	4.45	4.21	0.00
64.00	4.45	4.21	0.00
65.00	4.45	4.21	0.00
66.00	4.45	4.21	0.00
67.00	4.45	4.21	0.00
68.00	4.45	4.21	0.00
69.00	4.45	4.21	0.00
70.00	4.45	4.21	0.00
71.00	4.45	4.21	0.00
72.00	4.45	4.21	0.00

Summary for Pond 16P: Temp Craft Parking Pond

Inflow Area = 5.600 ac,100.00% Impervious, Inflow Depth = 4.21" for 2.3 yr event
Inflow = 29.83 cfs @ 12.00 hrs, Volume= 1.967 af
Outflow = 4.45 cfs @ 12.35 hrs, Volume= 1.967 af, Atten= 85%, Lag= 21.1 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Secondary = 4.45 cfs @ 12.35 hrs, Volume= 1.967 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Peak Elev= 78.96' @ 12.35 hrs Surf.Area= 0.474 ac Storage= 0.709 af

Plug-Flow detention time= 56.9 min calculated for 1.964 af (100% of inflow)
Center-of-Mass det. time= 56.8 min (806.5 - 749.7)

Volume	Invert	Avail.Storage	Storage Description
#1	77.00'	1.327 af	**19.00'W x 580.00'L x 3.10'H Prismatoid Z=4.0**

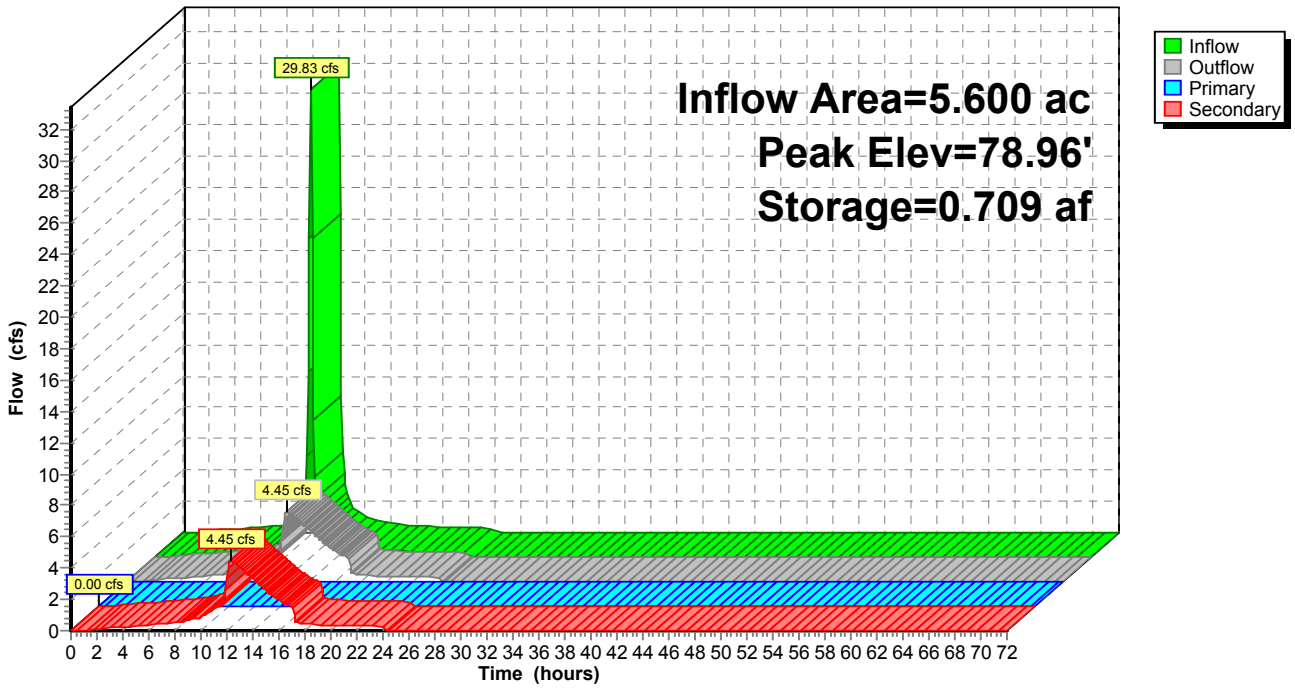
Device	Routing	Invert	Outlet Devices
#1	Secondary	77.00'	**5.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 75.00'
#2	Primary	79.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=77.00' TW=75.00' (Fixed TW Elev= 75.00')
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=4.45 cfs @ 12.35 hrs HW=78.95' (Free Discharge)
└**1=Exfiltration** (Controls 4.45 cfs)

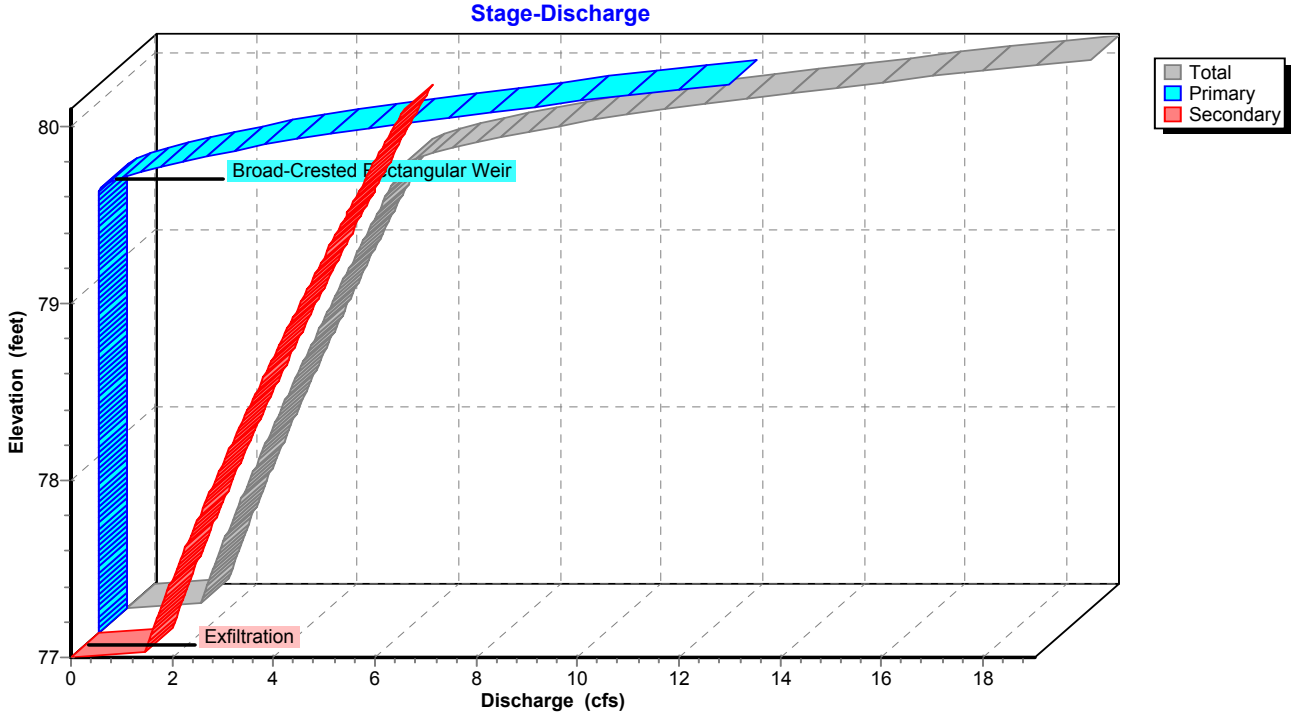
Pond 16P: Temp Craft Parking Pond

Hydrograph

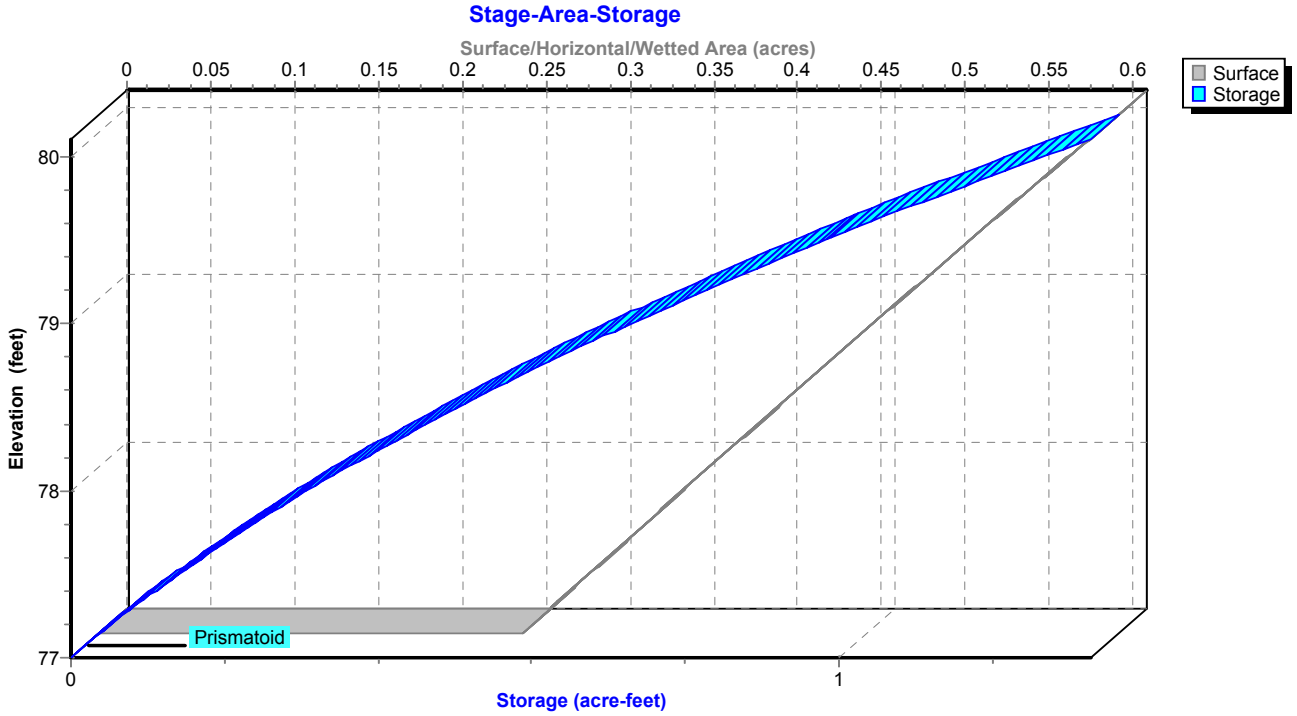


Pond 16P: Temp Craft Parking Pond

Stage-Discharge



Pond 16P: Temp Craft Parking Pond



Hydrograph for Pond 16P: Temp Craft Parking Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	77.00	0.00	**0.00**	0.00
2.00	0.10	0.001	77.00	0.10	0.00	0.10
4.00	0.24	0.001	77.01	0.24	0.00	0.24
6.00	0.37	0.002	77.01	0.37	0.00	0.37
8.00	0.50	0.003	77.01	0.49	0.00	0.49
10.00	0.90	0.005	77.02	0.87	0.00	0.87
12.00	**29.83**	**0.425**	**78.31**	**3.34**	0.00	**3.34**
14.00	1.00	**0.416**	**78.28**	**3.31**	0.00	**3.31**
16.00	0.60	0.116	77.42	1.98	0.00	1.98
18.00	0.46	0.003	77.01	0.47	0.00	0.47
20.00	0.34	0.002	77.01	0.34	0.00	0.34
22.00	0.30	0.002	77.01	0.30	0.00	0.30
24.00	0.28	0.002	77.01	0.28	0.00	0.28
26.00	0.00	0.000	77.00	0.00	0.00	0.00
28.00	0.00	0.000	77.00	0.00	0.00	0.00
30.00	0.00	0.000	77.00	0.00	0.00	0.00
32.00	0.00	0.000	77.00	0.00	0.00	0.00
34.00	0.00	0.000	77.00	0.00	0.00	0.00
36.00	0.00	0.000	77.00	0.00	0.00	0.00
38.00	0.00	0.000	77.00	0.00	0.00	0.00
40.00	0.00	0.000	77.00	0.00	0.00	0.00
42.00	0.00	0.000	77.00	0.00	0.00	0.00
44.00	0.00	0.000	77.00	0.00	0.00	0.00
46.00	0.00	0.000	77.00	0.00	0.00	0.00
48.00	0.00	0.000	77.00	0.00	0.00	0.00
50.00	0.00	0.000	77.00	0.00	0.00	0.00
52.00	0.00	0.000	77.00	0.00	0.00	0.00
54.00	0.00	0.000	77.00	0.00	0.00	0.00
56.00	0.00	0.000	77.00	0.00	0.00	0.00
58.00	0.00	0.000	77.00	0.00	0.00	0.00
60.00	0.00	0.000	77.00	0.00	0.00	0.00
62.00	0.00	0.000	77.00	0.00	0.00	0.00
64.00	0.00	0.000	77.00	0.00	0.00	0.00
66.00	0.00	0.000	77.00	0.00	0.00	0.00
68.00	0.00	0.000	77.00	0.00	0.00	0.00
70.00	0.00	0.000	77.00	0.00	0.00	0.00
72.00	0.00	0.000	77.00	0.00	0.00	0.00

Stage-Discharge for Pond 16P: Temp Craft Parking Pond

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
77.00	0.00	0.00	0.00
77.05	1.47	0.00	1.47
77.10	1.54	0.00	1.54
77.15	1.60	0.00	1.60
77.20	1.67	0.00	1.67
77.25	1.74	0.00	1.74
77.30	1.81	0.00	1.81
77.35	1.88	0.00	1.88
77.40	1.95	0.00	1.95
77.45	2.02	0.00	2.02
77.50	2.09	0.00	2.09
77.55	2.17	0.00	2.17
77.60	2.24	0.00	2.24
77.65	2.31	0.00	2.31
77.70	2.39	0.00	2.39
77.75	2.46	0.00	2.46
77.80	2.54	0.00	2.54
77.85	2.62	0.00	2.62
77.90	2.69	0.00	2.69
77.95	2.77	0.00	2.77
78.00	2.85	0.00	2.85
78.05	2.93	0.00	2.93
78.10	3.01	0.00	3.01
78.15	3.09	0.00	3.09
78.20	3.17	0.00	3.17
78.25	3.25	0.00	3.25
78.30	3.33	0.00	3.33
78.35	3.42	0.00	3.42
78.40	3.50	0.00	3.50
78.45	3.58	0.00	3.58
78.50	3.66	0.00	3.66
78.55	3.75	0.00	3.75
78.60	3.83	0.00	3.83
78.65	3.92	0.00	3.92
78.70	4.00	0.00	4.00
78.75	4.09	0.00	4.09
78.80	4.18	0.00	4.18
78.85	4.26	0.00	4.26
78.90	4.35	0.00	4.35
78.95	4.44	0.00	4.44
79.00	4.53	0.00	4.53
79.05	4.62	0.00	4.62
79.10	4.71	0.00	4.71
79.15	4.80	0.00	4.80
79.20	4.89	0.00	4.89
79.25	4.98	0.00	4.98
79.30	5.07	0.00	5.07
79.35	5.16	0.00	5.16
79.40	5.25	0.00	5.25
79.45	5.34	0.00	5.34
79.50	5.44	0.00	5.44
79.55	5.80	0.27	5.53
79.60	6.39	0.77	5.62
79.65	7.13	1.42	5.72
79.70	7.99	2.18	5.81
79.75	9.00	3.09	5.90
79.80	10.12	4.12	6.00
79.85	11.36	5.27	6.09
79.90	12.72	6.53	6.19
79.95	14.15	7.86	6.29
80.00	15.68	9.30	6.38
80.05	17.31	10.83	6.48
80.10	**19.03**	**12.46**	**6.58**

Stage-Area-Storage for Pond 16P: Temp Craft Parking Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)
77.00	0.253	0.000
77.05	0.258	0.013
77.10	0.264	0.026
77.15	0.270	0.039
77.20	0.275	0.053
77.25	0.281	0.067
77.30	0.286	0.081
77.35	0.292	0.095
77.40	0.297	0.110
77.45	0.303	0.125
77.50	0.308	0.140
77.55	0.314	0.156
77.60	0.320	0.172
77.65	0.325	0.188
77.70	0.331	0.204
77.75	0.336	0.221
77.80	0.342	0.238
77.85	0.348	0.255
77.90	0.353	0.273
77.95	0.359	0.290
78.00	0.364	0.308
78.05	0.370	0.327
78.10	0.376	0.345
78.15	0.381	0.364
78.20	0.387	0.384
78.25	0.393	0.403
78.30	0.398	0.423
78.35	0.404	0.443
78.40	0.410	0.463
78.45	0.416	0.484
78.50	0.421	0.505
78.55	0.427	0.526
78.60	0.433	0.548
78.65	0.438	0.569
78.70	0.444	0.591
78.75	0.450	0.614
78.80	0.456	0.636
78.85	0.462	0.659
78.90	0.467	0.683
78.95	0.473	0.706
79.00	0.479	0.730
79.05	0.485	0.754
79.10	0.490	0.778
79.15	0.496	0.803
79.20	0.502	0.828
79.25	0.508	0.853
79.30	0.514	0.879
79.35	0.520	0.905
79.40	0.525	0.931
79.45	0.531	0.957
79.50	0.537	0.984
79.55	0.543	1.011
79.60	0.549	1.038
79.65	0.555	1.066
79.70	0.561	1.094
79.75	0.567	1.122
79.80	0.573	1.150
79.85	0.578	1.179
79.90	0.584	1.208
79.95	0.590	1.238
80.00	0.596	1.267
80.05	0.602	1.297
80.10	**0.608**	**1.327**

Time span=0.00-72.00 hrs, dt=0.10 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment17S: Temp Craft Parking Runoff Area=5.600 ac 100.00% Impervious Runoff Depth=7.44"
Flow Length=350' Slope=0.0050 '/' Tc=10.0 min CN=98 Runoff=51.73 cfs 3.472 af

Pond 16P: Temp Craft Parking Pond Peak Elev=79.98' Storage=1.256 af Inflow=51.73 cfs 3.472 af
Primary=8.66 cfs 0.292 af Secondary=6.35 cfs 3.180 af Outflow=15.01 cfs 3.472 af

Total Runoff Area = 5.600 ac Runoff Volume = 3.472 af Average Runoff Depth = 7.44"
0.00% Pervious = 0.000 ac 100.00% Impervious = 5.600 ac

Summary for Subcatchment 17S: Temp Craft Parking

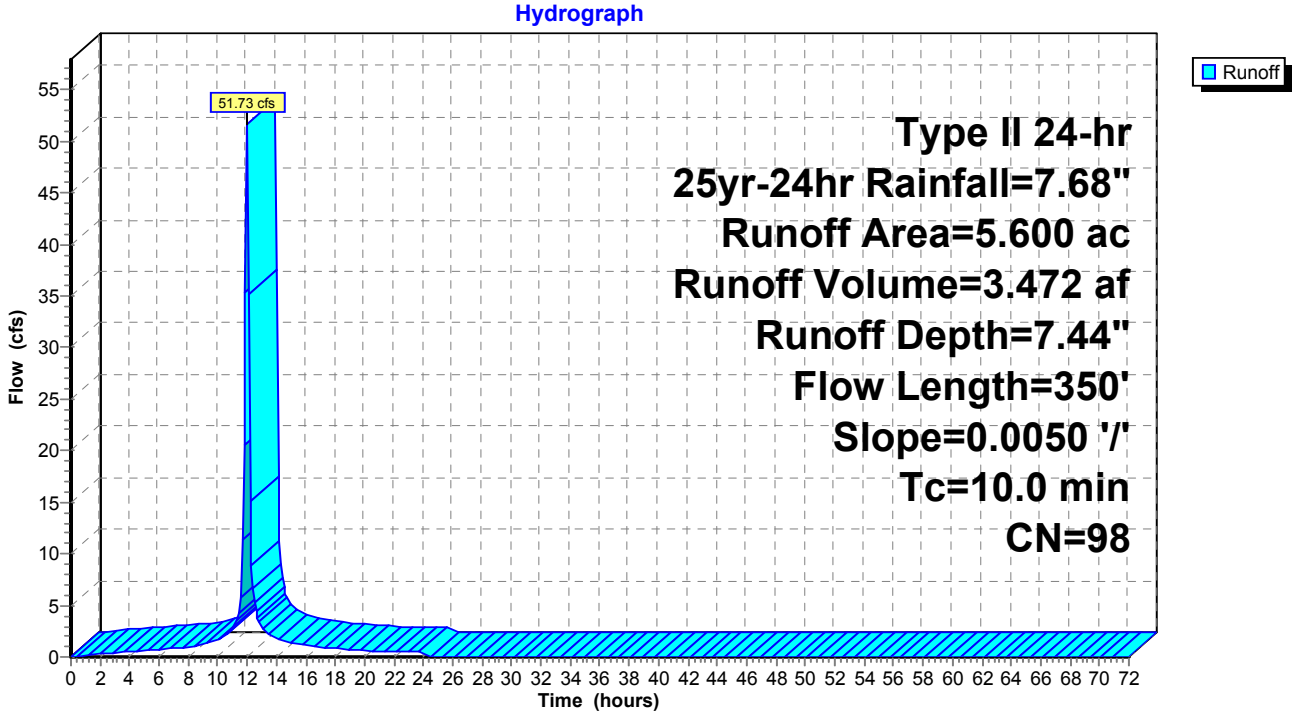
Runoff = 51.73 cfs @ 12.00 hrs, Volume= 3.472 af, Depth= 7.44"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type II 24-hr 25yr-24hr Rainfall=7.68"

Area (ac)	CN	Description
5.600	98	Paved parking, HSG A
5.600		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	350	0.0050	1.44		**Shallow Concentrated Flow, Runoff Across Parking Lot** Paved Kv= 20.3 fps
4.1	350	Total, Increased to minimum Tc = 10.0 min			

Subcatchment 17S: Temp Craft Parking



Hydrograph for Subcatchment 17S: Temp Craft Parking

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.01	0.10
2.00	0.17	0.05	0.30
3.00	0.26	0.12	0.42
4.00	0.37	0.20	0.51
5.00	0.48	0.30	0.61
6.00	0.61	0.42	0.71
7.00	0.76	0.56	0.81
8.00	0.92	0.72	0.91
9.00	1.13	0.92	1.29
10.00	1.39	1.17	1.60
11.00	1.80	1.58	2.82
12.00	5.09	4.85	**51.73**
13.00	5.93	5.69	2.99
14.00	6.30	6.06	1.74
15.00	6.55	6.32	1.35
16.00	6.76	6.52	1.04
17.00	6.93	6.69	0.90
18.00	7.07	6.83	0.80
19.00	7.20	6.96	0.69
20.00	7.31	7.07	0.58
21.00	7.41	7.17	0.55
22.00	7.50	7.26	0.52
23.00	7.59	7.35	0.50
24.00	**7.68**	**7.44**	0.48
25.00	7.68	7.44	0.00
26.00	7.68	7.44	0.00
27.00	7.68	7.44	0.00
28.00	7.68	7.44	0.00
29.00	7.68	7.44	0.00
30.00	7.68	7.44	0.00
31.00	7.68	7.44	0.00
32.00	7.68	7.44	0.00
33.00	7.68	7.44	0.00
34.00	7.68	7.44	0.00
35.00	7.68	7.44	0.00
36.00	7.68	7.44	0.00
37.00	7.68	7.44	0.00
38.00	7.68	7.44	0.00
39.00	7.68	7.44	0.00
40.00	7.68	7.44	0.00
41.00	7.68	7.44	0.00
42.00	7.68	7.44	0.00
43.00	7.68	7.44	0.00
44.00	7.68	7.44	0.00
45.00	7.68	7.44	0.00
46.00	7.68	7.44	0.00
47.00	7.68	7.44	0.00
48.00	7.68	7.44	0.00
49.00	7.68	7.44	0.00
50.00	7.68	7.44	0.00
51.00	7.68	7.44	0.00
52.00	7.68	7.44	0.00
53.00	7.68	7.44	0.00
54.00	7.68	7.44	0.00
55.00	7.68	7.44	0.00
56.00	7.68	7.44	0.00
57.00	7.68	7.44	0.00
58.00	7.68	7.44	0.00
59.00	7.68	7.44	0.00
60.00	7.68	7.44	0.00
61.00	7.68	7.44	0.00
62.00	7.68	7.44	0.00
63.00	7.68	7.44	0.00
64.00	7.68	7.44	0.00
65.00	7.68	7.44	0.00
66.00	7.68	7.44	0.00
67.00	7.68	7.44	0.00
68.00	7.68	7.44	0.00
69.00	7.68	7.44	0.00
70.00	7.68	7.44	0.00
71.00	7.68	7.44	0.00
72.00	7.68	7.44	0.00

Summary for Pond 16P: Temp Craft Parking Pond

Inflow Area = 5.600 ac,100.00% Impervious, Inflow Depth = 7.44" for 25yr-24hr event
Inflow = 51.73 cfs @ 12.00 hrs, Volume= 3.472 af
Outflow = 15.01 cfs @ 12.23 hrs, Volume= 3.472 af, Atten= 71%, Lag= 14.1 min
Primary = 8.66 cfs @ 12.23 hrs, Volume= 0.292 af
Secondary = 6.35 cfs @ 12.24 hrs, Volume= 3.180 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Peak Elev= 79.98' @ 12.24 hrs Surf.Area= 0.594 ac Storage= 1.256 af

Plug-Flow detention time= 67.2 min calculated for 3.472 af (100% of inflow)
Center-of-Mass det. time= 67.1 min (808.3 - 741.2)

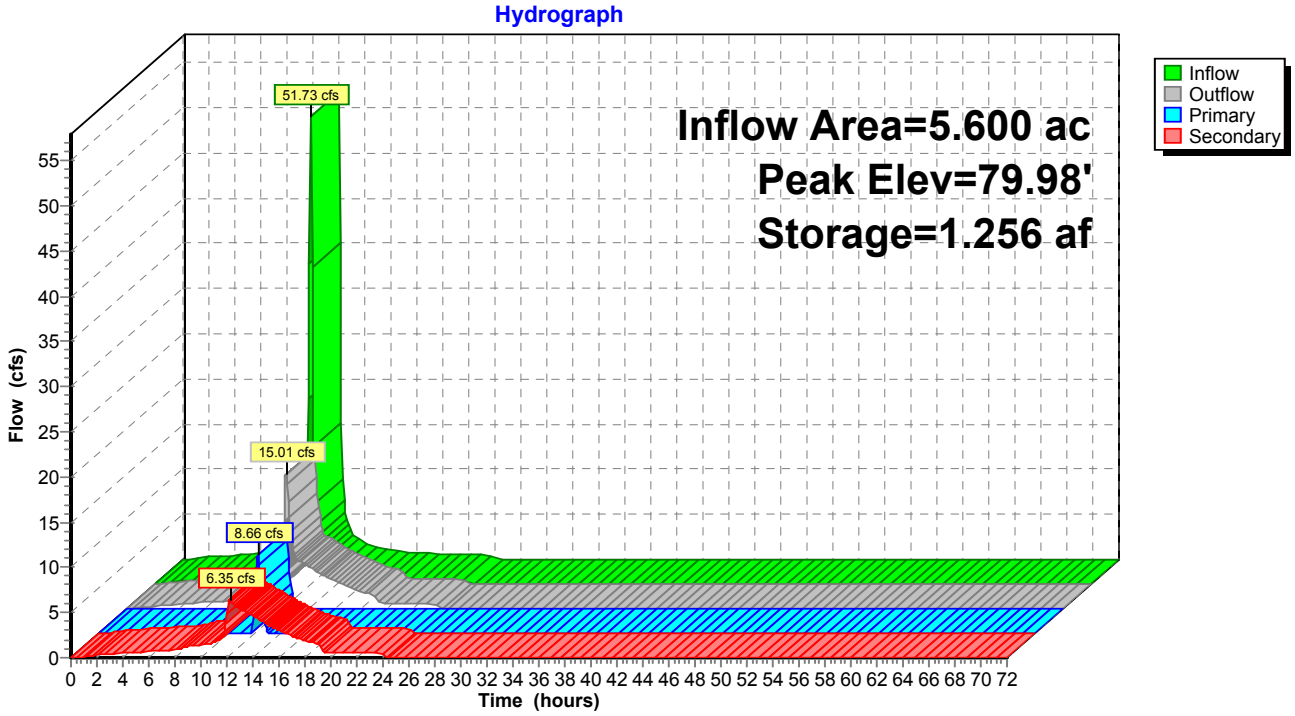
Volume	Invert	Avail.Storage	Storage Description
#1	77.00'	1.327 af	**19.00'W x 580.00'L x 3.10'H Prismatoid Z=4.0**

Device	Routing	Invert	Outlet Devices
#1	Secondary	77.00'	**5.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 75.00'
#2	Primary	79.50'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

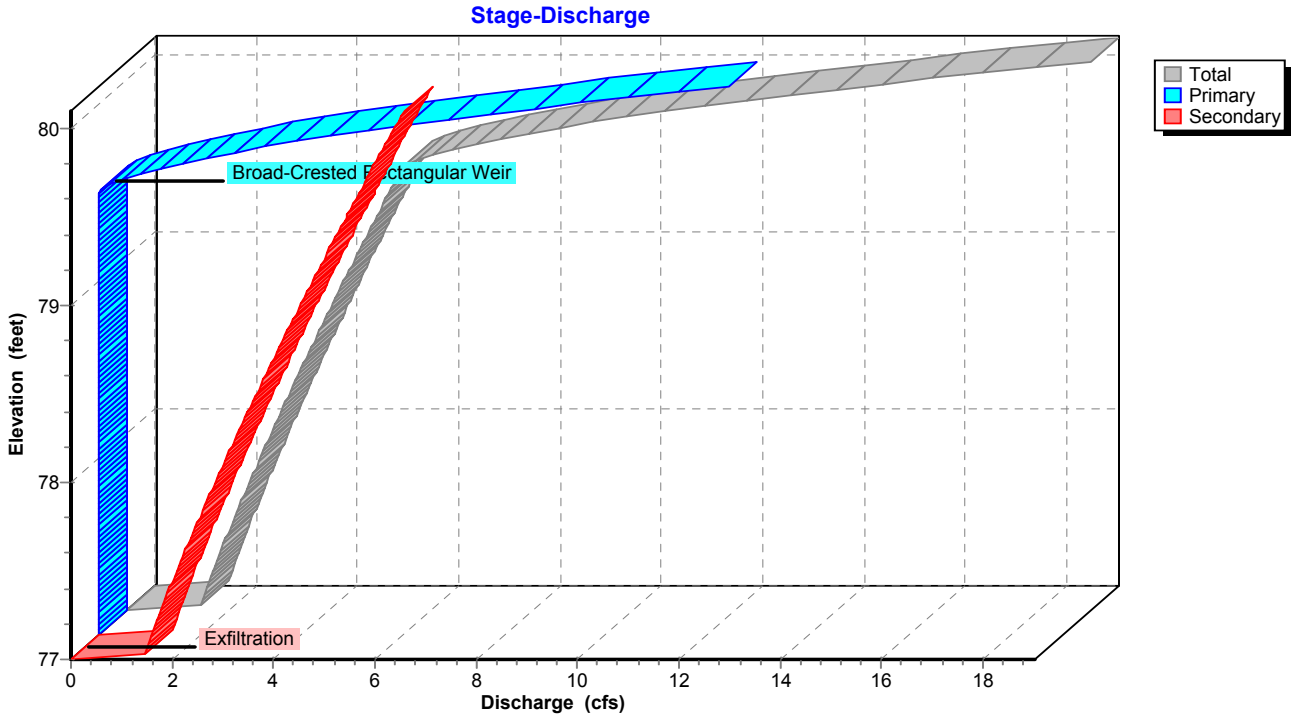
Primary OutFlow Max=8.04 cfs @ 12.23 hrs HW=79.96' TW=75.00' (Fixed TW Elev= 75.00')
└**2=Broad-Crested Rectangular Weir** (Weir Controls 8.04 cfs @ 1.76 fps)

Secondary OutFlow Max=6.30 cfs @ 12.24 hrs HW=79.96' (Free Discharge)
└**1=Exfiltration** (Controls 6.30 cfs)

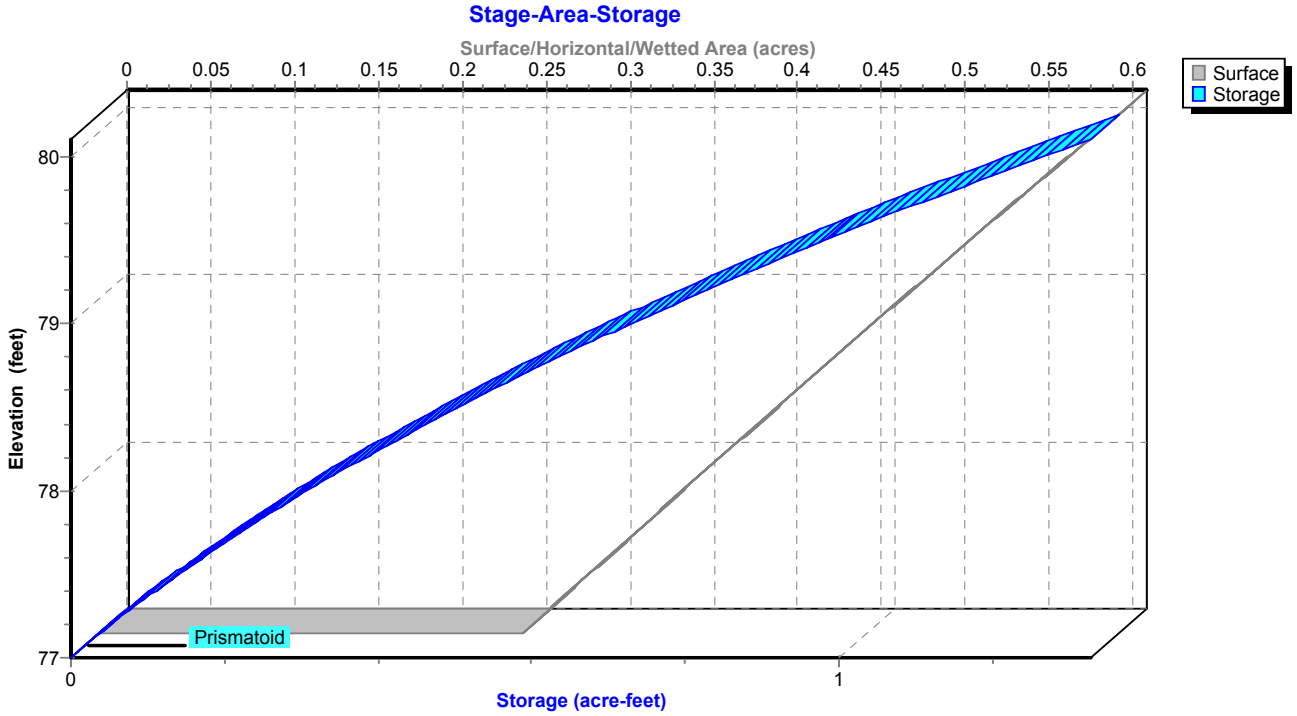
Pond 16P: Temp Craft Parking Pond



Pond 16P: Temp Craft Parking Pond



Pond 16P: Temp Craft Parking Pond



Hydrograph for Pond 16P: Temp Craft Parking Pond

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0.000	77.00	0.00	0.00	0.00
2.00	0.30	0.002	77.01	0.29	0.00	0.29
4.00	0.51	0.003	77.01	0.50	0.00	0.50
6.00	0.71	0.004	77.02	0.70	0.00	0.70
8.00	0.91	0.005	77.02	0.90	0.00	0.90
10.00	1.60	0.009	77.04	1.45	0.00	1.45
12.00	**51.73**	**0.843**	**79.23**	**4.94**	**0.00**	**4.94**
14.00	1.74	**0.767**	**79.08**	**4.66**	**0.00**	**4.66**
16.00	1.04	0.357	78.13	3.06	0.00	3.06
18.00	0.80	0.103	77.38	1.92	0.00	1.92
20.00	0.58	0.003	77.01	0.59	0.00	0.59
22.00	0.52	0.003	77.01	0.52	0.00	0.52
24.00	0.48	0.003	77.01	0.48	0.00	0.48
26.00	0.00	0.000	77.00	0.00	0.00	0.00
28.00	0.00	0.000	77.00	0.00	0.00	0.00
30.00	0.00	0.000	77.00	0.00	0.00	0.00
32.00	0.00	0.000	77.00	0.00	0.00	0.00
34.00	0.00	0.000	77.00	0.00	0.00	0.00
36.00	0.00	0.000	77.00	0.00	0.00	0.00
38.00	0.00	0.000	77.00	0.00	0.00	0.00
40.00	0.00	0.000	77.00	0.00	0.00	0.00
42.00	0.00	0.000	77.00	0.00	0.00	0.00
44.00	0.00	0.000	77.00	0.00	0.00	0.00
46.00	0.00	0.000	77.00	0.00	0.00	0.00
48.00	0.00	0.000	77.00	0.00	0.00	0.00
50.00	0.00	0.000	77.00	0.00	0.00	0.00
52.00	0.00	0.000	77.00	0.00	0.00	0.00
54.00	0.00	0.000	77.00	0.00	0.00	0.00
56.00	0.00	0.000	77.00	0.00	0.00	0.00
58.00	0.00	0.000	77.00	0.00	0.00	0.00
60.00	0.00	0.000	77.00	0.00	0.00	0.00
62.00	0.00	0.000	77.00	0.00	0.00	0.00
64.00	0.00	0.000	77.00	0.00	0.00	0.00
66.00	0.00	0.000	77.00	0.00	0.00	0.00
68.00	0.00	0.000	77.00	0.00	0.00	0.00
70.00	0.00	0.000	77.00	0.00	0.00	0.00
72.00	0.00	0.000	77.00	0.00	0.00	0.00

Stage-Discharge for Pond 16P: Temp Craft Parking Pond

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
77.00	0.00	0.00	0.00
77.05	1.47	0.00	1.47
77.10	1.54	0.00	1.54
77.15	1.60	0.00	1.60
77.20	1.67	0.00	1.67
77.25	1.74	0.00	1.74
77.30	1.81	0.00	1.81
77.35	1.88	0.00	1.88
77.40	1.95	0.00	1.95
77.45	2.02	0.00	2.02
77.50	2.09	0.00	2.09
77.55	2.17	0.00	2.17
77.60	2.24	0.00	2.24
77.65	2.31	0.00	2.31
77.70	2.39	0.00	2.39
77.75	2.46	0.00	2.46
77.80	2.54	0.00	2.54
77.85	2.62	0.00	2.62
77.90	2.69	0.00	2.69
77.95	2.77	0.00	2.77
78.00	2.85	0.00	2.85
78.05	2.93	0.00	2.93
78.10	3.01	0.00	3.01
78.15	3.09	0.00	3.09
78.20	3.17	0.00	3.17
78.25	3.25	0.00	3.25
78.30	3.33	0.00	3.33
78.35	3.42	0.00	3.42
78.40	3.50	0.00	3.50
78.45	3.58	0.00	3.58
78.50	3.66	0.00	3.66
78.55	3.75	0.00	3.75
78.60	3.83	0.00	3.83
78.65	3.92	0.00	3.92
78.70	4.00	0.00	4.00
78.75	4.09	0.00	4.09
78.80	4.18	0.00	4.18
78.85	4.26	0.00	4.26
78.90	4.35	0.00	4.35
78.95	4.44	0.00	4.44
79.00	4.53	0.00	4.53
79.05	4.62	0.00	4.62
79.10	4.71	0.00	4.71
79.15	4.80	0.00	4.80
79.20	4.89	0.00	4.89
79.25	4.98	0.00	4.98
79.30	5.07	0.00	5.07
79.35	5.16	0.00	5.16
79.40	5.25	0.00	5.25
79.45	5.34	0.00	5.34
79.50	5.44	0.00	5.44
79.55	5.80	0.27	5.53
79.60	6.39	0.77	5.62
79.65	7.13	1.42	5.72
79.70	7.99	2.18	5.81
79.75	9.00	3.09	5.90
79.80	10.12	4.12	6.00
79.85	11.36	5.27	6.09
79.90	12.72	6.53	6.19
79.95	14.15	7.86	6.29
80.00	15.68	9.30	6.38
80.05	17.31	10.83	6.48
80.10	**19.03**	**12.46**	**6.58**

Stage-Area-Storage for Pond 16P: Temp Craft Parking Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)
77.00	0.253	0.000
77.05	0.258	0.013
77.10	0.264	0.026
77.15	0.270	0.039
77.20	0.275	0.053
77.25	0.281	0.067
77.30	0.286	0.081
77.35	0.292	0.095
77.40	0.297	0.110
77.45	0.303	0.125
77.50	0.308	0.140
77.55	0.314	0.156
77.60	0.320	0.172
77.65	0.325	0.188
77.70	0.331	0.204
77.75	0.336	0.221
77.80	0.342	0.238
77.85	0.348	0.255
77.90	0.353	0.273
77.95	0.359	0.290
78.00	0.364	0.308
78.05	0.370	0.327
78.10	0.376	0.345
78.15	0.381	0.364
78.20	0.387	0.384
78.25	0.393	0.403
78.30	0.398	0.423
78.35	0.404	0.443
78.40	0.410	0.463
78.45	0.416	0.484
78.50	0.421	0.505
78.55	0.427	0.526
78.60	0.433	0.548
78.65	0.438	0.569
78.70	0.444	0.591
78.75	0.450	0.614
78.80	0.456	0.636
78.85	0.462	0.659
78.90	0.467	0.683
78.95	0.473	0.706
79.00	0.479	0.730
79.05	0.485	0.754
79.10	0.490	0.778
79.15	0.496	0.803
79.20	0.502	0.828
79.25	0.508	0.853
79.30	0.514	0.879
79.35	0.520	0.905
79.40	0.525	0.931
79.45	0.531	0.957
79.50	0.537	0.984
79.55	0.543	1.011
79.60	0.549	1.038
79.65	0.555	1.066
79.70	0.561	1.094
79.75	0.567	1.122
79.80	0.573	1.150
79.85	0.578	1.179
79.90	0.584	1.208
79.95	0.590	1.238
80.00	0.596	1.267
80.05	0.602	1.297
80.10	**0.608**	**1.327**