NVEnergy

Plan

Periodic (5 Year) Review and Revision, Run-On and Runoff Control System Plan, CCR Landfill, Reid Gardner Station

PREPARED FOR:	File
PREPARED BY:	NV Energy, Jacobs
DATE:	October 15, 2021

1.0 INTRODUCTION

This plan documents the first five year (quinquennial) periodic review and revision of the Run-on and Runoff Control System Plan (Plan) (CH2M HILL, Inc., 2016a) for the existing coal combustion residuals (CCR) landfill (landfill) at the Reid Gardner Station (Station) as required by the U.S. Environmental Protection Agency's CCR Rule. This periodic revision concludes that the existing landfill run-on and runoff controls continue to meet the CCR Rule requirements.

1.1 PURPOSE AND SCOPE

In accordance with §257.81(c)(4), Plan reviews and updates must be completed at 5-year intervals. This periodic review and revision of the initial CCR Landfill Run-On and Runoff Control System Plan included a professional engineer review of the Plan, a review of available documentation and inspection reports for changes in site conditions from those in the Plan, and an assessment to determine whether the existing run-on and runoff controls are adequate for current conditions.

1.2 SITE INFORMATION

The Station is located 50 miles northeast of Las Vegas, within the Moapa Valley and was formerly a coal-fired electric power generation facility that produced approximately 557 megawatts (MW) of power from four generating units. Units 1 through 3 were retired in 2014 and Unit 4 was retired in 2017. Station demolition was completed in 2020.

The CCR landfill is a partially lined monofill landfill that has waste placed over approximately 111 acres. The waste fill currently extends 40 or more feet above the adjacent ground surface and generally has 3:1 (horizontal to vertical) or flatter side slopes. The landfill's surface is generally graded to drain stormwater runoff to basins located at the perimeter of the landfill. The landfill consists of two different cells: a lateral expansion called the South Lateral Landfill Expansion (SLLE) and the main part of the landfill. The SLLE has a bottom liner system consisting of a single layer of high-density polyethylene (HDPE) geomembrane and some sections of the main landfill include lined areas as well.

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2.0 REGULATORY OVERVIEW

The CCR Rule was published in the Federal Register on April 17, 2015, and became effective on October 19, 2015. The CCR Rule regulates the disposal of CCR as solid waste in landfills, surface impoundments, and lateral expansions under Subtitle D of the Resource Conservation and Recovery Act. The CCR Rule sets forth minimum criteria for the requirements for run-on and runoff controls of existing CCR landfills in §257.81.

As required by §257.81(a)(1), the CCR landfill run-on control system must prevent flow onto the active portion of the landfill from a 25-year, 24-hour storm. The active portion of the landfill is defined in §257.53 as "that part of the [landfill] that has received or is receiving CCR or non-CCR waste and that has not completed closure in accordance with §257.102." The CCR Rule also requires the run-off control system be capable of collecting and controlling the volume of water produced by a 25-year, 24-hour from the active portion of the landfill (§257.81(a)(2)). Additionally, as required by §257.81(b), run-off from the active portion of the CCR landfill must be handled in accordance with the surface water requirements in §257.3-3. Generally speaking, this means that the following actions are prohibited: 1) discharge of fill or dredge material to waters of the United States, 2) discharge of pollutants that violate a National Pollutant Discharge Elimination System permit, and 3) causing non-point source pollution to waters of the United States.

Periodic Plan assessments and updates are required to be completed and placed in the operating record every 5 years from the date that the Plan was placed into the operating record (§257.81(c)(4) and §257.105(g)(3)). The Plan was certified by a professional engineer and placed in the operating record on October 17, 2016. Accordingly, this plan must be placed in the operating record by October 17, 2021, and within 30 days of placing in the operating record, the required notifications to the State Director (§257.106(d) and §257.106(g)(3)) and placement of the updated plan on the publicly accessible internet site must also be completed (§257.107(d) and §257.107(g)(3)). The initial and periodic run-on and runoff plans must be certified by a qualified professional engineer (§257.81(c)(5).

3.0 AVAILABLE INFORMATION

The information available regarding the status and condition of the existing CCR landfill was reviewed. Information from the operating record and other sources reviewed as part of this five year assessment included the following items:

- The Plan and associated calculations and worksheets.
- Annual inspection reports for 2016 through 2020 (CH2M HILL, Inc. 2016b, 2017, 2018, 2019, 2020).
- Topographic data from 2016 (Attachment 1) and updated through 2020 (Attachment 2) described in the following sections.

4.0 INITIAL RUN-ON AND RUNOFF CONTROL PLAN (2016)

The Plan was intended to "prevent flow onto the active portion" of the landfill, and to "collect and control" the stormwater runoff produced by the "active portion" of the landfill. As required by CCR Rule, the design storm event for the initial run-on and runoff control plan was the 25-year, 24-hour storm.

Run-On: The landfill is generally higher than the adjacent ground surface around its entire perimeter. Therefore, run-on potential does not exist for the landfill, except for the landfill's

southern boundary where the SLLE perimeter road is lower because it has been cut into the terrain approximately 5 feet. A roadside stormwater ditch has been provided to capture the cut slope's minor run-on flows and convey it around the SLLE with no adverse impact.

Runoff: A series of diversion berms, ditches, culverts/pipes, "Arizona Crossings" (sagged roadways), and stormwater basins (SWBs) are constructed within and around the landfill to control runoff. The stormwater basins include the lined contact water pond system (CWPS), which was built with the SLLE to control runoff from the landfill perimeter, and leachate from lined portions of the landfill. These features were used to collect, route and eliminate discharge from the landfill downstream in accordance with §257.81(b) and §257.3-3.

5.0 CHANGES IN CONDITIONS FROM THE PLAN

Based on review of updated topography obtained in 2020 following the placement of Station demolition construction debris in the landfill, the most significant change in the landfill formation occurred in the center of the mass. Fill has been placed in a manner that results in additional runoff to the northern boundary of the landfill. No fill was placed in the southeastern portion of the landfill, and that has created a collection area for runoff from the slope and center positioned fill and a route to the control storage basin. Additionally, the direction subbasin SUB8 drains is currently southwesterly, as opposed to the Plan, which had shown it draining southeasterly. Attachment 3 provides a map showing the current subbasins, drainage patterns, and drainage controls, (including the receiving storage basins, referred to as combination points in the attached drawings and calculations if they receive flow from multiple subbasins) overlain on the updated topography. Although topography has changed in the landfill interior, the runoff control measures identified in 2016 to collect and route stormwater at its perimeter prior to discharge continue to function in compliance with the CCR Rule. Additionally, current site conditions have not changed the run-on impacts from the Plan. Therefore, no new recommendations are made to control run-on at the site.

6.0 CHANGES IN FLOW CALCULATIONS FROM THE PLAN

Due to the formation changes, a revised hydrologic analysis was performed for the runoff potential of the landfill to estimate peak flow rates and runoff volumes required to be controlled. The revised hydrologic analysis used the U.S. Army Corps of Engineers Hydrologic Engineering Center (HEC-1) software and Soil Conservation Service (SCS) Unit Hydrograph method runoff computations. Inputs for HEC-1 and SCS computation used the Natural Resources Conservation Service Type II rainfall distribution for a 24-hour storm event, and the same hydrologic parameters used in the Clark County standard form 4 (SF4) calculations in the Plan were also used for this revised analysis. One adjustment was made to the hydrologic parameters, revising the curve number ("CN" on the SF4 column headers) from 86 to 83. The SF4 calculation summary and the HEC-1 calculations are presented in Attachment 4. The results of 2021 and 2016 calculations are summarized in Table 6.1.

Table 6.1. Summary of Subbasin Changes – 2021 vs. 2016		
Subbasin ID	**2021 Current Topography Q_{25} (cfs)**	**2016 Plan Q_{25} (cfs)**
SUB1	16	22
SUB2	6	7
SUB2A	9	12
SUB2B	5	6
SUB2C	4	5
SUB3	4	6
SUB3A	2	3
SUB4	15	9
SUB5	3	4
SUB5A	2	2
SUB6	10	13
SUB7	5	7
SUB8	3	5
SUB9	4	5
SUB10	3	4
SUB11	7	8
SUB12	2	2
SUB12A	3	4
SLLE	14	19

Notes:

cfs = cubic feet per second
ID = identifier
Q_{25} = Discharge from design flood (24- hour, 25-year)
SUB = subbasin drainage basin

The total runoff to the combination points on the site have also been compared to the 2016 Plan and summarized in Table 6.2.

Table 6.2. Summary of Combination Point Changes – 2021 vs. 2016		
CP ID	**2021 Current Topography Q_{25} (cfs)**	**2016 Plan Q_{25} (cfs)**
CWPS1	20	32
CWPS	32	49
SWB1	21	27
SWB4	17	12
SWB5	15	19
SWB8	10	8

Notes:

CP = Combination Points
ID = identifier
Q_{25} = Discharge from design flood (24- hour, 25-year)
CWPS = contact water pond system
SWB = stormwater basin

7.0 EVALUATION OF RUN-ON AND RUNOFF CONTROLS

As stated in Section 5.0 of this plan, the run-on controls remain in their 2016 state and there are no new impacts by offsite flow anticipated based on current topography. However, due to formation changes within the landfill, an evaluation was done on the existing runoff control facilities within the limits of the changed subbasins.

Ditches, Berms, and "Arizona Crossing": Utilizing the current topography, normal depth hydraulic calculations were used to determine the capacities of the subject routing facilities. Based on capacity calculations and the flow rates realized by the tributary subbasin(s), no changes to ditches and berms are necessary and they function in accordance with CCR Rule landfill requirements to convey the storm flows to the applicable stormwater basins. The hydraulic calculations showing maximum capacity of each feature have been included in Attachment 5, with the applicable name of each facility shown on the subbasin map, included in Attachment 3. Attachment 5 presents individual worksheets for each runoff conveyance or control feature described below. Each worksheet indicates the capacity of the feature and in all cases the capacity was greater than the calculated runoff discharge. For example, the first calculation sheet, for the CWPS shows a capacity of 75 cfs compared to the design flood discharge in Table 6.2 above of 32 cfs. Note for the control features that are intended to act as positive drainage to the correct stormwater basin, only an inspection of current topography was performed to determine the applicable feature remained in a similar state as proposed in the Plan.

Culverts: The current topography around the culverts shows similar ground elevations to those presented in the Plan. The flow rate to the 24-inch reinforced concrete pipes (RCP) culvert into Stormwater Basin 5 has not increased from the 2016 Plan; therefore, no change is needed to this facility. The current peak flow rate to the 18-inch RCP culvert into Stormwater Basin 8 has slightly increased to 10 cfs from 8 cfs; however, the culvert remains properly sized to accept/convey flow per the design intent and no change is required to this facility. The updated HY-8 culvert capacity calculation for the 18-inch RCP culvert into Stormwater Basin 8 has been included in Attachment 5.

Stormwater Collection Basins: The current topography has been studied in the locations of the stormwater basins to ensure adequate capacity of storage volume is provided to meet requirements of the CCR Rule. All the stormwater basins remain in their previous configuration to provide the required volume, except for SWB4. To provide the required capacity of SWB4, the assumed footprint of the storage area was increased from the 2016 Plan; the existing berm that straddles the northern boundary at this location provides the required volume. Refer to the footprint exhibit of SWB4 volume in the last page of Attachment 5 for an illustration of the updated catchment area provided by the current topography. Note, no physical modification to the basin was required, the change was only to recognize the larger basin volume as it already exists. Table 7.1 represents the required volume routed to each of the stormwater basins, compared to the actual volume provided in the current topography. The basins do not require any expansion or adjustment based on current topography.

Table 7.1. Summary of Required Volumes in Stormwater Basins

Stormwater Basin ID *(Relevant HEC-1 ID)*	2021 HEC-1 Volume (ac-ft)	2021 HEC-1 Volume (yd^3)	Provided Topography Volume (yd^3)	Additional Volume Required (yd^3)
CWPS *(CWPS)*	2.59	4,178	5,440	0
SWB1 *(SWB1)*	1.69	2,727	2,818	0
SWB3 *(SUB3A)*	0.16	258	366	0
SWB4 *(SWB4)*	1.52	2,452	4,858	0
SWB5 *(SWB5)*	1.15	1,855	2,743	0
SWB6 *(SUB12)*	0.12	194	223	0
SWB7 *(SUB12A)*	0.20	323	428	0
SWB8 *(SWB8)*	0.60	968	980	0

Note:
ac-ft = acre-feet
yd^3 = cubic yard

8.0 CONCLUSION

Based on review of the current topography, run-on continues to have no impact to the landfill. A reanalysis of the subbasins within the active landfill area shows that flow rates have changed since the Plan was submitted, but the hydraulic calculations of the runoff control facilities show there is adequate capacity for the re-division of storm flows within the area in the ditches, berms, and culverts. Additionally, the stormwater basins that receive additional runoff (when compared to the Plan), have been determined to provide adequate storage capacity in their vicinity to meet criteria required for a CCR landfill.

It is recommended that NV Energy continue its annual inspections, and maintenance of the landfill area, including the existing stormwater control features, to maintain compliance with runoff control requirements.

9.0 CERTIFICATION

This quinquennial assessment of the run-on and runoff control plan was conducted in accordance with the requirements of §257.8 of the CCR Rule.

Stephen M. Jones, P.E. Digitally signed by Stephen M. Jones, P.E.
DN: C=US, E=steve.jones1@jacobs.com, O=Jacobs, CN="Stephen M. Jones, P.E."
Date: 2021.10.15 10:02:46-07'00'

----seal----

Jacobs
1301 N. Green Valley Parkway, Suite 200
Henderson, NV 89074
702-369-6175

The originally certified document inadvertently included Adobe comment call-outs on three map attachments. After the certification above, the call-outs were removed. No other changes were made, as certified below.

Stephen M. Jones, P.E. Digitally signed by Stephen M. Jones, P.E.
DN: C=US, E=steve.jones1@jacobs.com, O=Jacobs, CN="Stephen M. Jones, P.E."
Date: 2021.10.28 10:24:15-07'00'

10.0 REFERENCES

CH2M HILL, Inc. 2016a. *Run-on and Runoff Control System Plan, Coal Combustion Residuals Landfill, Reid Gardner Generating Station*. October 17.

CH2M HILL, Inc. 2016b. *Annual Coal Combustion Residuals Landfill Inspection, Reid Gardner Generating Station*. December 14.

CH2M HILL, Inc. 2017. *Annual Coal Combustion Residuals Landfill Inspection, Reid Gardner Generating Station*. December 11.

CH2M HILL, Inc. 2018. *Annual Coal Combustion Residuals Landfill Inspection, Reid Gardner Generating Station*. November 20.

CH2M HILL, Inc. 2019. *Annual Coal Combustion Residuals Landfill Inspection, Reid Gardner Generating Station*. November 21.

CH2M HILL, Inc. 2020. *Annual Coal Combustion Residuals Landfill Inspection, Reid Gardner Generating Station*. December 1.

11.0 ATTACHMENT LIST

1. Referenced/Annotated 2016 As-Built Stormwater Features Survey and Design Drawings
2. Current Site Topography
3. 2021 Updated Landfill Runoff Subbasin Map
4. 2021 Updated Landfill Runoff Hydrology Calculations
5. Updated Runoff AND Run-On Hydraulic Calculations

Attachment 1
Referenced/Annotated 2016 As-Built Stormwater Features Survey and Design Plans

As-Built Features

N

W E

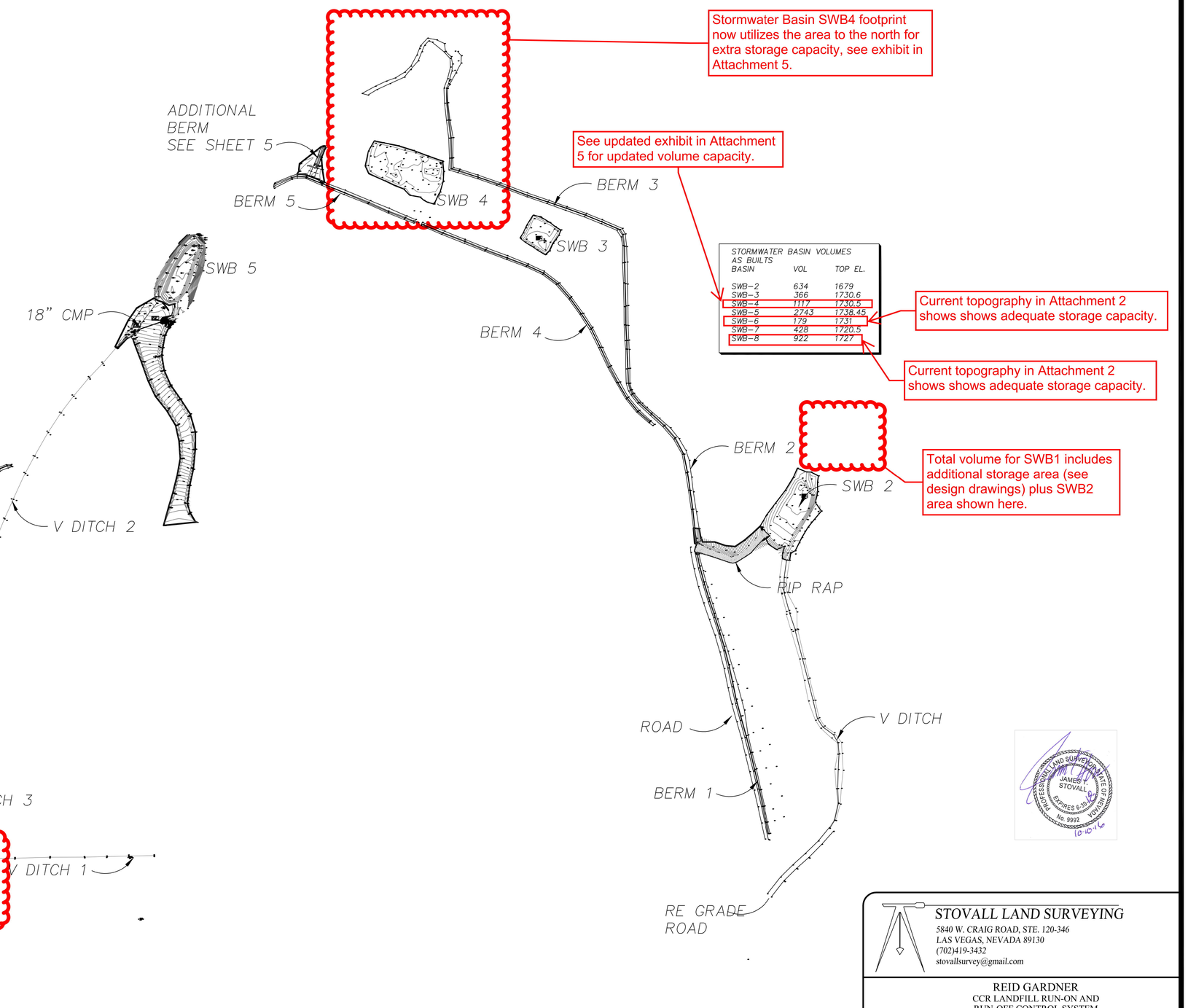
S

GRAPHIC SCALE

0 0 0 0 0

(IN FEET)

1 INCH = 150 FEET



Stormwater Basin SWB4 footprint now utilizes the area to the north for extra storage capacity, see exhibit in Attachment 5.

See updated exhibit in Attachment 5 for updated volume capacity.

STORMWATER BASIN VOLUMES AS BUILTS

BASIN	VOL	TOP EL.
SWB-2	634	1679
SWB-3	366	1730.6
SWB-4	1117	1730.5
SWB-5	2743	1738.45
SWB-6	179	1731
SWB-7	428	1720.5
SWB-8	922	1727

Current topography in Attachment 2 shows shows adequate storage capacity.

Current topography in Attachment 2 shows shows adequate storage capacity.

Total volume for SWB1 includes additional storage area (see design drawings) plus SWB2 area shown here.

Current topography in Attachment 2 shows enough storage volume provided by this SWB6.

Current topography in Attachment 2 shows enough storage volume provided by this SWB8.

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CCR LANDFILL RUN-ON AND RUN-OFF CONTROL SYSTEM
AS-BUILTS

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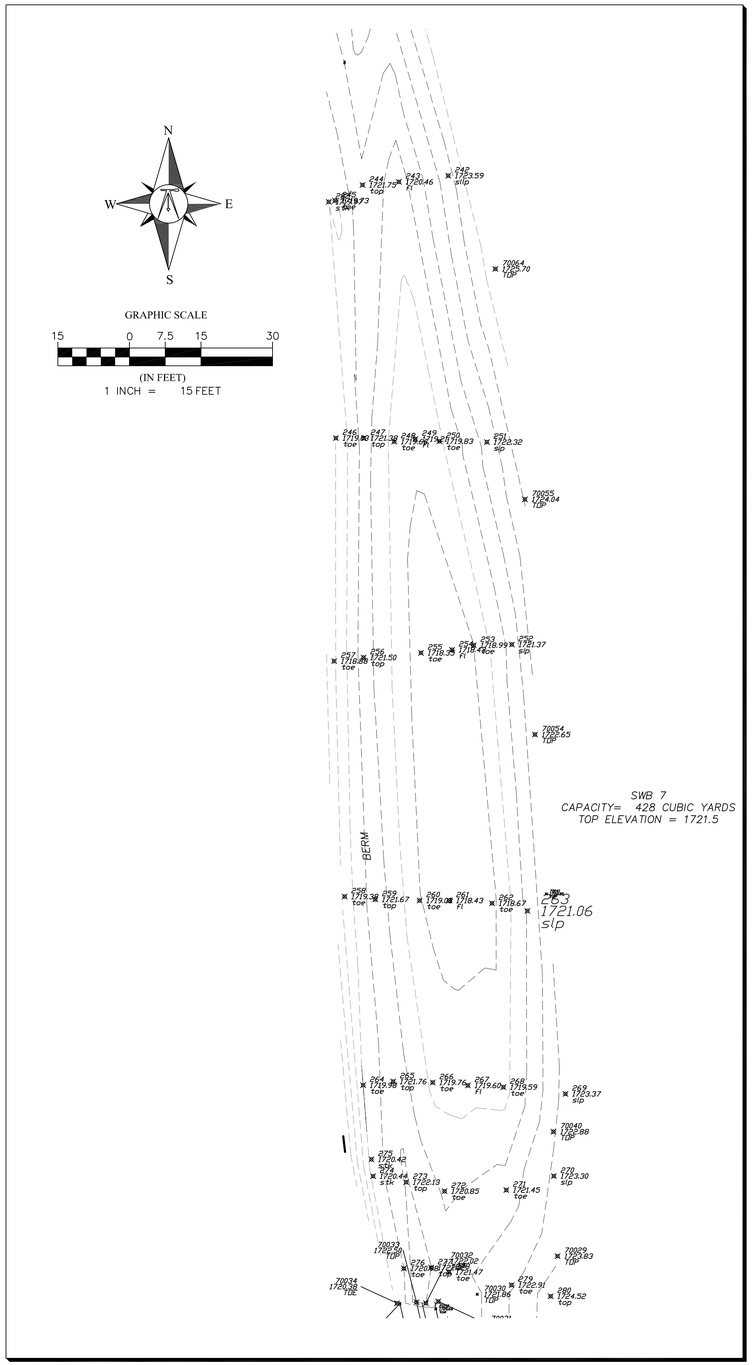

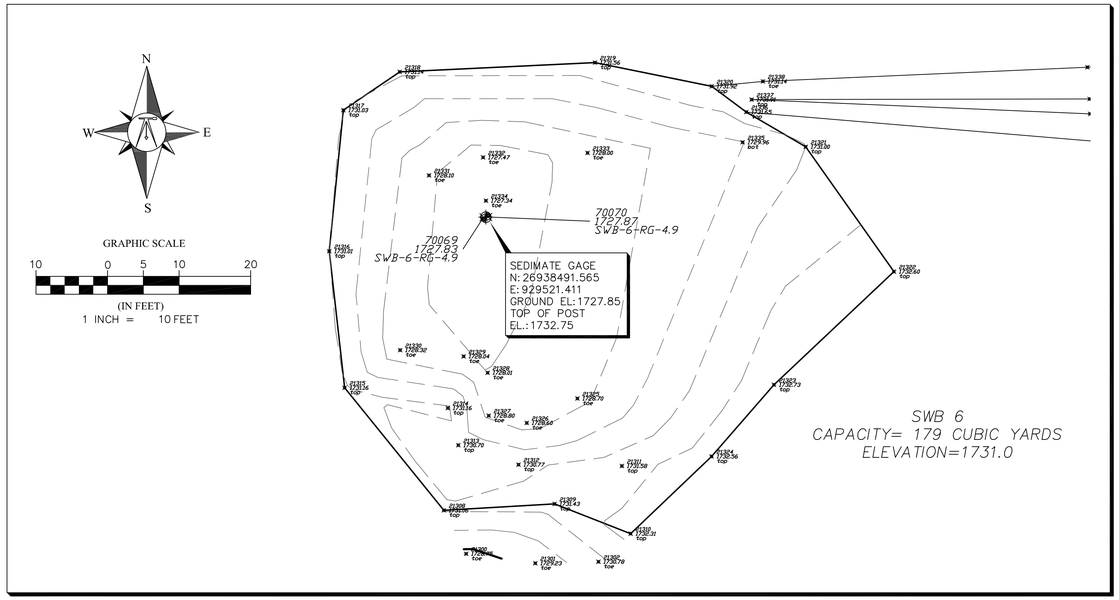

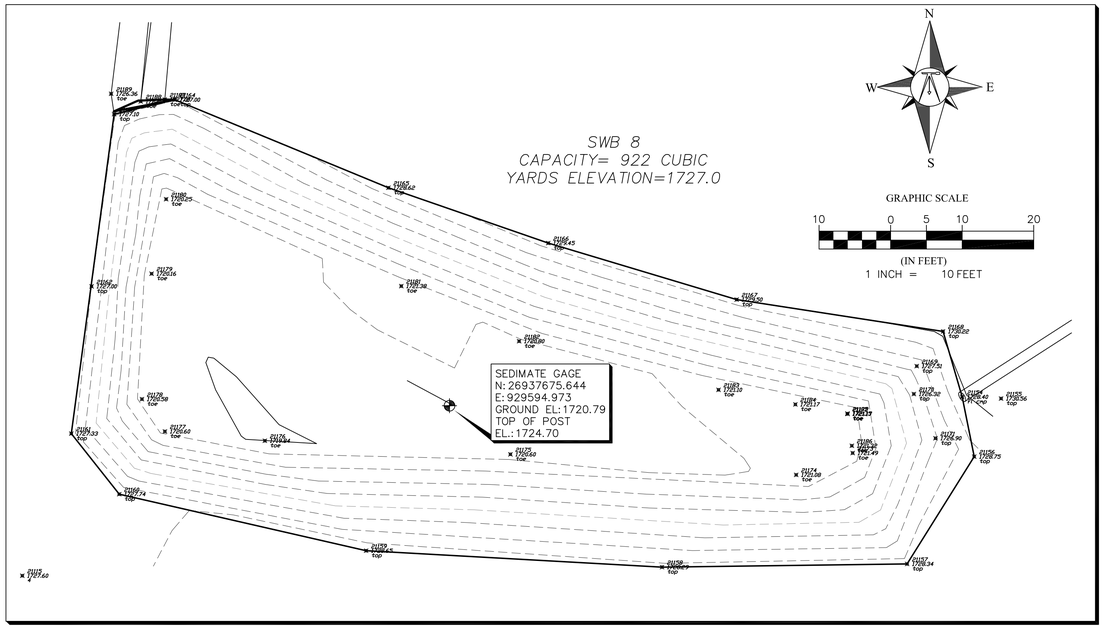

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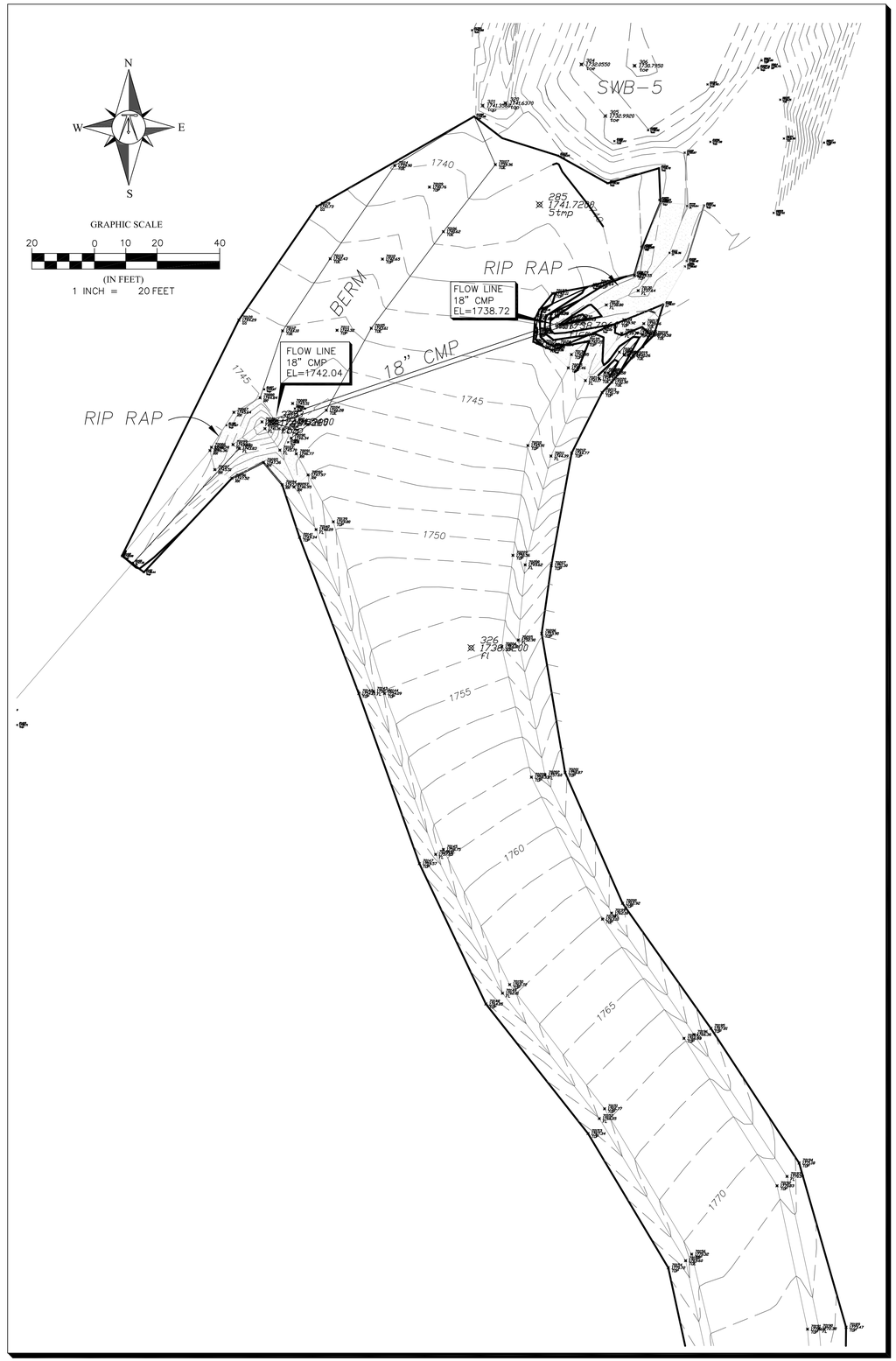

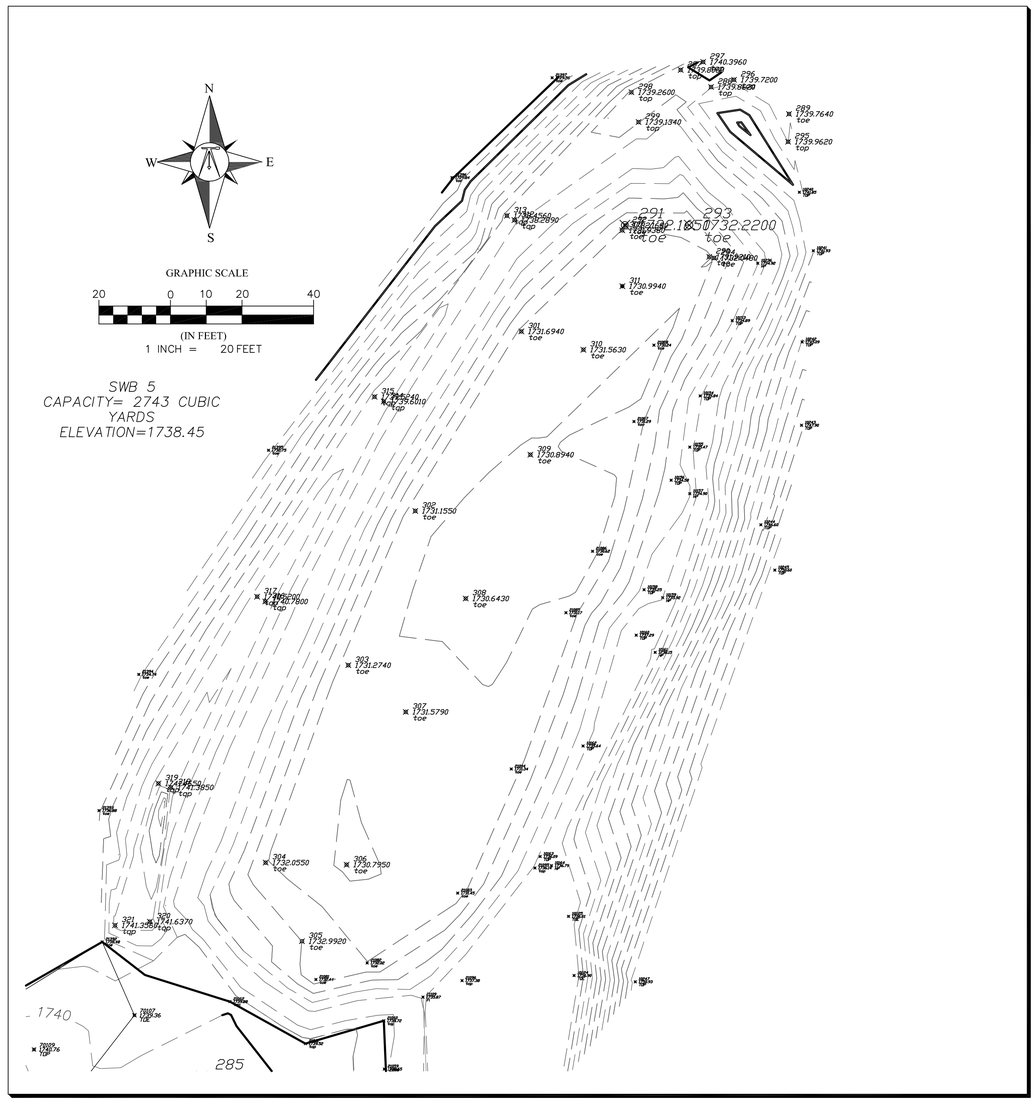

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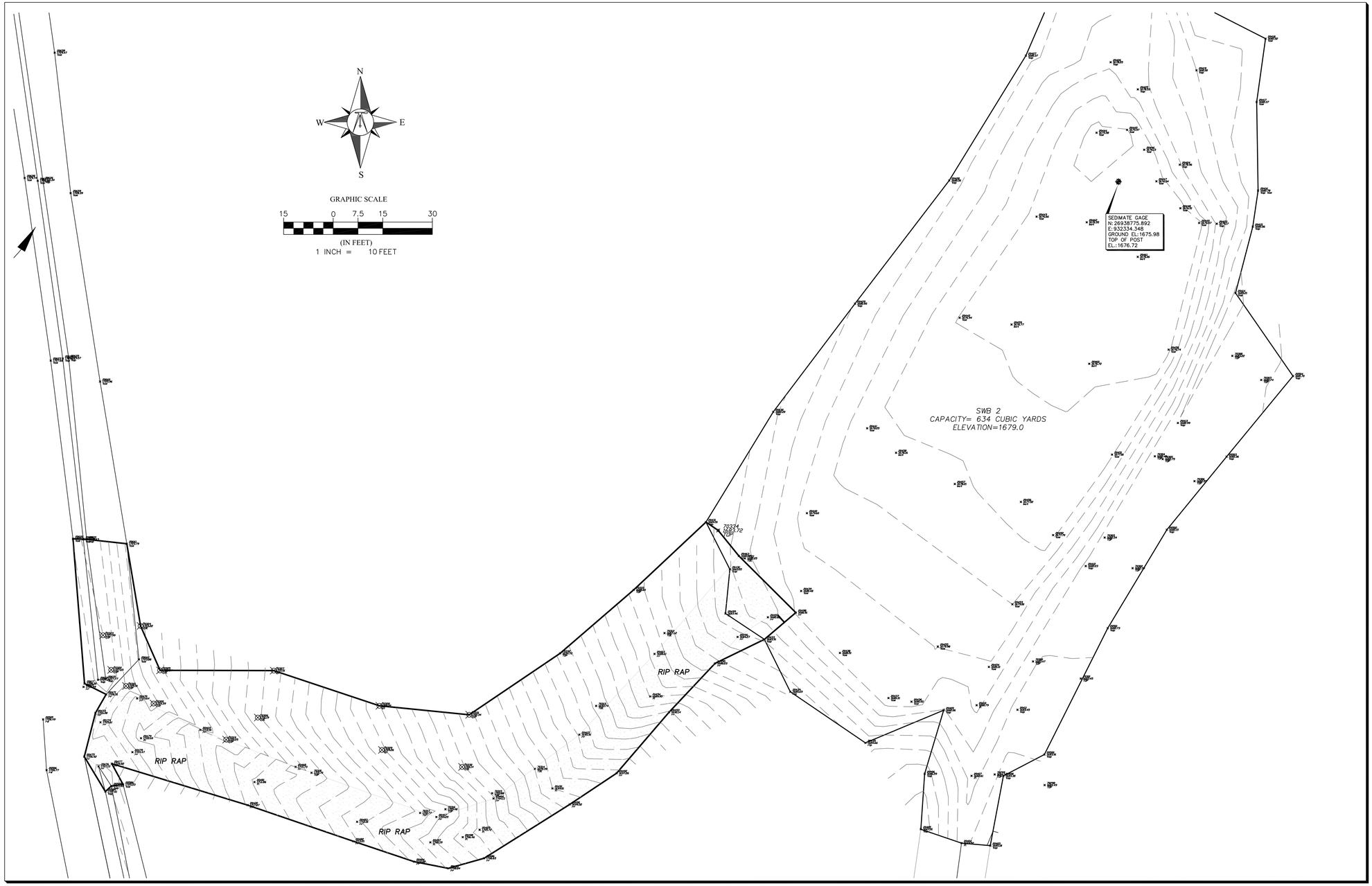

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SWB 4
CAPACITY= 1842 CUBIC YARDS
ELEVATION=1730.50

N
W E
S

GRAPHIC SCALE
15 0 7.5 15 30
(IN FEET)
1 INCH = 10 FEET

SWB 3
CAPACITY= 366 CUBIC YARDS
ELEVATION=1730.60

N
W E
S

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FEET

SEDIMATE GAGE
N: 26939497.151
E: 931586.039
GROUND EL: 1727.85
TOP OF POST
EL.: 1732.14

70335
1727.85
SWG3-SG

BERM

N
W E
S

GRAPHIC SCALE
15 0 7.5 15 30
(IN FEET)
1 INCH = 10 FEET

V DITCH 1 AND 3

18" CMP

BERM

N
W E
S

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 INCH = 10 FEET

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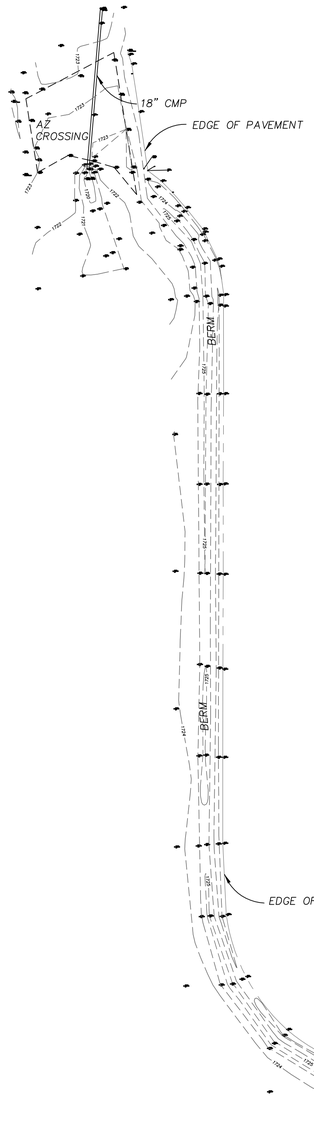

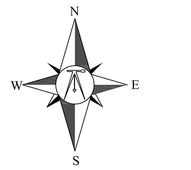

GRAPHIC SCALE

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(IN FEET)

1 INCH = 50 FEET

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DATE:	10/10/2016	CHECKED BY:	JTS		

Design Drawings

NVEnergy

MOAPA, NEVADA

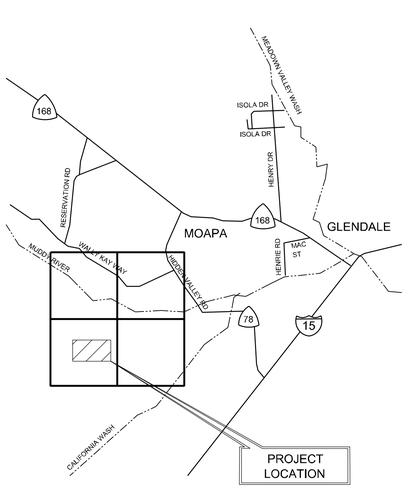
REID GARDNER STATION

DRAWINGS FOR CONSTRUCTION OF

CCR LANDFILL RUN-ON AND RUN-OFF CONTROL SYSTEM

WO# 9837520901

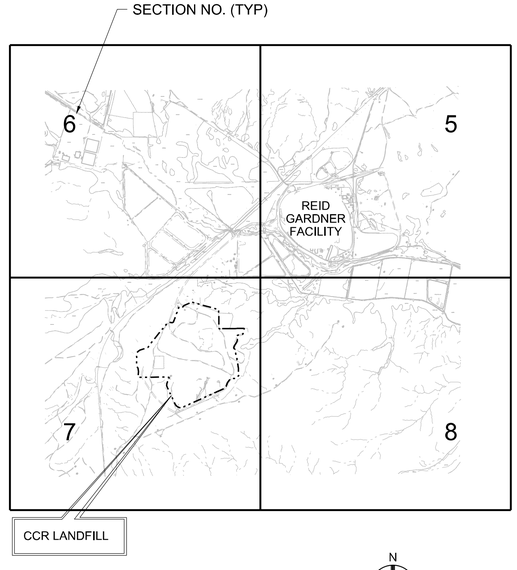
MARCH 2016



VICINITY MAP N

DRAWING INDEX

SHEET 1 OF 9	G-1	COVER AND INDEX SHEET
SHEET 2 OF 9	G-2	GENERAL NOTES AND LEGEND SHEET
SHEET 3 OF 9	C-1	OVERALL SITE PLAN AND CIVIL PLAN
SHEET 4 OF 9	C-2	SURVEY CONTROL PLAN
SHEET 5 OF 9	C-3	STORM WATER BASIN GRADING PLAN
SHEET 6 OF 9	C-4	DRAINAGE PROFILES
SHEET 7 OF 9	C-5	ROADWAY PLAN & PROFILE
SHEET 8 OF 9	C-6	DETAILS
SHEET 9 OF 9	C-7	SEDIMENT DEPTH GAGE ELEVATION & DETAIL



LOCATION MAP N

NO.	DATE	DSGN	DR	CHK	APVD
0	03/16/16	M. SCHWAB	S. BOURQUE	J. GRIEST	N. BETTS

ISSUED FOR CONSTRUCTION

REVISION BY APVD

MS NB

MICHAEL E. SCHWAB
Exp. 06/30/2016
CIVIL
No. 23585
STATE OF NEVADA
PROFESSIONAL ENGINEER
03/16/2016

2485 VILLAGE VIEW DRIVE, SUITE 350
HENDERSON, NEVADA 89074
PHONE: 702-369-6175

ch2m

REID GARDNER STATION
Moapa, Nevada

NVEnergy

CCR LANDFILL RUN-ON AND RUN-OFF CONTROL SYSTEM, WO # 9837520901

COVER AND INDEX SHEET

ISSUED FOR CONSTRUCTION

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2016
PROJ	670439
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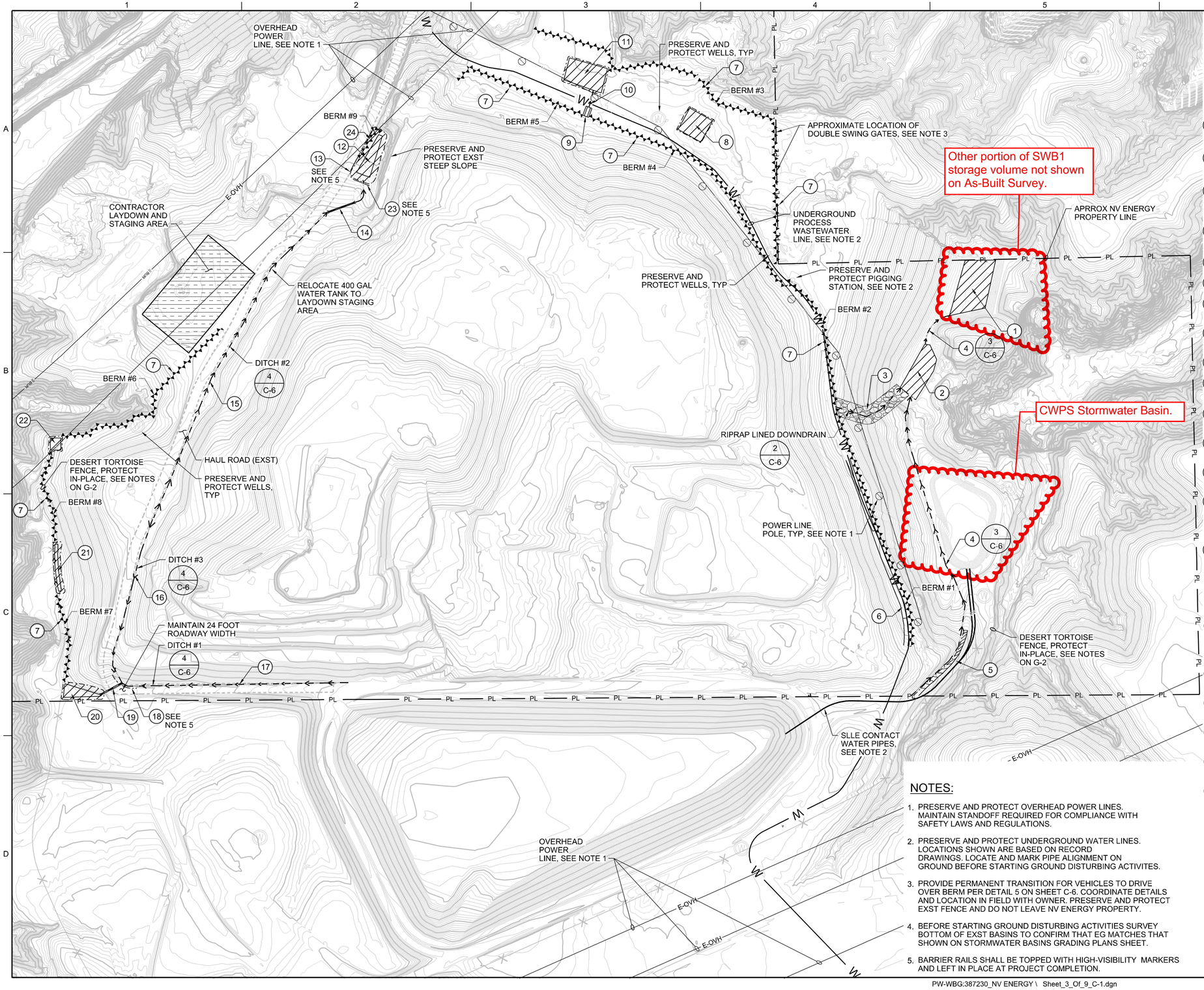
SHEET	1 OF 9

PW-WBG:387230_NV ENERGY \ Sheet_1_Of_9_G-1.dgn PLOT DATE: 2016\03\16 PLOT TIME: 4:20:46 PM



KEYED NOTES:

1. REGRADE EXISTING STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-1 FOR SURVEY CONTROL INFORMATION.
2. REGRADE EXISTING STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-2 FOR SURVEY CONTROL INFORMATION.
3. CONSTRUCT RIPRAP LINED DOWNDRAIN. SEE SHEET C-2 FOR SURVEY CONTROL INFORMATION. SEE DETAIL 2 ON SHEET C-6.
4. CLEAN-OUT DEBRIS AND SEDIMENT FROM EXISTING DITCH
5. REGRADE ROAD. SEE SHEET C-5 FOR SURVEY CONTROL INFORMATION.
6. REGRADE ROAD. SEE SHEET C-5 FOR SURVEY CONTROL INFORMATION.
7. CONSTRUCT BERM. SEE SHEET C-2 FOR SURVEY CONTROL INFORMATION. SEE DETAIL 1 ON SHEET C-6.
8. CONSTRUCT STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-3 FOR SURVEY CONTROL INFORMATION.
9. CONSTRUCT ARIZONA CROSSING. SEE SHEET C-7, DETAIL 3.
10. CONSTRUCT V-DITCH. SEE DETAIL 3, SHEET C-6. SEE SHEET C-2 FOR CONTROL LINE INFORMATION
11. CONSTRUCT STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-4 FOR SURVEY CONTROL INFORMATION.
12. CONSTRUCT STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-5 FOR SURVEY CONTROL INFORMATION.
13. INSTALL APPROX 232 LF TYPE FA CONCRETE BARRIER RAIL PER NDOT STD DWG R-8.6.2. SEE NOTE 5.
14. INSTALL 24" RCP PER NDOT STD SPEC SEC 603. SEE DITCH #2 PROFILE ON SHT C-4. INSTALL CLASS 300 CULVERT INLET AND OUTLET PROTECTION PER NDOT STD DWG R-3.1.5 & NDOT STD SPEC SEC 610.
15. 16. 17. CONSTRUCT ROADSIDE V-DITCH. SEE SHEET C-4 FOR PROFILE. SEE SHEET C-2 FOR SURVEY CONTROL INFORMATION SEE DETAIL 4 ON SHEET C-6.
18. INSTALL APPROX 97 LF TYPE FA CONCRETE BARRIER RAIL PER NDOT STD DWG R-8.6.2. SEE NOTE 5.
19. INSTALL 18" RCP PER NDOT STD SPEC SEC 603. SEE DITCH #1 PROFILE ON SHT C-4. INSTALL CLASS 300 CULVERT INLET AND OUTLET PROTECTION PER NDOT STD DWG R-3.1.5 & NDOT STD SPEC SEC 610.
20. CONSTRUCT STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-8 FOR SURVEY CONTROL INFORMATION.
21. CONSTRUCT STORMWATER BASIN. SEE SHT C-3, DETAIL SWB-7 FOR SURVEY CONTROL INFORMATION.
22. CONSTRUCT STORMWATER BASIN. SEE SHEET C-3, DETAIL SWB-6 FOR SURVEY CONTROL INFORMATION.
23. INSTALL APPROX 21 LF TYPE FA CONCRETE BARRIER RAIL PER NDOT STD DWG R-8.6.2. SEE NOTE 5.
24. CONSTRUCT BERM. SEE SHEET C-2 FOR SURVEY CONTROL INFORMATION. SEE DETAIL 1 ON SHEET C-6.

NOTES:

1. PRESERVE AND PROTECT OVERHEAD POWER LINES. MAINTAIN STANDOFF REQUIRED FOR COMPLIANCE WITH SAFETY LAWS AND REGULATIONS.
2. PRESERVE AND PROTECT UNDERGROUND WATER LINES. LOCATIONS SHOWN ARE BASED ON RECORD DRAWINGS. LOCATE AND MARK PIPE ALIGNMENT ON GROUND BEFORE STARTING GROUND DISTURBING ACTIVITES.
3. PROVIDE PERMANENT TRANSITION FOR VEHICLES TO DRIVE OVER BERM PER DETAIL 5 ON SHEET C-6. COORDINATE DETAILS AND LOCATION IN FIELD WITH OWNER. PRESERVE AND PROTECT EXST FENCE AND DO NOT LEAVE NV ENERGY PROPERTY.
4. BEFORE STARTING GROUND DISTURBING ACTIVITIES SURVEY BOTTOM OF EXST BASINS TO CONFIRM THAT EG MATCHES THAT SHOWN ON STORMWATER BASINS GRADING PLANS SHEET.
5. BARRIER RAILS SHALL BE TOPPED WITH HIGH-VISIBILITY MARKERS AND LEFT IN PLACE AT PROJECT COMPLETION.

PROFESSIONAL ENGINEER STATE OF NEVADA
MICHAEL E. SCHWAB
Exp. 06/30/2016
CIVIL
No. 23555
03/16/2016

NO.	DATE	DSGN	DR	CHK	APVD
0	03/16/16	M. SCHWAB	S. BOURQUE	J. GRIEST	N. BETTS

ISSUED FOR CONSTRUCTION

REVISION	BY	APVD
	MS	NB

2485 VILLAGE VIEW DRIVE, SUITE 350
HENDERSON, NEVADA 89074
PHONE: 702-369-6175

ch2m

REID GARDNER STATION
Moapa, Nevada

NVEnergy

CCR LANDFILL RUN-ON AND RUN-OFF CONTROL SYSTEM, WO # 9837520901

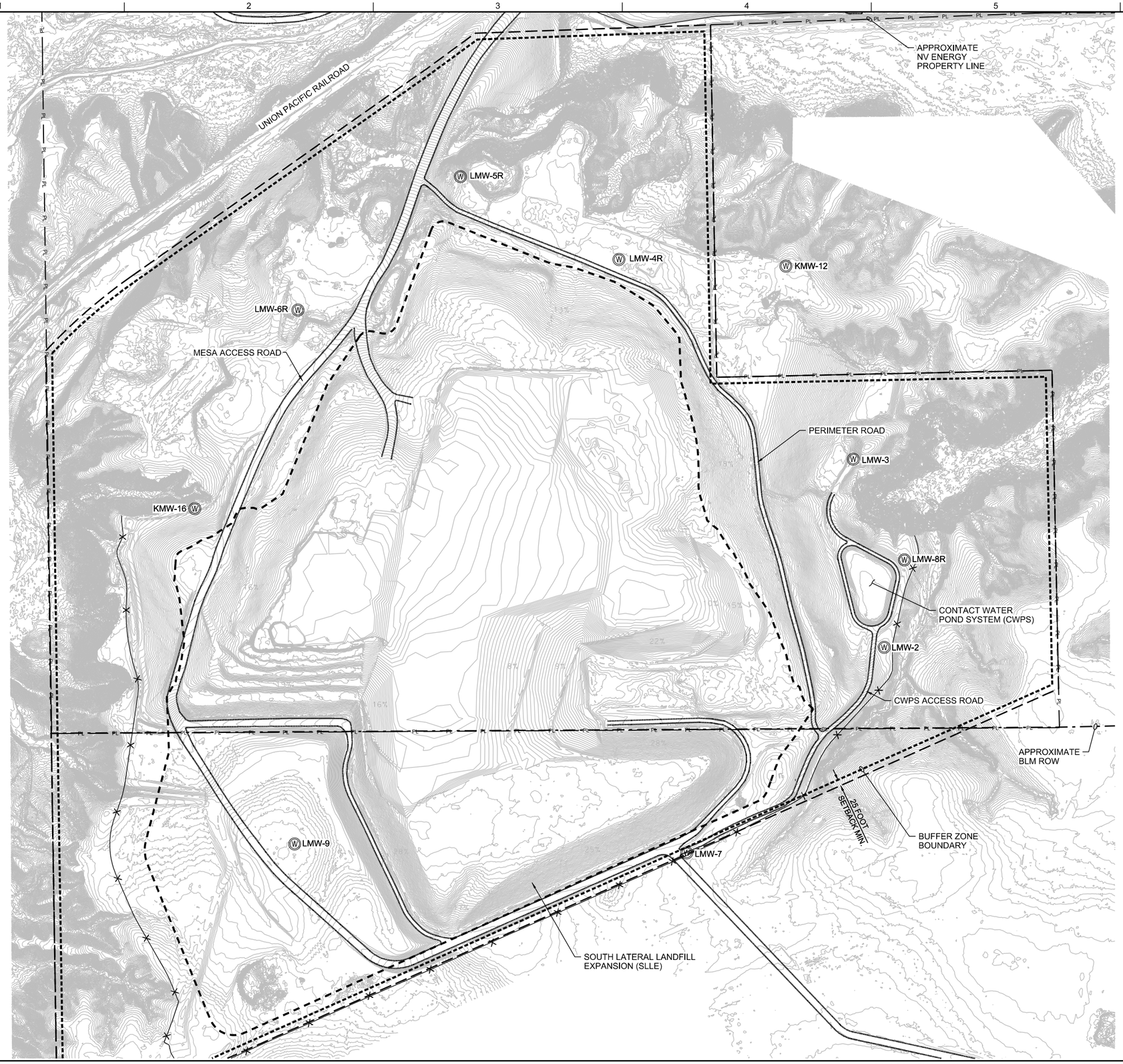
OVERALL SITE PLAN AND CIVIL PLAN

ISSUED FOR CONSTRUCTION

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2016
PROJ	670439
DWG	C-1
SHEET	3 OF 9

Attachment 2
Current Site Topography



N

0 200 400 600

Scale In Feet

LEGEND

- APPROXIMATE PROPERTY LINE
- APPROXIMATE BLM ROW
- LINED AREA
- DISPOSAL SITE BOUNDARY
- BUFFER ZONE BOUNDARY
- APPROXIMATE LIMIT OF ACTIVE FILL AREA PER 2011 LANDFILL PERMIT
- GROUND WATER MONITORING WELL
- TORTOISE FENCE

NO.	DATE	DSGN	DR	CHK	APVD
0	07/21/21	S. BOURQUE	R. VILORIA	R. DRESEL	N. BETTS

ISSUED FOR CONSTRUCTION

REVISION BY APVD RD SD

1301 N. GREEN VALLEY PKWY, SUITE 200
HENDERSON, NEVADA 89074
PHONE: 702-369-4175

REID GARDNER STATION
Moapa, Nevada

NVEnergy

Jacobs

REMEDIAL EXCAVATION PROJECTS

LANDFILL FILL PLAN PHASE 2
MATERIAL FROM ASH FILL REMOVAL PROJECTS

PRELIMINARY NOT FOR CONSTRUCTION

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JULY 2021
PROJ	705712
DWG	C-15
SHEET	17 OF 19

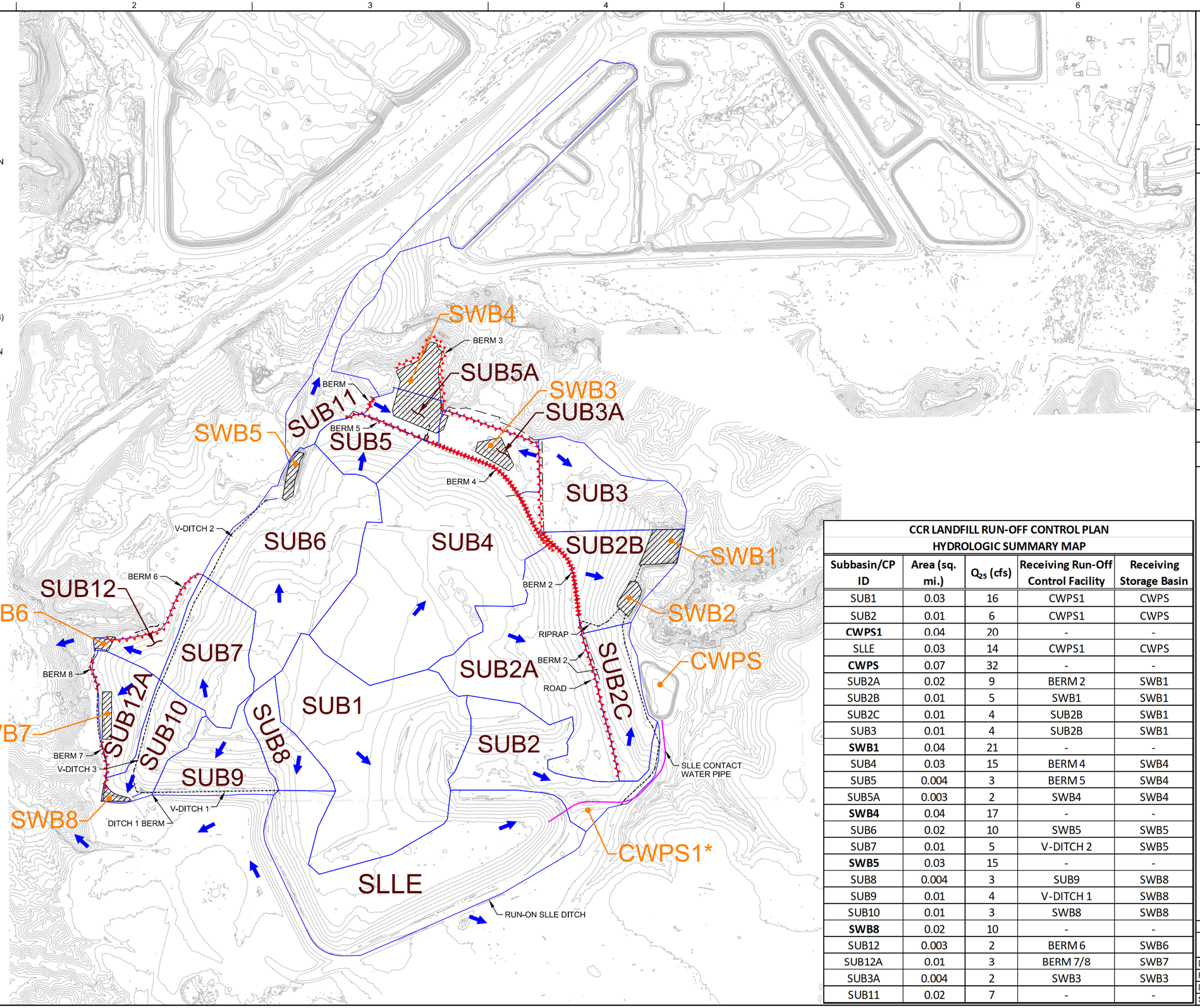
Attachment 3
2021 Updated Landfill Runoff Subbasin Map

N

0 250 500 750

LEGEND

- SUBBASIN BOUNDARY
- SURFACE FLOW DIRECTION
- SUB12 — SUBBASIN NAME
- SWB4 — COMBINATION POINT WITH STORMWATER BASIN ID
- BERM
- PL — APPROX PROPERTY LINE
- 5 FOOT CONTOUR
- STORMWATER BASIN (SWB)
- * — NO STORMWATER BASIN PRESENT AT COMBINATION POINT



CCR LANDFILL RUN-OFF CONTROL PLAN
HYDROLOGIC SUMMARY MAP

Subbasin/CP ID	Area (sq. mi.)	Q_{25} (cfs)	Receiving Run-Off Control Facility	Receiving Storage Basin
SUB1	0.03	16	CWPS1	CWPS
SUB2	0.01	6	CWPS1	CWPS
CWPS1	0.04	20	-	-
SLLE	0.03	14	CWPS1	CWPS
CWPS	0.07	32	-	-
SUB2A	0.02	9	BERM 2	SWB1
SUB2B	0.01	5	SWB1	SWB1
SUB2C	0.01	4	SUB2B	SWB1
SUB3	0.01	4	SUB2B	SWB1
SWB1	0.04	21	-	-
SUB4	0.03	15	BERM 4	SWB4
SUB5	0.004	3	BERM 5	SWB4
SUB5A	0.003	2	SWB4	SWB4
SWB4	0.04	17	-	-
SUB6	0.02	10	SWB5	SWB5
SUB7	0.01	5	V-DITCH 2	SWB5
SWB5	0.03	15	-	-
SUB8	0.004	3	SUB9	SWB8
SUB9	0.01	4	V-DITCH 1	SWB8
SUB10	0.01	3	SWB8	SWB8
SWB8	0.02	10	-	-
SUB12	0.003	2	BERM 6	SWB6
SUB12A	0.01	3	BERM 7/8	SWB7
SUB3A	0.004	2	SWB3	SWB3
SUB11	0.02	7	-	-

NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
0		M.SCHWAB	R. VILORIA				

REVISION

1301 N. GREEN VALLEY PKWY, SUITE 200
HENDERSON, NEVADA 89074
PHONE: 702-369-4175

REID GARDNER STATION
Moapa, Nevada

NVEnergy

Jacobs

RGS

SUBBASIN MAP

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	SEPTEMBER 2021
PROJ	670439
DWG	FIG 1
SHEET	1 OF 1

PW-WBG:387230_NV ENERGY \ 2021_RGS_Landfill_Subbasin_670439.dgn PLOT DATE: 2021\10\15 PLOT TIME: 9:13:23 AM

Attachment 4
2021 Updated Landfill Runoff Hydrology Calculations

SF4 Calculations

TIME OF CONCENTRATION / LAG TIME DETERMINATION - less than 1 mi2

Jacobs

CCR LANDFILL STORMWATER CONTROLS

RUN-OFF SUBBASIN HYDROLOGIC PARAMETERS

Project No: NVE01918
Date: September-21
Calculated by: FA

SUB-BASIN DATA					INITIAL / OVERLAND TIME (Ti)			TRAVEL TIME (Tt)							T_{lag}	REMARKS
Basin ID	DEV./UNDEV. (D or U)	CN	K	AREA Mi^2	INITIAL LENGTH Feet	SLOPE %	Ti Min	TRAVEL LENGTH Feet	SLOPE %	V_1 VELOCITY FPS	V_2 VELOCITY FPS	Tt Min	Tc Min	Tc Check Min	T_{lag} 0.6Tc/60 Hours	RAINFALL INCHES
(1)	(2)	(3)	(4)	(5b)	(6)	(7)	(8)	(9)	(10)	(10a)	(10b)	(11)	(12)	(13)	(14)	(15)
SUB1	U	83.0	0.7056	0.0274	180	5.00	5.6	1132	5.39	3.4	6.8	4.0	9.5	N/A	**0.095**	2.04
SUB2	U	83.0	0.7056	0.0113	288	4.17	7.5	1909	4.24	3.0	6.1	6.6	14.1	N/A	**0.141**	2.04
SUB2A	U	83.0	0.7056	0.0187	437	4.58	8.9	1213	3.05	2.6	5.1	5.5	14.5	N/A	**0.145**	2.04
SUB2B	U	83.0	0.7056	0.0086	214	1.40	9.3	343	14.29	5.6	11.1	1.0	10.3	N/A	**0.103**	2.04
SUB2C	U	83.0	0.7056	0.0064	242	18.18	4.2	874	5.72	3.5	7.0	3.2	7.4	N/A	**0.074**	2.04
SUB3	U	83.0	0.7056	0.0101	463	0.43	20.2	311	18.01	6.3	12.5	0.8	21.0	N/A	**0.210**	2.04
SUB3A	U	83.0	0.7056	0.0042	157.75	0.38	12.3	257	1.58	1.9	3.7	2.3	14.6	N/A	**0.146**	2.04
SUB4	U	83.0	0.7056	0.0325	352	1.42	11.8	1974	3.04	2.6	5.1	8.0	19.9	N/A	**0.199**	2.04
SUB5	U	83.0	0.7056	0.0043	97	42.90	2.0	520	5.47	3.5	6.9	2.5	4.5	N/A	**0.045**	2.04
SUB5A	U	83.0	0.7056	0.0026	80	0.63	7.4	86	0.58	1.1	2.2	1.3	8.7	N/A	**0.087**	2.04
SUB6	U	83.0	0.7056	0.0209	489	2.25	12.0	1130	5.84	3.6	7.1	3.8	15.8	N/A	**0.158**	2.04
SUB7	U	83.0	0.7056	0.0090	334	13.17	5.5	896	5.47	3.5	6.9	3.4	8.9	N/A	**0.089**	2.04
SUB8	U	83.0	0.7056	0.0044	239	11.30	4.9	499	7.62	4.1	8.1	2.0	6.9	N/A	**0.069**	2.04
SUB9	U	83.0	0.7056	0.0065	125	6.40	4.3	571	12.08	5.1	10.2	1.7	6.0	N/A	**0.060**	2.04
SUB10	U	83.0	0.7056	0.0051	160	9.38	4.3	838	8.59	4.3	8.6	2.6	6.8	N/A	**0.068**	2.04
SUB11	U	83.0	0.7056	0.0186	435	0.22	24.5	2550	5.14	3.4	6.7	7.6	32.1	N/A	**0.321**	2.04
SUB12	U	83.0	0.7056	0.0030	104.33	1.44	6.4	602	3.41	2.7	5.4	3.4	9.8	N/A	**0.098**	2.04
SUB12A	U	83.0	0.7056	0.0050	253.1	13.04	4.8	197	3.56	2.8	5.5	1.2	6.0	N/A	**0.060**	2.04
SLLE	U	83.0	0.7056	0.0284	144	22.22	3.0	2742	1.71	1.9	3.8	14.0	17.1	N/A	**0.171**	2.04

NOTE:

(1) Subbasin Name
(2) Developed or Undeveloped Subbasin
(3) Curve Number (See Subbasin CN Calculations)
(4) K = 0.0132 (CN) - 0.39
(5a) & (5b) Area
(6) Initial Length
(7) Initial Slope
(8) Ti = 1.8 (1.1 - K) L^1/2 / S^1/3
(9) Travel Length
(10) Slope
(10a) Slope V_1 applies to the first 500 feet of travel distance; Developed V_1 = 20.2*(S/100)^1/2
(10b) V_2 applies to the remaining travel distance; Developed V_2 = 30.6*(S/100)^1/2
(11) Tt = 500/(V1*60)+(Travel Length-500)/(V2*60)
(12) Tc = Ti + Tt
(13) Tc Check = L/180+10 (select smaller Tc)
(14) Tlag = 0.6 Tc/60
(15) Rainfall in inches

REFERENCE: Calculations based on the Clark County Regional Flood Control District HCDDM

STANDARD FORM 4

HEC-1 Computation 2

```
1****************************************                 ****************************************
 *                                      *                 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                 *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998              *                 *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *                 *         609 SECOND STREET            *
 *                                      *                 *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   07OCT21  TIME  08:31:46  *                 *           (916) 756-1104             *
 *                                      *                 *                                      *
 ****************************************                 ****************************************

                                        X     X  XXXXXXX   XXXXX           X
                                        X     X  X        X     X         XX
                                        X     X  X        X               X
                                        XXXXXXX  XXXX     X        XXXXX  X
                                        X     X  X        X               X
                                        X     X  X        X     X         X
                                        X     X  XXXXXXX   XXXXX          XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                                  HEC-1 INPUT                                                  PAGE  1

          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

                        *DIAGRAM
 *** FREE ***
              1         ID   RGS LANDFILL
              2         ID   AS-BUILT CONDITION
              3         ID   CCR DRAINAGE IMPROVEMENTS
              4         ID   INPUT FILE = RGSCCR25.DAT
              5         ID   INPUT FILE DATE = SEPT 2021
              6         ID   DESIGN STORM = 25-YEAR 24-HOUR STORM
              7         ID   NOAA ATLAS 14, VOLUME 1, VERSION 5
              8         ID   STORM DISTRIBUTION = NRCS 24-HOUR TYPE II
              9         ID   MODELED BY = JACOBS - FERNANDO ARAGONEZ
             10         ID   CHECKED BY = JACOBS - STEVE JONES, P.E.
             11         ID
             12         ID    JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:
             13         ID
             14         ID     AREA (SQUARE MILES)    DARF
             15         ID    0     -------- -------- 1.000
             16         ID
             17         ID
             18         IT       6       0       0     300
             19         IO       6       0       0
             20         IN       6       0       0
             21         JR    PREC   1.000
                        *

             22         KK    SUB1
             23         BA  0.0274
             24         PB    2.04
             25         PC 0.00000 0.00101 0.00202 0.00305 0.00408 0.00513 0.00618 0.00725 0.00832   0.009
             26         PC 0.01050 0.01161 0.01272 0.01385 0.01498 0.01613 0.01728 0.01845 0.01962   0.020
             27         PC 0.02200 0.02321 0.02442 0.02565 0.02688 0.02813 0.02938 0.03065 0.03192   0.033
             28         PC 0.03450 0.03581 0.03712 0.03845 0.03978 0.04113 0.04248 0.04385 0.04522   0.046
             29         PC 0.04800 0.04941 0.05084 0.05229 0.05376 0.05525 0.05676 0.05829 0.05984   0.061
             30         PC 0.06300 0.06461 0.06624 0.06956 0.07125 0.07296 0.07469 0.07644 0.07821   0.080
             31         PC 0.08181 0.08364 0.08549 0.08736 0.08925 0.09116 0.09309 0.09504 0.09701   0.099
             32         PC 0.10101 0.10304 0.10509 0.10716 0.10925 0.11136 0.11349 0.11564 0.11781   0.120
             33         PC 0.12225 0.12460 0.12705 0.12960 0.13225 0.13785 0.14080 0.14385 0.14700   0.150
             34         PC 0.15660 0.15980 0.16300 0.16628 0.16972 0.17332 0.17708 0.18100 0.18512   0.189
             35         PC 0.19408 0.19892 0.20400 0.20940 0.21520 0.22140 0.22800 0.23500 0.24268   0.251
             36         PC 0.26092 0.27148 0.28300 0.30684 0.35436 0.43079 0.56786 0.66300 0.68196   0.698
             37         PC 0.71304 0.72516 0.73500 0.74344 0.75136 0.75876 0.76564 0.77200 0.77796   0.783
             38         PC 0.78904 0.79416 0.79900 0.80360 0.80800 0.81220 0.81620 0.82000 0.82367   0.827
             39         PC 0.83079 0.83424 0.83763 0.84094 0.84419 0.84736 0.85047 0.85350 0.85647   0.859
             40         PC 0.86219 0.86494 0.86763 0.87024 0.87279 0.87526 0.87767 0.88000 0.88229   0.884
             41         PC 0.88679 0.88900 0.89119 0.89335 0.89549 0.89760 0.89969 0.90175 0.90379   0.905
             42         PC 0.90779 0.90975 0.91169 0.91360 0.91549 0.91735 0.91919 0.92100 0.92279   0.924
             43         PC 0.92969 0.93135 0.93299 0.93460 0.93619 0.93775 0.93929 0.94080 0.94229   0.943
             44         PC 0.94519 0.94660 0.94799 0.94935 0.95069 0.95200 0.95330 0.95459 0.95588   0.957
             45         PC 0.95844 0.95971 0.96098 0.96224 0.96350 0.96475 0.96600 0.96724 0.96848   0.969
             46         PC 0.97094 0.97216 0.97338 0.97459 0.97580 0.97700 0.97820 0.97939 0.98058   0.981
             47         PC 0.98294 0.98411 0.98528 0.98644 0.98760 0.98875 0.98990 0.99104 0.99218   0.993
             48         PC 0.99444 0.99556 0.99668 0.99779 0.99890 1.00000
             49         LS       0    83.0
             50         UD   0.095
                        *
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

   51         KK   RSUB1
   52         KM  ROUTE SUB1 TO CWPS1
   53         KM  LINING = EARTHEN
   54         RD     797   0.018   0.025       0    TRAP       0       3
              *

   55         KK    SUB2
   56         BA  0.0113
   57         LS       0    83.0
   58         UD   0.141
              *

   59         KK   CWPS1
   60         KM  COMBINE SUB1, SUB2
   61         KM  FLOW AT FIELD INLET
   62         KM  COMBINATION POINT
   63         HC       2
   64         KO       3
              *

   65         KK    SLLE
   66         BA  0.0284
   67         LS       0    83.0
   68         UD   0.171
              *

   69         KK   RSLLE
   70         KM  ROUTE SLLE TO CWPS
   71         KM  LINING = EARTHEN
   72         RD     795  0.0400   0.013       0    CIRC       3
              *

   73         KK    CWPS
   74         KM  COMBINE CWPS1 AND SLLE
   75         KM  FLOW CWPS
   76         KM  COMBINATION POINT
   77         HC       2
   78         KO       3
              *

   79         KK   RCWPS
   80         KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
   81         KO       1
   82         RS       1    STOR      -1
   83         SV       0    5000
   84         SE       0    5000
   85         SQ       0       1
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

   86         KK   SUB2A
   87         BA  0.0187
   88         LS       0    83.0
   89         UD   0.145
              *

   90         KK  RSUB2A
   91         KM  ROUTE SUB2A TO SWB1
   92         KM  LINING = EARTHEN
   93         RD     507   0.093   0.033       0    TRAP       0       3
              *

   94         KK   SUB2B
   95         BA  0.0086
   96         LS       0    83.0
   97         UD   0.103
              *

   98         KK   SUB2C
   99         BA  0.0064
  100         LS       0    83.0
  101         UD   0.074
              *

  102         KK  RSUB2C
  103         KM  ROUTE SUB2A TO SWB1
  104         KM  LINING = EARTHEN
  105         RD     328   0.030   0.025       0    TRAP       0       3
              *

  106         KK    SUB3
  107         BA  0.0101
  108         LS       0    83.0
  109         UD   0.210
              *
```

```
 110          KK    SWB1
 111          KM  COMBINE SUB2A, SUB2B, SUB2C, AND SUB3
 112          KM  FLOW SWB1
 113          KM  COMBINATION POINT
 114          HC       4
 115          KO       3
              *

 116          KK   RSWB1
 117          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
 118          KO       1
 119          RS       1    STOR      -1
 120          SV       0    5000
 121          SE       0    5000
 122          SQ       0       1
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 123          KK    SUB4
 124          BA  0.0325
 125          LS       0    83.0
 126          UD   0.199
              *

 127          KK   RSUB4
 128          KM  ROUTE SUB4 TO SWB4
 129          KM  LINING = EARTHEN
 130          RD     118   0.017   0.025       0    TRAP       0       3
              *

 131          KK    SUB5
 132          BA  0.0043
 133          LS       0    83.0
 134          UD   0.045
              *

 135          KK   RSUB5
 136          KM  ROUTE SUB5 TO SWB3
 137          KM  LINING = EARTHEN
 138          RD     133   0.015   0.025       0    TRAP       0       3
              *

 139          KK   SUB5A
 140          BA  0.0026
 141          LS       0    83.0
 142          UD   0.087
              *

 143          KK    SWB4
 144          KM  COMBINE SUB4, SUB5, AND SUB5A
 145          KM  FLOW SWB4
 146          KM  COMBINATION POINT
 147          HC       3
 148          KO       3
              *

 149          KK   RSWB4
 150          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
 151          KO       1
 152          RS       1    STOR      -1
 153          SV       0    5000
 154          SE       0    5000
 155          SQ       0       1
              *

 156          KK    SUB6
 157          BA  0.0209
 158          LS       0    83.0
 159          UD   0.158
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 160          KK    SUB7
 161          BA  0.0090
 162          LS       0    83.0
 163          UD   0.089
              *

 164          KK   RSUB7
 165          KM  ROUTE SUB7 TO SWB5
 166          KM  LINING = EARTHEN
 167          RD     583   0.015   0.025       0    TRAP       0       3
              *

 168          KK    SWB5
 169          KM  COMBINE SUB6 AND SUB7
```

```
  170          KM  FLOW SWB5
  171          KM  COMBINATION POINT
  172          HC       2
  173          KO       3
               *

  174          KK   RSWB5
  175          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
  176          KO       1
  177          RS       1    STOR      -1
  178          SV       0    5000
  179          SE       0    5000
  180          SQ       0       1
               *

  181          KK    SUB8
  182          BA  0.0044
  183          LS       0    83.0
  184          UD   0.069
               *

  185          KK   RSUB8
  186          KM  ROUTE SUB8 TO SWB8
  187          KM  LINING = EARTHEN
  188          RD     580   0.023   0.014       0    TRAP       0       2
               *

  189          KK    SUB9
  190          BA  0.0065
  191          LS       0    83.0
  192          UD   0.060
               *

  193          KK   RSUB9
  194          KM  ROUTE SUB9 TO SWB8
  195          KM  LINING = EARTHEN
  196          RD     118   0.034   0.025       0    TRAP       0       3
               *
1                                      HEC-1 INPUT                                          PAGE  6

 LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  197          KK   SUB10
  198          BA  0.0051
  199          LS       0    83.0
  200          UD   0.068
               *

  201          KK    SWB8
  202          KM  COMBINE SUB8, SUB9 AND SUB10
  203          KM  FLOW SWB8
  204          KM  COMBINATION POINT
  205          HC       3
  206          KO       3
               *

  207          KK   RSWB8
  208          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
  209          KO       1
  210          RS       1    STOR      -1
  211          SV       0    5000
  212          SE       0    5000
  213          SQ       0       1
               *

  214          KK   SUB12
  215          KM  FLOW TO SWB6
  216          BA  0.0030
  217          LS       0    83.0
  218          UD   0.098
               *

  219          KK  RSUB12
  220          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
  221          KO       1
  222          RS       1    STOR      -1
  223          SV       0    5000
  224          SE       0    5000
  225          SQ       0       1
               *

  226          KK  SUB12A
  227          KM  FLOW TO SWB7
  228          BA  0.0052
  229          LS       0    83.0
  230          UD   0.060
               *

  231          KK RSUB12A
  232          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
  233          KO       1
  234          RS       1    STOR      -1
```

```
          235          SV       0    5000
          236          SE       0    5000
          237          SQ       0       1
                       *
1                                              HEC-1 INPUT                                                PAGE  7

         LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

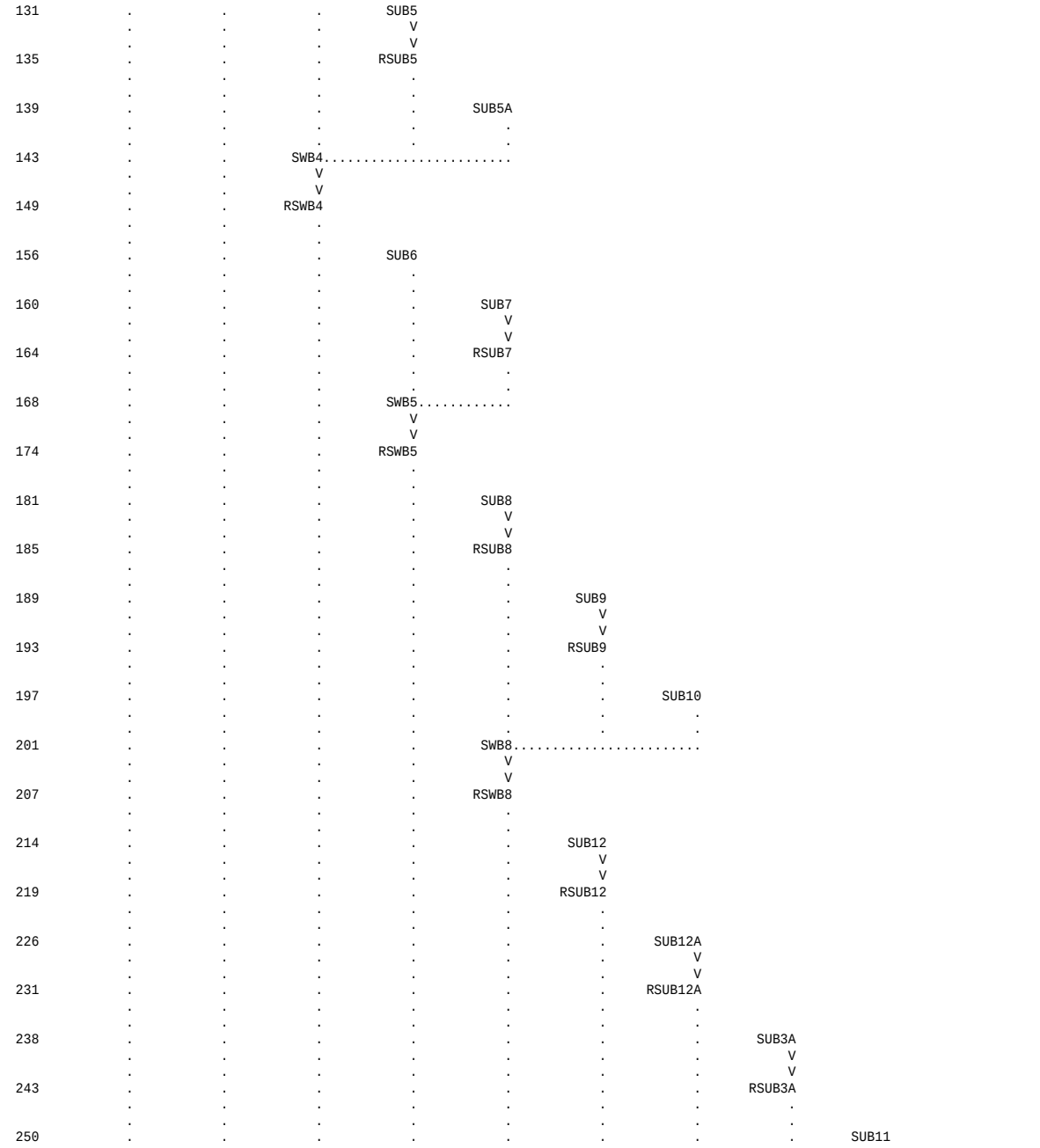

          238          KK   SUB3A
          239          KM  FLOW TO SWB3
          240          BA  0.0042
          241          LS       0    83.0
          242          UD   0.146
                       *

          243          KK  RSUB3A
          244          KM   DUMMY STORAGE ROUTING TO COMPUTE ACCURATE STORAGE VOLUME
          245          KO       1
          246          RS       1    STOR      -1
          247          SV       0    5000
          248          SE       0    5000
          249          SQ       0       1
                       *

          250          KK   SUB11
          251          KM  FLOW TO STORMWATER PONDS
          252          BA  0.0186
          253          LS       0    83.0
          254          UD   0.321
                       *
          255          ZZ
1
               SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    22        SUB1
              V
              V
    51       RSUB1
              .
              .
    55        .        SUB2
              .           .
              .           .
    59       CWPS1.............
              .
              .
    65        .        SLLE
              .          V
              .          V
    69        .       RSLLE
              .           .
              .           .
    73        CWPS.............
              V
              V
    79       RCWPS
              .
              .
    86        .       SUB2A
              .          V
              .          V
    90        .      RSUB2A
              .           .
              .           .
    94        .           .       SUB2B
              .           .           .
              .           .           .
    98        .           .           .       SUB2C
              .           .           .          V
              .           .           .          V
   102        .           .           .      RSUB2C
              .           .           .           .
              .           .           .           .
   106        .           .           .           .       SUB3
              .           .           .           .          .
              .           .           .           .          .
   110        .        SWB1.................................
              .          V
              .          V
   116        .       RSWB1
              .           .
              .           .
   123        .           .        SUB4
              .           .          V
              .           .          V
   127        .           .       RSUB4
              .           .           .
              .           .           .
```



(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1

```
*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*              JUN   1998               *
*            VERSION 4.1                *
*                                       *
*  RUN DATE   07OCT21  TIME  08:31:46   *
*                                       *
*****************************************
```

```
*****************************************
*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*    HYDROLOGIC ENGINEERING CENTER      *
*          609 SECOND STREET            *
*       DAVIS, CALIFORNIA 95616         *
*           (916) 756-1104              *
*                                       *
*****************************************
```

RGS LANDFILL
AS-BUILT CONDITION
CCR DRAINAGE IMPROVEMENTS
INPUT FILE = RGSCCR25.DAT
INPUT FILE DATE = SEPT 2021
DESIGN STORM = 25-YEAR 24-HOUR STORM
NOAA ATLAS 14, VOLUME 1, VERSION 5

```
                          STORM DISTRIBUTION = NRCS 24-HOUR TYPE II
                          MODELED BY = JACOBS - FERNANDO ARAGONEZ
                          CHECKED BY = JACOBS - STEVE JONES, P.E.

                           JR CARDS CONTAIN DARFS BASED ON THE FOLLOWING VALUES:

                            AREA (SQUARE MILES)    DARF
                           0     -------- -------- 1.000



   19 IO          OUTPUT CONTROL VARIABLES
                        IPRNT           6  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      IT          HYDROGRAPH TIME DATA
                         NMIN           6  MINUTES IN COMPUTATION INTERVAL
                        IDATE      1    0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE      2    0  ENDING DATE
                       NDTIME        0554  ENDING TIME
                       ICENT           19  CENTURY MARK

                     COMPUTATION INTERVAL     .10 HOURS
                          TOTAL TIME BASE   29.90 HOURS

            ENGLISH UNITS
                 DRAINAGE AREA         SQUARE MILES
                 PRECIPITATION DEPTH   INCHES
                 LENGTH, ELEVATION     FEET
                 FLOW                  CUBIC FEET PER SECOND
                 STORAGE VOLUME        ACRE-FEET
                 SURFACE AREA          ACRES
                 TEMPERATURE           DEGREES FAHRENHEIT

      JP          MULTI-PLAN OPTION
                        NPLAN           1  NUMBER OF PLANS

      JR          MULTI-RATIO OPTION
                      RATIOS OF PRECIPITATION
                     1.00

   64 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

   63 HC          HYDROGRAPH COMBINATION
                        ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                                  ***

       ***             ***             ***             ***             ***

                           HYDROGRAPH AT STATION    CWPS1
                             FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                          (CFS)
+      20.     11.70                    2.          1.          1.           1.
                         (INCHES)      .588        .722        .722         .722
                          (AC-FT)        1.          1.          1.           1.

                          CUMULATIVE AREA =     .04 SQ MI


   78 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

   77 HC          HYDROGRAPH COMBINATION
                        ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                                  ***

       ***             ***             ***             ***             ***

                           HYDROGRAPH AT STATION     CWPS
                             FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                          (CFS)
+      32.     11.70                    4.          1.          1.           1.
                         (INCHES)      .588        .723        .723         .723
                          (AC-FT)        2.          3.          3.           3.
```

```
                    CUMULATIVE AREA =     .07 SQ MI


 81 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE

             HYDROGRAPH ROUTING DATA

 82 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        STOR  TYPE OF INITIAL CONDITION
                      RSVRIC       -1.00  INITIAL CONDITION
                          X          .00 WORKING R AND D COEFFICIENT

 83 SV            STORAGE          .0    5000.0

 84 SE          ELEVATION         .00   5000.00

 85 SQ          DISCHARGE          0.        1.

                                                  ***
```

****

HYDROGRAPH AT STATION RCWPS
PLAN 1, RATIO = 1.00

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	2.4	2.4
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	2.4	2.4
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	2.4	2.4
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	2.4	2.4
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	2.4	2.4
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	2.4	2.4
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	2.4	2.4
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	2.4	2.4
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	2.4	2.4
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	2.4	2.4
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	2.4	2.4
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	2.4	2.4
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	2.4	2.4
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	2.4	2.4
1		0124	15	0.	.0	.0	1		1124	115	0.	.1	.1	1		2124	215	0.	2.5	2.5
1		0130	16	0.	.0	.0	1		1130	116	0.	.1	.1	1		2130	216	0.	2.5	2.5
1		0136	17	0.	.0	.0	1		1136	117	0.	.2	.2	1		2136	217	0.	2.5	2.5
1		0142	18	0.	.0	.0	1		1142	118	0.	.4	.4	1		2142	218	0.	2.5	2.5
1		0148	19	0.	.0	.0	1		1148	119	0.	.7	.7	1		2148	219	0.	2.5	2.5
1		0154	20	0.	.0	.0	1		1154	120	0.	.9	.9	1		2154	220	0.	2.5	2.5
1		0200	21	0.	.0	.0	1		1200	121	0.	1.1	1.1	1		2200	221	0.	2.5	2.5
1		0206	22	0.	.0	.0	1		1206	122	0.	1.2	1.2	1		2206	222	0.	2.5	2.5
1		0212	23	0.	.0	.0	1		1212	123	0.	1.2	1.2	1		2212	223	0.	2.5	2.5
1		0218	24	0.	.0	.0	1		1218	124	0.	1.3	1.3	1		2218	224	0.	2.5	2.5
1		0224	25	0.	.0	.0	1		1224	125	0.	1.3	1.3	1		2224	225	0.	2.5	2.5
1		0230	26	0.	.0	.0	1		1230	126	0.	1.4	1.4	1		2230	226	0.	2.5	2.5
1		0236	27	0.	.0	.0	1		1236	127	0.	1.4	1.4	1		2236	227	0.	2.5	2.5
1		0242	28	0.	.0	.0	1		1242	128	0.	1.4	1.4	1		2242	228	0.	2.5	2.5
1		0248	29	0.	.0	.0	1		1248	129	0.	1.5	1.5	1		2248	229	0.	2.5	2.5
1		0254	30	0.	.0	.0	1		1254	130	0.	1.5	1.5	1		2254	230	0.	2.5	2.5
1		0300	31	0.	.0	.0	1		1300	131	0.	1.5	1.5	1		2300	231	0.	2.5	2.5
1		0306	32	0.	.0	.0	1		1306	132	0.	1.6	1.6	1		2306	232	0.	2.5	2.5
1		0312	33	0.	.0	.0	1		1312	133	0.	1.6	1.6	1		2312	233	0.	2.6	2.6
1		0318	34	0.	.0	.0	1		1318	134	0.	1.6	1.6	1		2318	234	0.	2.6	2.6
1		0324	35	0.	.0	.0	1		1324	135	0.	1.6	1.6	1		2324	235	0.	2.6	2.6
1		0330	36	0.	.0	.0	1		1330	136	0.	1.6	1.6	1		2330	236	0.	2.6	2.6
1		0336	37	0.	.0	.0	1		1336	137	0.	1.7	1.7	1		2336	237	0.	2.6	2.6
1		0342	38	0.	.0	.0	1		1342	138	0.	1.7	1.7	1		2342	238	0.	2.6	2.6
1		0348	39	0.	.0	.0	1		1348	139	0.	1.7	1.7	1		2348	239	0.	2.6	2.6
1		0354	40	0.	.0	.0	1		1354	140	0.	1.7	1.7	1		2354	240	0.	2.6	2.6
1		0400	41	0.	.0	.0	1		1400	141	0.	1.7	1.7	2		0000	241	0.	2.6	2.6
1		0406	42	0.	.0	.0	1		1406	142	0.	1.8	1.8	2		0006	242	0.	2.6	2.6
1		0412	43	0.	.0	.0	1		1412	143	0.	1.8	1.8	2		0012	243	0.	2.6	2.6
1		0418	44	0.	.0	.0	1		1418	144	0.	1.8	1.8	2		0018	244	0.	2.6	2.6
1		0424	45	0.	.0	.0	1		1424	145	0.	1.8	1.8	2		0024	245	0.	2.6	2.6
1		0430	46	0.	.0	.0	1		1430	146	0.	1.8	1.8	2		0030	246	0.	2.6	2.6
1		0436	47	0.	.0	.0	1		1436	147	0.	1.8	1.8	2		0036	247	0.	2.6	2.6
1		0442	48	0.	.0	.0	1		1442	148	0.	1.8	1.8	2		0042	248	0.	2.6	2.6
1		0448	49	0.	.0	.0	1		1448	149	0.	1.9	1.9	2		0048	249	0.	2.6	2.6
1		0454	50	0.	.0	.0	1		1454	150	0.	1.9	1.9	2		0054	250	0.	2.6	2.6
1		0500	51	0.	.0	.0	1		1500	151	0.	1.9	1.9	2		0100	251	0.	2.6	2.6
1		0506	52	0.	.0	.0	1		1506	152	0.	1.9	1.9	2		0106	252	0.	2.6	2.6
1		0512	53	0.	.0	.0	1		1512	153	0.	1.9	1.9	2		0112	253	0.	2.6	2.6
1		0518	54	0.	.0	.0	1		1518	154	0.	1.9	1.9	2		0118	254	0.	2.6	2.6
1		0524	55	0.	.0	.0	1		1524	155	0.	1.9	1.9	2		0124	255	0.	2.6	2.6
1		0530	56	0.	.0	.0	1		1530	156	0.	2.0	2.0	2		0130	256	0.	2.6	2.6
1		0536	57	0.	.0	.0	1		1536	157	0.	2.0	2.0	2		0136	257	0.	2.6	2.6
1		0542	58	0.	.0	.0	1		1542	158	0.	2.0	2.0	2		0142	258	0.	2.6	2.6
1		0548	59	0.	.0	.0	1		1548	159	0.	2.0	2.0	2		0148	259	0.	2.6	2.6
1		0554	60	0.	.0	.0	1		1554	160	0.	2.0	2.0	2		0154	260	0.	2.6	2.6

```
   1     0600  61       0.       .0      .0 *  1     1600 161       0.      2.0     2.0 *  2     0200 261       0.      2.6     2.6
   1     0606  62       0.       .0      .0 *  1     1606 162       0.      2.0     2.0 *  2     0206 262       0.      2.6     2.6
   1     0612  63       0.       .0      .0 *  1     1612 163       0.      2.0     2.0 *  2     0212 263       0.      2.6     2.6
   1     0618  64       0.       .0      .0 *  1     1618 164       0.      2.0     2.0 *  2     0218 264       0.      2.6     2.6
   1     0624  65       0.       .0      .0 *  1     1624 165       0.      2.1     2.1 *  2     0224 265       0.      2.6     2.6
   1     0630  66       0.       .0      .0 *  1     1630 166       0.      2.1     2.1 *  2     0230 266       0.      2.6     2.6
   1     0636  67       0.       .0      .0 *  1     1636 167       0.      2.1     2.1 *  2     0236 267       0.      2.6     2.6
   1     0642  68       0.       .0      .0 *  1     1642 168       0.      2.1     2.1 *  2     0242 268       0.      2.6     2.6
   1     0648  69       0.       .0      .0 *  1     1648 169       0.      2.1     2.1 *  2     0248 269       0.      2.6     2.6
   1     0654  70       0.       .0      .0 *  1     1654 170       0.      2.1     2.1 *  2     0254 270       0.      2.6     2.6
   1     0700  71       0.       .0      .0 *  1     1700 171       0.      2.1     2.1 *  2     0300 271       0.      2.6     2.6
   1     0706  72       0.       .0      .0 *  1     1706 172       0.      2.1     2.1 *  2     0306 272       0.      2.6     2.6
   1     0712  73       0.       .0      .0 *  1     1712 173       0.      2.1     2.1 *  2     0312 273       0.      2.6     2.6
   1     0718  74       0.       .0      .0 *  1     1718 174       0.      2.1     2.1 *  2     0318 274       0.      2.6     2.6
   1     0724  75       0.       .0      .0 *  1     1724 175       0.      2.1     2.1 *  2     0324 275       0.      2.6     2.6
   1     0730  76       0.       .0      .0 *  1     1730 176       0.      2.2     2.2 *  2     0330 276       0.      2.6     2.6
   1     0736  77       0.       .0      .0 *  1     1736 177       0.      2.2     2.2 *  2     0336 277       0.      2.6     2.6
   1     0742  78       0.       .0      .0 *  1     1742 178       0.      2.2     2.2 *  2     0342 278       0.      2.6     2.6
   1     0748  79       0.       .0      .0 *  1     1748 179       0.      2.2     2.2 *  2     0348 279       0.      2.6     2.6
   1     0754  80       0.       .0      .0 *  1     1754 180       0.      2.2     2.2 *  2     0354 280       0.      2.6     2.6
   1     0800  81       0.       .0      .0 *  1     1800 181       0.      2.2     2.2 *  2     0400 281       0.      2.6     2.6
   1     0806  82       0.       .0      .0 *  1     1806 182       0.      2.2     2.2 *  2     0406 282       0.      2.6     2.6
   1     0812  83       0.       .0      .0 *  1     1812 183       0.      2.2     2.2 *  2     0412 283       0.      2.6     2.6
   1     0818  84       0.       .0      .0 *  1     1818 184       0.      2.2     2.2 *  2     0418 284       0.      2.6     2.6
   1     0824  85       0.       .0      .0 *  1     1824 185       0.      2.3     2.3 *  2     0424 285       0.      2.6     2.6
   1     0830  86       0.       .0      .0 *  1     1830 186       0.      2.3     2.3 *  2     0430 286       0.      2.6     2.6
   1     0836  87       0.       .0      .0 *  1     1836 187       0.      2.3     2.3 *  2     0436 287       0.      2.6     2.6
   1     0842  88       0.       .0      .0 *  1     1842 188       0.      2.3     2.3 *  2     0442 288       0.      2.6     2.6
   1     0848  89       0.       .0      .0 *  1     1848 189       0.      2.3     2.3 *  2     0448 289       0.      2.6     2.6
   1     0854  90       0.       .0      .0 *  1     1854 190       0.      2.3     2.3 *  2     0454 290       0.      2.6     2.6
   1     0900  91       0.       .0      .0 *  1     1900 191       0.      2.3     2.3 *  2     0500 291       0.      2.6     2.6
   1     0906  92       0.       .0      .0 *  1     1906 192       0.      2.3     2.3 *  2     0506 292       0.      2.6     2.6
   1     0912  93       0.       .0      .0 *  1     1912 193       0.      2.3     2.3 *  2     0512 293       0.      2.6     2.6
   1     0918  94       0.       .0      .0 *  1     1918 194       0.      2.3     2.3 *  2     0518 294       0.      2.6     2.6
   1     0924  95       0.       .0      .0 *  1     1924 195       0.      2.3     2.3 *  2     0524 295       0.      2.6     2.6
   1     0930  96       0.       .0      .0 *  1     1930 196       0.      2.3     2.3 *  2     0530 296       0.      2.6     2.6
   1     0936  97       0.       .0      .0 *  1     1936 197       0.      2.3     2.3 *  2     0536 297       0.      2.6     2.6
   1     0942  98       0.       .0      .0 *  1     1942 198       0.      2.3     2.3 *  2     0542 298       0.      2.6     2.6
   1     0948  99       0.       .0      .0 *  1     1948 199       0.      2.4     2.4 *  2     0548 299       0.      2.6     2.6
   1     0954 100       0.       .0        * 1     1954 200       0.      2.4       * 2     0554 300       0.      2.6     2.6
 ********************************************************************************************************************************************************

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                  6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+       0.       .00                  0.          0.          0.          0.
                    (INCHES)       .000        .000        .000        .000
                     (AC-FT)         0.          0.          0.          0.

 PEAK STORAGE   TIME                       MAXIMUM AVERAGE STORAGE
                                  6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        3.     24.00                  3.          2.          1.          1.

  PEAK STAGE    TIME                        MAXIMUM AVERAGE STAGE
                                  6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
      2.59     24.40                 2.59        1.71        1.37        1.37

                      CUMULATIVE AREA =     .07 SQ MI


  115 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           3  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

  114 HC          HYDROGRAPH COMBINATION
                       ICOMP           4  NUMBER OF HYDROGRAPHS TO COMBINE

                                                          ***

       ***             ***             ***             ***             ***

                        HYDROGRAPH AT STATION     SWB1
                          FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                  6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+      21.     11.70                  3.          1.          1.          1.
                    (INCHES)       .589        .723        .723        .723
                     (AC-FT)         1.          2.          2.          2.

                      CUMULATIVE AREA =     .04 SQ MI


  118 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
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                    QSCAL          0.  HYDROGRAPH PLOT SCALE

              HYDROGRAPH ROUTING DATA

119 RS          STORAGE ROUTING
                     NSTPS           1  NUMBER OF SUBREACHES
                      ITYP        STOR  TYPE OF INITIAL CONDITION
                     RSVRIC      -1.00  INITIAL CONDITION
                         X         .00 WORKING R AND D COEFFICIENT

120 SV            STORAGE          .0    5000.0

121 SE          ELEVATION         .00   5000.00

122 SQ          DISCHARGE          0.        1.

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HYDROGRAPH AT STATION RSWB1
PLAN 1, RATIO = 1.00

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	1.5	1.5
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	1.5	1.5
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	1.6	1.6
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	1.6	1.6
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	1.6	1.6
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	1.6	1.6
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	1.6	1.6
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	1.6	1.6
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	1.6	1.6
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	1.6	1.6
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	1.6	1.6
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	1.6	1.6
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	1.6	1.6
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	1.6	1.6
1		0124	15	0.	.0	.0	1		1124	115	0.	.0	.0	1		2124	215	0.	1.6	1.6
1		0130	16	0.	.0	.0	1		1130	116	0.	.1	.1	1		2130	216	0.	1.6	1.6
1		0136	17	0.	.0	.0	1		1136	117	0.	.1	.1	1		2136	217	0.	1.6	1.6
1		0142	18	0.	.0	.0	1		1142	118	0.	.3	.3	1		2142	218	0.	1.6	1.6
1		0148	19	0.	.0	.0	1		1148	119	0.	.5	.5	1		2148	219	0.	1.6	1.6
1		0154	20	0.	.0	.0	1		1154	120	0.	.6	.6	1		2154	220	0.	1.6	1.6
1		0200	21	0.	.0	.0	1		1200	121	0.	.7	.7	1		2200	221	0.	1.6	1.6
1		0206	22	0.	.0	.0	1		1206	122	0.	.8	.8	1		2206	222	0.	1.6	1.6
1		0212	23	0.	.0	.0	1		1212	123	0.	.8	.8	1		2212	223	0.	1.6	1.6
1		0218	24	0.	.0	.0	1		1218	124	0.	.8	.8	1		2218	224	0.	1.6	1.6
1		0224	25	0.	.0	.0	1		1224	125	0.	.9	.9	1		2224	225	0.	1.6	1.6
1		0230	26	0.	.0	.0	1		1230	126	0.	.9	.9	1		2230	226	0.	1.6	1.6
1		0236	27	0.	.0	.0	1		1236	127	0.	.9	.9	1		2236	227	0.	1.6	1.6
1		0242	28	0.	.0	.0	1		1242	128	0.	.9	.9	1		2242	228	0.	1.7	1.7
1		0248	29	0.	.0	.0	1		1248	129	0.	1.0	1.0	1		2248	229	0.	1.7	1.7
1		0254	30	0.	.0	.0	1		1254	130	0.	1.0	1.0	1		2254	230	0.	1.7	1.7
1		0300	31	0.	.0	.0	1		1300	131	0.	1.0	1.0	1		2300	231	0.	1.7	1.7
1		0306	32	0.	.0	.0	1		1306	132	0.	1.0	1.0	1		2306	232	0.	1.7	1.7
1		0312	33	0.	.0	.0	1		1312	133	0.	1.0	1.0	1		2312	233	0.	1.7	1.7
1		0318	34	0.	.0	.0	1		1318	134	0.	1.0	1.0	1		2318	234	0.	1.7	1.7
1		0324	35	0.	.0	.0	1		1324	135	0.	1.1	1.1	1		2324	235	0.	1.7	1.7
1		0330	36	0.	.0	.0	1		1330	136	0.	1.1	1.1	1		2330	236	0.	1.7	1.7
1		0336	37	0.	.0	.0	1		1336	137	0.	1.1	1.1	1		2336	237	0.	1.7	1.7
1		0342	38	0.	.0	.0	1		1342	138	0.	1.1	1.1	1		2342	238	0.	1.7	1.7
1		0348	39	0.	.0	.0	1		1348	139	0.	1.1	1.1	1		2348	239	0.	1.7	1.7
1		0354	40	0.	.0	.0	1		1354	140	0.	1.1	1.1	1		2354	240	0.	1.7	1.7
1		0400	41	0.	.0	.0	1		1400	141	0.	1.1	1.1	2		0000	241	0.	1.7	1.7
1		0406	42	0.	.0	.0	1		1406	142	0.	1.1	1.1	2		0006	242	0.	1.7	1.7
1		0412	43	0.	.0	.0	1		1412	143	0.	1.2	1.2	2		0012	243	0.	1.7	1.7
1		0418	44	0.	.0	.0	1		1418	144	0.	1.2	1.2	2		0018	244	0.	1.7	1.7
1		0424	45	0.	.0	.0	1		1424	145	0.	1.2	1.2	2		0024	245	0.	1.7	1.7
1		0430	46	0.	.0	.0	1		1430	146	0.	1.2	1.2	2		0030	246	0.	1.7	1.7
1		0436	47	0.	.0	.0	1		1436	147	0.	1.2	1.2	2		0036	247	0.	1.7	1.7
1		0442	48	0.	.0	.0	1		1442	148	0.	1.2	1.2	2		0042	248	0.	1.7	1.7
1		0448	49	0.	.0	.0	1		1448	149	0.	1.2	1.2	2		0048	249	0.	1.7	1.7
1		0454	50	0.	.0	.0	1		1454	150	0.	1.2	1.2	2		0054	250	0.	1.7	1.7
1		0500	51	0.	.0	.0	1		1500	151	0.	1.2	1.2	2		0100	251	0.	1.7	1.7
1		0506	52	0.	.0	.0	1		1506	152	0.	1.2	1.2	2		0106	252	0.	1.7	1.7
1		0512	53	0.	.0	.0	1		1512	153	0.	1.3	1.3	2		0112	253	0.	1.7	1.7
1		0518	54	0.	.0	.0	1		1518	154	0.	1.3	1.3	2		0118	254	0.	1.7	1.7
1		0524	55	0.	.0	.0	1		1524	155	0.	1.3	1.3	2		0124	255	0.	1.7	1.7
1		0530	56	0.	.0	.0	1		1530	156	0.	1.3	1.3	2		0130	256	0.	1.7	1.7
1		0536	57	0.	.0	.0	1		1536	157	0.	1.3	1.3	2		0136	257	0.	1.7	1.7
1		0542	58	0.	.0	.0	1		1542	158	0.	1.3	1.3	2		0142	258	0.	1.7	1.7
1		0548	59	0.	.0	.0	1		1548	159	0.	1.3	1.3	2		0148	259	0.	1.7	1.7
1		0554	60	0.	.0	.0	1		1554	160	0.	1.3	1.3	2		0154	260	0.	1.7	1.7
1		0600	61	0.	.0	.0	1		1600	161	0.	1.3	1.3	2		0200	261	0.	1.7	1.7
1		0606	62	0.	.0	.0	1		1606	162	0.	1.3	1.3	2		0206	262	0.	1.7	1.7
1		0612	63	0.	.0	.0	1		1612	163	0.	1.3	1.3	2		0212	263	0.	1.7	1.7
1		0618	64	0.	.0	.0	1		1618	164	0.	1.3	1.3	2		0218	264	0.	1.7	1.7
1		0624	65	0.	.0	.0	1		1624	165	0.	1.3	1.3	2		0224	265	0.	1.7	1.7
1		0630	66	0.	.0	.0	1		1630	166	0.	1.3	1.3	2		0230	266	0.	1.7	1.7

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   1     0636  67       0.       .0      .0 *  1     1636 167       0.      1.4     1.4 *  2     0236 267       0.      1.7     1.7
   1     0642  68       0.       .0      .0 *  1     1642 168       0.      1.4     1.4 *  2     0242 268       0.      1.7     1.7
   1     0648  69       0.       .0      .0 *  1     1648 169       0.      1.4     1.4 *  2     0248 269       0.      1.7     1.7
   1     0654  70       0.       .0      .0 *  1     1654 170       0.      1.4     1.4 *  2     0254 270       0.      1.7     1.7
   1     0700  71       0.       .0      .0 *  1     1700 171       0.      1.4     1.4 *  2     0300 271       0.      1.7     1.7
   1     0706  72       0.       .0      .0 *  1     1706 172       0.      1.4     1.4 *  2     0306 272       0.      1.7     1.7
   1     0712  73       0.       .0      .0 *  1     1712 173       0.      1.4     1.4 *  2     0312 273       0.      1.7     1.7
   1     0718  74       0.       .0      .0 *  1     1718 174       0.      1.4     1.4 *  2     0318 274       0.      1.7     1.7
   1     0724  75       0.       .0      .0 *  1     1724 175       0.      1.4     1.4 *  2     0324 275       0.      1.7     1.7
   1     0730  76       0.       .0      .0 *  1     1730 176       0.      1.4     1.4 *  2     0330 276       0.      1.7     1.7
   1     0736  77       0.       .0      .0 *  1     1736 177       0.      1.4     1.4 *  2     0336 277       0.      1.7     1.7
   1     0742  78       0.       .0      .0 *  1     1742 178       0.      1.4     1.4 *  2     0342 278       0.      1.7     1.7
   1     0748  79       0.       .0      .0 *  1     1748 179       0.      1.4     1.4 *  2     0348 279       0.      1.7     1.7
   1     0754  80       0.       .0      .0 *  1     1754 180       0.      1.4     1.4 *  2     0354 280       0.      1.7     1.7
   1     0800  81       0.       .0      .0 *  1     1800 181       0.      1.4     1.4 *  2     0400 281       0.      1.7     1.7
   1     0806  82       0.       .0      .0 *  1     1806 182       0.      1.4     1.4 *  2     0406 282       0.      1.7     1.7
   1     0812  83       0.       .0      .0 *  1     1812 183       0.      1.5     1.5 *  2     0412 283       0.      1.7     1.7
   1     0818  84       0.       .0      .0 *  1     1818 184       0.      1.5     1.5 *  2     0418 284       0.      1.7     1.7
   1     0824  85       0.       .0      .0 *  1     1824 185       0.      1.5     1.5 *  2     0424 285       0.      1.7     1.7
   1     0830  86       0.       .0      .0 *  1     1830 186       0.      1.5     1.5 *  2     0430 286       0.      1.7     1.7
   1     0836  87       0.       .0      .0 *  1     1836 187       0.      1.5     1.5 *  2     0436 287       0.      1.7     1.7
   1     0842  88       0.       .0      .0 *  1     1842 188       0.      1.5     1.5 *  2     0442 288       0.      1.7     1.7
   1     0848  89       0.       .0      .0 *  1     1848 189       0.      1.5     1.5 *  2     0448 289       0.      1.7     1.7
   1     0854  90       0.       .0      .0 *  1     1854 190       0.      1.5     1.5 *  2     0454 290       0.      1.7     1.7
   1     0900  91       0.       .0      .0 *  1     1900 191       0.      1.5     1.5 *  2     0500 291       0.      1.7     1.7
   1     0906  92       0.       .0      .0 *  1     1906 192       0.      1.5     1.5 *  2     0506 292       0.      1.7     1.7
   1     0912  93       0.       .0      .0 *  1     1912 193       0.      1.5     1.5 *  2     0512 293       0.      1.7     1.7
   1     0918  94       0.       .0      .0 *  1     1918 194       0.      1.5     1.5 *  2     0518 294       0.      1.7     1.7
   1     0924  95       0.       .0      .0 *  1     1924 195       0.      1.5     1.5 *  2     0524 295       0.      1.7     1.7
   1     0930  96       0.       .0      .0 *  1     1930 196       0.      1.5     1.5 *  2     0530 296       0.      1.7     1.7
   1     0936  97       0.       .0      .0 *  1     1936 197       0.      1.5     1.5 *  2     0536 297       0.      1.7     1.7
   1     0942  98       0.       .0      .0 *  1     1942 198       0.      1.5     1.5 *  2     0542 298       0.      1.7     1.7
   1     0948  99       0.       .0      .0 *  1     1948 199       0.      1.5     1.5 *  2     0548 299       0.      1.7     1.7
   1     0954 100       0.       .0      .0 *  1     1954 200       0.      1.5     1.5 *  2     0554 300       0.      1.7     1.7
                                               *                                               *
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  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+       0.       .00                   0.          0.          0.          0.
                    (INCHES)       .000        .000        .000        .000
                     (AC-FT)         0.          0.          0.          0.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        2.     24.10                   2.          1.          1.          1.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
      1.69     24.50                1.69        1.12         .90         .90

                     CUMULATIVE AREA =     .04 SQ MI


  148 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           3  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

  147 HC          HYDROGRAPH COMBINATION
                       ICOMP           3  NUMBER OF HYDROGRAPHS TO COMBINE

                                                        ***

       ***             ***             ***             ***             ***

                       HYDROGRAPH AT STATION     SWB4
                         FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+      17.     11.80                   2.          1.          1.          1.
                    (INCHES)       .588        .723        .723        .723
                     (AC-FT)         1.          2.          2.          2.

                     CUMULATIVE AREA =     .04 SQ MI


  151 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  152 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
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                     ITYP        STOR  TYPE OF INITIAL CONDITION
                   RSVRIC       -1.00  INITIAL CONDITION
                        X         .00 WORKING R AND D COEFFICIENT

 153 SV            STORAGE          .0    5000.0

 154 SE          ELEVATION         .00   5000.00

 155 SQ          DISCHARGE          0.        1.

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HYDROGRAPH AT STATION RSWB4
PLAN 1, RATIO = 1.00

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	1.4	1.4
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	1.4	1.4
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	1.4	1.4
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	1.4	1.4
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	1.4	1.4
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	1.4	1.4
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	1.4	1.4
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	1.4	1.4
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	1.4	1.4
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	1.4	1.4
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	1.4	1.4
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	1.4	1.4
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	1.4	1.4
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	1.4	1.4
1		0124	15	0.	.0	.0	1		1124	115	0.	.0	.0	1		2124	215	0.	1.4	1.4
1		0130	16	0.	.0	.0	1		1130	116	0.	.1	.1	1		2130	216	0.	1.4	1.4
1		0136	17	0.	.0	.0	1		1136	117	0.	.1	.1	1		2136	217	0.	1.4	1.4
1		0142	18	0.	.0	.0	1		1142	118	0.	.2	.2	1		2142	218	0.	1.4	1.4
1		0148	19	0.	.0	.0	1		1148	119	0.	.4	.4	1		2148	219	0.	1.5	1.5
1		0154	20	0.	.0	.0	1		1154	120	0.	.5	.5	1		2154	220	0.	1.5	1.5
1		0200	21	0.	.0	.0	1		1200	121	0.	.6	.6	1		2200	221	0.	1.5	1.5
1		0206	22	0.	.0	.0	1		1206	122	0.	.7	.7	1		2206	222	0.	1.5	1.5
1		0212	23	0.	.0	.0	1		1212	123	0.	.7	.7	1		2212	223	0.	1.5	1.5
1		0218	24	0.	.0	.0	1		1218	124	0.	.7	.7	1		2218	224	0.	1.5	1.5
1		0224	25	0.	.0	.0	1		1224	125	0.	.8	.8	1		2224	225	0.	1.5	1.5
1		0230	26	0.	.0	.0	1		1230	126	0.	.8	.8	1		2230	226	0.	1.5	1.5
1		0236	27	0.	.0	.0	1		1236	127	0.	.8	.8	1		2236	227	0.	1.5	1.5
1		0242	28	0.	.0	.0	1		1242	128	0.	.8	.8	1		2242	228	0.	1.5	1.5
1		0248	29	0.	.0	.0	1		1248	129	0.	.9	.9	1		2248	229	0.	1.5	1.5
1		0254	30	0.	.0	.0	1		1254	130	0.	.9	.9	1		2254	230	0.	1.5	1.5
1		0300	31	0.	.0	.0	1		1300	131	0.	.9	.9	1		2300	231	0.	1.5	1.5
1		0306	32	0.	.0	.0	1		1306	132	0.	.9	.9	1		2306	232	0.	1.5	1.5
1		0312	33	0.	.0	.0	1		1312	133	0.	.9	.9	1		2312	233	0.	1.5	1.5
1		0318	34	0.	.0	.0	1		1318	134	0.	.9	.9	1		2318	234	0.	1.5	1.5
1		0324	35	0.	.0	.0	1		1324	135	0.	1.0	1.0	1		2324	235	0.	1.5	1.5
1		0330	36	0.	.0	.0	1		1330	136	0.	1.0	1.0	1		2330	236	0.	1.5	1.5
1		0336	37	0.	.0	.0	1		1336	137	0.	1.0	1.0	1		2336	237	0.	1.5	1.5
1		0342	38	0.	.0	.0	1		1342	138	0.	1.0	1.0	1		2342	238	0.	1.5	1.5
1		0348	39	0.	.0	.0	1		1348	139	0.	1.0	1.0	1		2348	239	0.	1.5	1.5
1		0354	40	0.	.0	.0	1		1354	140	0.	1.0	1.0	1		2354	240	0.	1.5	1.5
1		0400	41	0.	.0	.0	1		1400	141	0.	1.0	1.0	2		0000	241	0.	1.5	1.5
1		0406	42	0.	.0	.0	1		1406	142	0.	1.0	1.0	2		0006	242	0.	1.5	1.5
1		0412	43	0.	.0	.0	1		1412	143	0.	1.0	1.0	2		0012	243	0.	1.5	1.5
1		0418	44	0.	.0	.0	1		1418	144	0.	1.0	1.0	2		0018	244	0.	1.5	1.5
1		0424	45	0.	.0	.0	1		1424	145	0.	1.1	1.1	2		0024	245	0.	1.5	1.5
1		0430	46	0.	.0	.0	1		1430	146	0.	1.1	1.1	2		0030	246	0.	1.5	1.5
1		0436	47	0.	.0	.0	1		1436	147	0.	1.1	1.1	2		0036	247	0.	1.5	1.5
1		0442	48	0.	.0	.0	1		1442	148	0.	1.1	1.1	2		0042	248	0.	1.5	1.5
1		0448	49	0.	.0	.0	1		1448	149	0.	1.1	1.1	2		0048	249	0.	1.5	1.5
1		0454	50	0.	.0	.0	1		1454	150	0.	1.1	1.1	2		0054	250	0.	1.5	1.5
1		0500	51	0.	.0	.0	1		1500	151	0.	1.1	1.1	2		0100	251	0.	1.5	1.5
1		0506	52	0.	.0	.0	1		1506	152	0.	1.1	1.1	2		0106	252	0.	1.5	1.5
1		0512	53	0.	.0	.0	1		1512	153	0.	1.1	1.1	2		0112	253	0.	1.5	1.5
1		0518	54	0.	.0	.0	1		1518	154	0.	1.1	1.1	2		0118	254	0.	1.5	1.5
1		0524	55	0.	.0	.0	1		1524	155	0.	1.1	1.1	2		0124	255	0.	1.5	1.5
1		0530	56	0.	.0	.0	1		1530	156	0.	1.1	1.1	2		0130	256	0.	1.5	1.5
1		0536	57	0.	.0	.0	1		1536	157	0.	1.2	1.2	2		0136	257	0.	1.5	1.5
1		0542	58	0.	.0	.0	1		1542	158	0.	1.2	1.2	2		0142	258	0.	1.5	1.5
1		0548	59	0.	.0	.0	1		1548	159	0.	1.2	1.2	2		0148	259	0.	1.5	1.5
1		0554	60	0.	.0	.0	1		1554	160	0.	1.2	1.2	2		0154	260	0.	1.5	1.5
1		0600	61	0.	.0	.0	1		1600	161	0.	1.2	1.2	2		0200	261	0.	1.5	1.5
1		0606	62	0.	.0	.0	1		1606	162	0.	1.2	1.2	2		0206	262	0.	1.5	1.5
1		0612	63	0.	.0	.0	1		1612	163	0.	1.2	1.2	2		0212	263	0.	1.5	1.5
1		0618	64	0.	.0	.0	1		1618	164	0.	1.2	1.2	2		0218	264	0.	1.5	1.5
1		0624	65	0.	.0	.0	1		1624	165	0.	1.2	1.2	2		0224	265	0.	1.5	1.5
1		0630	66	0.	.0	.0	1		1630	166	0.	1.2	1.2	2		0230	266	0.	1.5	1.5
1		0636	67	0.	.0	.0	1		1636	167	0.	1.2	1.2	2		0236	267	0.	1.5	1.5
1		0642	68	0.	.0	.0	1		1642	168	0.	1.2	1.2	2		0242	268	0.	1.5	1.5
1		0648	69	0.	.0	.0	1		1648	169	0.	1.2	1.2	2		0248	269	0.	1.5	1.5
1		0654	70	0.	.0	.0	1		1654	170	0.	1.2	1.2	2		0254	270	0.	1.5	1.5
1		0700	71	0.	.0	.0	1		1700	171	0.	1.2	1.2	2		0300	271	0.	1.5	1.5
1		0706	72	0.	.0	.0	1		1706	172	0.	1.2	1.2	2		0306	272	0.	1.5	1.5

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   1     0712  73       0.       .0      .0 *  1     1712 173       0.      1.2     1.2 *  2     0312 273       0.      1.5     1.5
   1     0718  74       0.       .0      .0 *  1     1718 174       0.      1.3     1.3 *  2     0318 274       0.      1.5     1.5
   1     0724  75       0.       .0      .0 *  1     1724 175       0.      1.3     1.3 *  2     0324 275       0.      1.5     1.5
   1     0730  76       0.       .0      .0 *  1     1730 176       0.      1.3     1.3 *  2     0330 276       0.      1.5     1.5
   1     0736  77       0.       .0      .0 *  1     1736 177       0.      1.3     1.3 *  2     0336 277       0.      1.5     1.5
   1     0742  78       0.       .0      .0 *  1     1742 178       0.      1.3     1.3 *  2     0342 278       0.      1.5     1.5
   1     0748  79       0.       .0      .0 *  1     1748 179       0.      1.3     1.3 *  2     0348 279       0.      1.5     1.5
   1     0754  80       0.       .0      .0 *  1     1754 180       0.      1.3     1.3 *  2     0354 280       0.      1.5     1.5
   1     0800  81       0.       .0      .0 *  1     1800 181       0.      1.3     1.3 *  2     0400 281       0.      1.5     1.5
   1     0806  82       0.       .0      .0 *  1     1806 182       0.      1.3     1.3 *  2     0406 282       0.      1.5     1.5
   1     0812  83       0.       .0      .0 *  1     1812 183       0.      1.3     1.3 *  2     0412 283       0.      1.5     1.5
   1     0818  84       0.       .0      .0 *  1     1818 184       0.      1.3     1.3 *  2     0418 284       0.      1.5     1.5
   1     0824  85       0.       .0      .0 *  1     1824 185       0.      1.3     1.3 *  2     0424 285       0.      1.5     1.5
   1     0830  86       0.       .0      .0 *  1     1830 186       0.      1.3     1.3 *  2     0430 286       0.      1.5     1.5
   1     0836  87       0.       .0      .0 *  1     1836 187       0.      1.3     1.3 *  2     0436 287       0.      1.5     1.5
   1     0842  88       0.       .0      .0 *  1     1842 188       0.      1.3     1.3 *  2     0442 288       0.      1.5     1.5
   1     0848  89       0.       .0      .0 *  1     1848 189       0.      1.3     1.3 *  2     0448 289       0.      1.5     1.5
   1     0854  90       0.       .0      .0 *  1     1854 190       0.      1.3     1.3 *  2     0454 290       0.      1.5     1.5
   1     0900  91       0.       .0      .0 *  1     1900 191       0.      1.3     1.3 *  2     0500 291       0.      1.5     1.5
   1     0906  92       0.       .0      .0 *  1     1906 192       0.      1.4     1.4 *  2     0506 292       0.      1.5     1.5
   1     0912  93       0.       .0      .0 *  1     1912 193       0.      1.4     1.4 *  2     0512 293       0.      1.5     1.5
   1     0918  94       0.       .0      .0 *  1     1918 194       0.      1.4     1.4 *  2     0518 294       0.      1.5     1.5
   1     0924  95       0.       .0      .0 *  1     1924 195       0.      1.4     1.4 *  2     0524 295       0.      1.5     1.5
   1     0930  96       0.       .0      .0 *  1     1930 196       0.      1.4     1.4 *  2     0530 296       0.      1.5     1.5
   1     0936  97       0.       .0      .0 *  1     1936 197       0.      1.4     1.4 *  2     0536 297       0.      1.5     1.5
   1     0942  98       0.       .0      .0 *  1     1942 198       0.      1.4     1.4 *  2     0542 298       0.      1.5     1.5
   1     0948  99       0.       .0      .0 *  1     1948 199       0.      1.4     1.4 *  2     0548 299       0.      1.5     1.5
   1     0954 100       0.       .0      .0 *  1     1954 200       0.      1.4     1.4 *  2     0554 300       0.      1.5     1.5
                                             *                                                 *
 ********************************************************************************************************************************************************

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                        (CFS)
+       0.       .00                    0.          0.          0.          0.
                          (INCHES)      .000        .000        .000        .000
                           (AC-FT)        0.          0.          0.          0.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                     6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        2.     24.00                    2.          1.          1.          1.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
      1.52     24.60                  1.52        1.00         .81         .81

                         CUMULATIVE AREA =     .04 SQ MI


  173 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           3  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

  172 HC          HYDROGRAPH COMBINATION
                        ICOMP           2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                          ***

       ***             ***             ***             ***             ***

                           HYDROGRAPH AT STATION     SWB5
                             FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                        (CFS)
+      15.     11.70                    2.          1.          0.          0.
                          (INCHES)      .588        .722        .722        .722
                           (AC-FT)        1.          1.          1.          1.

                         CUMULATIVE AREA =     .03 SQ MI


  176 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           1  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  177 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                        RSVRIC       -1.00  INITIAL CONDITION
                            X          .00 WORKING R AND D COEFFICIENT

  178 SV            STORAGE          .0    5000.0
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179 SE ELEVATION .00 5000.00

180 SQ DISCHARGE 0. 1.

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HYDROGRAPH AT STATION RSWB5
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	1.1	1.1
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	1.1	1.1
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	1.1	1.1
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	1.1	1.1
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	1.1	1.1
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	1.1	1.1
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	1.1	1.1
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	1.1	1.1
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	1.1	1.1
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	1.1	1.1
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	1.1	1.1
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	1.1	1.1
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	1.1	1.1
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	1.1	1.1
1		0124	15	0.	.0	.0	1		1124	115	0.	.0	.0	1		2124	215	0.	1.1	1.1
1		0130	16	0.	.0	.0	1		1130	116	0.	.0	.0	1		2130	216	0.	1.1	1.1
1		0136	17	0.	.0	.0	1		1136	117	0.	.1	.1	1		2136	217	0.	1.1	1.1
1		0142	18	0.	.0	.0	1		1142	118	0.	.2	.2	1		2142	218	0.	1.1	1.1
1		0148	19	0.	.0	.0	1		1148	119	0.	.3	.3	1		2148	219	0.	1.1	1.1
1		0154	20	0.	.0	.0	1		1154	120	0.	.4	.4	1		2154	220	0.	1.1	1.1
1		0200	21	0.	.0	.0	1		1200	121	0.	.5	.5	1		2200	221	0.	1.1	1.1
1		0206	22	0.	.0	.0	1		1206	122	0.	.5	.5	1		2206	222	0.	1.1	1.1
1		0212	23	0.	.0	.0	1		1212	123	0.	.6	.6	1		2212	223	0.	1.1	1.1
1		0218	24	0.	.0	.0	1		1218	124	0.	.6	.6	1		2218	224	0.	1.1	1.1
1		0224	25	0.	.0	.0	1		1224	125	0.	.6	.6	1		2224	225	0.	1.1	1.1
1		0230	26	0.	.0	.0	1		1230	126	0.	.6	.6	1		2230	226	0.	1.1	1.1
1		0236	27	0.	.0	.0	1		1236	127	0.	.6	.6	1		2236	227	0.	1.1	1.1
1		0242	28	0.	.0	.0	1		1242	128	0.	.6	.6	1		2242	228	0.	1.1	1.1
1		0248	29	0.	.0	.0	1		1248	129	0.	.7	.7	1		2248	229	0.	1.1	1.1
1		0254	30	0.	.0	.0	1		1254	130	0.	.7	.7	1		2254	230	0.	1.1	1.1
1		0300	31	0.	.0	.0	1		1300	131	0.	.7	.7	1		2300	231	0.	1.1	1.1
1		0306	32	0.	.0	.0	1		1306	132	0.	.7	.7	1		2306	232	0.	1.1	1.1
1		0312	33	0.	.0	.0	1		1312	133	0.	.7	.7	1		2312	233	0.	1.1	1.1
1		0318	34	0.	.0	.0	1		1318	134	0.	.7	.7	1		2318	234	0.	1.1	1.1
1		0324	35	0.	.0	.0	1		1324	135	0.	.7	.7	1		2324	235	0.	1.1	1.1
1		0330	36	0.	.0	.0	1		1330	136	0.	.7	.7	1		2330	236	0.	1.1	1.1
1		0336	37	0.	.0	.0	1		1336	137	0.	.7	.7	1		2336	237	0.	1.1	1.1
1		0342	38	0.	.0	.0	1		1342	138	0.	.8	.8	1		2342	238	0.	1.2	1.2
1		0348	39	0.	.0	.0	1		1348	139	0.	.8	.8	1		2348	239	0.	1.2	1.2
1		0354	40	0.	.0	.0	1		1354	140	0.	.8	.8	1		2354	240	0.	1.2	1.2
1		0400	41	0.	.0	.0	1		1400	141	0.	.8	.8	2		0000	241	0.	1.2	1.2
1		0406	42	0.	.0	.0	1		1406	142	0.	.8	.8	2		0006	242	0.	1.2	1.2
1		0412	43	0.	.0	.0	1		1412	143	0.	.8	.8	2		0012	243	0.	1.2	1.2
1		0418	44	0.	.0	.0	1		1418	144	0.	.8	.8	2		0018	244	0.	1.2	1.2
1		0424	45	0.	.0	.0	1		1424	145	0.	.8	.8	2		0024	245	0.	1.2	1.2
1		0430	46	0.	.0	.0	1		1430	146	0.	.8	.8	2		0030	246	0.	1.2	1.2
1		0436	47	0.	.0	.0	1		1436	147	0.	.8	.8	2		0036	247	0.	1.2	1.2
1		0442	48	0.	.0	.0	1		1442	148	0.	.8	.8	2		0042	248	0.	1.2	1.2
1		0448	49	0.	.0	.0	1		1448	149	0.	.8	.8	2		0048	249	0.	1.2	1.2
1		0454	50	0.	.0	.0	1		1454	150	0.	.8	.8	2		0054	250	0.	1.2	1.2
1		0500	51	0.	.0	.0	1		1500	151	0.	.8	.8	2		0100	251	0.	1.2	1.2
1		0506	52	0.	.0	.0	1		1506	152	0.	.8	.8	2		0106	252	0.	1.2	1.2
1		0512	53	0.	.0	.0	1		1512	153	0.	.9	.9	2		0112	253	0.	1.2	1.2
1		0518	54	0.	.0	.0	1		1518	154	0.	.9	.9	2		0118	254	0.	1.2	1.2
1		0524	55	0.	.0	.0	1		1524	155	0.	.9	.9	2		0124	255	0.	1.2	1.2
1		0530	56	0.	.0	.0	1		1530	156	0.	.9	.9	2		0130	256	0.	1.2	1.2
1		0536	57	0.	.0	.0	1		1536	157	0.	.9	.9	2		0136	257	0.	1.2	1.2
1		0542	58	0.	.0	.0	1		1542	158	0.	.9	.9	2		0142	258	0.	1.2	1.2
1		0548	59	0.	.0	.0	1		1548	159	0.	.9	.9	2		0148	259	0.	1.2	1.2
1		0554	60	0.	.0	.0	1		1554	160	0.	.9	.9	2		0154	260	0.	1.2	1.2
1		0600	61	0.	.0	.0	1		1600	161	0.	.9	.9	2		0200	261	0.	1.2	1.2
1		0606	62	0.	.0	.0	1		1606	162	0.	.9	.9	2		0206	262	0.	1.2	1.2
1		0612	63	0.	.0	.0	1		1612	163	0.	.9	.9	2		0212	263	0.	1.2	1.2
1		0618	64	0.	.0	.0	1		1618	164	0.	.9	.9	2		0218	264	0.	1.2	1.2
1		0624	65	0.	.0	.0	1		1624	165	0.	.9	.9	2		0224	265	0.	1.2	1.2
1		0630	66	0.	.0	.0	1		1630	166	0.	.9	.9	2		0230	266	0.	1.2	1.2
1		0636	67	0.	.0	.0	1		1636	167	0.	.9	.9	2		0236	267	0.	1.2	1.2
1		0642	68	0.	.0	.0	1		1642	168	0.	.9	.9	2		0242	268	0.	1.2	1.2
1		0648	69	0.	.0	.0	1		1648	169	0.	.9	.9	2		0248	269	0.	1.2	1.2
1		0654	70	0.	.0	.0	1		1654	170	0.	.9	.9	2		0254	270	0.	1.2	1.2
1		0700	71	0.	.0	.0	1		1700	171	0.	.9	.9	2		0300	271	0.	1.2	1.2
1		0706	72	0.	.0	.0	1		1706	172	0.	.9	.9	2		0306	272	0.	1.2	1.2
1		0712	73	0.	.0	.0	1		1712	173	0.	.9	.9	2		0312	273	0.	1.2	1.2
1		0718	74	0.	.0	.0	1		1718	174	0.	1.0	1.0	2		0318	274	0.	1.2	1.2
1		0724	75	0.	.0	.0	1		1724	175	0.	1.0	1.0	2		0324	275	0.	1.2	1.2
1		0730	76	0.	.0	.0	1		1730	176	0.	1.0	1.0	2		0330	276	0.	1.2	1.2
1		0736	77	0.	.0	.0	1		1736	177	0.	1.0	1.0	2		0336	277	0.	1.2	1.2
1		0742	78	0.	.0	.0	1		1742	178	0.	1.0	1.0	2		0342	278	0.	1.2	1.2

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   1     0748  79       0.       .0      .0 *  1     1748 179       0.      1.0     1.0 *  2     0348 279       0.      1.2     1.2
   1     0754  80       0.       .0      .0 *  1     1754 180       0.      1.0     1.0 *  2     0354 280       0.      1.2     1.2
   1     0800  81       0.       .0      .0 *  1     1800 181       0.      1.0     1.0 *  2     0400 281       0.      1.2     1.2
   1     0806  82       0.       .0      .0 *  1     1806 182       0.      1.0     1.0 *  2     0406 282       0.      1.2     1.2
   1     0812  83       0.       .0      .0 *  1     1812 183       0.      1.0     1.0 *  2     0412 283       0.      1.2     1.2
   1     0818  84       0.       .0      .0 *  1     1818 184       0.      1.0     1.0 *  2     0418 284       0.      1.2     1.2
   1     0824  85       0.       .0      .0 *  1     1824 185       0.      1.0     1.0 *  2     0424 285       0.      1.2     1.2
   1     0830  86       0.       .0      .0 *  1     1830 186       0.      1.0     1.0 *  2     0430 286       0.      1.2     1.2
   1     0836  87       0.       .0      .0 *  1     1836 187       0.      1.0     1.0 *  2     0436 287       0.      1.2     1.2
   1     0842  88       0.       .0      .0 *  1     1842 188       0.      1.0     1.0 *  2     0442 288       0.      1.2     1.2
   1     0848  89       0.       .0      .0 *  1     1848 189       0.      1.0     1.0 *  2     0448 289       0.      1.2     1.2
   1     0854  90       0.       .0      .0 *  1     1854 190       0.      1.0     1.0 *  2     0454 290       0.      1.2     1.2
   1     0900  91       0.       .0      .0 *  1     1900 191       0.      1.0     1.0 *  2     0500 291       0.      1.2     1.2
   1     0906  92       0.       .0      .0 *  1     1906 192       0.      1.0     1.0 *  2     0506 292       0.      1.2     1.2
   1     0912  93       0.       .0      .0 *  1     1912 193       0.      1.0     1.0 *  2     0512 293       0.      1.2     1.2
   1     0918  94       0.       .0      .0 *  1     1918 194       0.      1.0     1.0 *  2     0518 294       0.      1.2     1.2
   1     0924  95       0.       .0      .0 *  1     1924 195       0.      1.0     1.0 *  2     0524 295       0.      1.2     1.2
   1     0930  96       0.       .0      .0 *  1     1930 196       0.      1.0     1.0 *  2     0530 296       0.      1.2     1.2
   1     0936  97       0.       .0      .0 *  1     1936 197       0.      1.0     1.0 *  2     0536 297       0.      1.2     1.2
   1     0942  98       0.       .0      .0 *  1     1942 198       0.      1.0     1.0 *  2     0542 298       0.      1.2     1.2
   1     0948  99       0.       .0      .0 *  1     1948 199       0.      1.0     1.0 *  2     0548 299       0.      1.2     1.2
   1     0954 100       0.       .0      .0 *  1     1954 200       0.      1.1     1.1 *  2     0554 300       0.      1.2     1.2
                                               *                                                *
 ********************************************************************************************************************************************************

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+       0.       .00                   0.          0.          0.          0.
                    (INCHES)      .000        .000        .000        .000
                     (AC-FT)        0.          0.          0.          0.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        1.     23.90                   1.          1.          1.          1.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
      1.15     24.40                 1.15         .76         .61         .61

                      CUMULATIVE AREA =     .03 SQ MI


  206 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           3  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

  205 HC          HYDROGRAPH COMBINATION
                       ICOMP           3  NUMBER OF HYDROGRAPHS TO COMBINE

                                                      ***

       ***             ***             ***             ***             ***

                        HYDROGRAPH AT STATION     SWB8
                          FOR PLAN 1, RATIO = 1.00

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+      10.     11.70                   1.          0.          0.          0.
                    (INCHES)      .590        .724        .724        .724
                     (AC-FT)        1.          1.          1.          1.

                      CUMULATIVE AREA =     .02 SQ MI


  209 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  210 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
                        ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC      -1.00  INITIAL CONDITION
                            X        .00 WORKING R AND D COEFFICIENT

  211 SV            STORAGE          .0    5000.0

  212 SE          ELEVATION         .00   5000.00

  213 SQ          DISCHARGE          0.        1.

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HYDROGRAPH AT STATION RSWB8
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	.6	.6
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	.6	.6
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	.6	.6
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	.6	.6
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	.6	.6
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	.6	.6
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	.6	.6
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	.6	.6
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	.6	.6
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	.6	.6
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	.6	.6
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	.6	.6
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	.6	.6
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	.6	.6
1		0124	15	0.	.0	.0	1		1124	115	0.	.0	.0	1		2124	215	0.	.6	.6
1		0130	16	0.	.0	.0	1		1130	116	0.	.0	.0	1		2130	216	0.	.6	.6
1		0136	17	0.	.0	.0	1		1136	117	0.	.1	.1	1		2136	217	0.	.6	.6
1		0142	18	0.	.0	.0	1		1142	118	0.	.2	.2	1		2142	218	0.	.6	.6
1		0148	19	0.	.0	.0	1		1148	119	0.	.2	.2	1		2148	219	0.	.6	.6
1		0154	20	0.	.0	.0	1		1154	120	0.	.3	.3	1		2154	220	0.	.6	.6
1		0200	21	0.	.0	.0	1		1200	121	0.	.3	.3	1		2200	221	0.	.6	.6
1		0206	22	0.	.0	.0	1		1206	122	0.	.3	.3	1		2206	222	0.	.6	.6
1		0212	23	0.	.0	.0	1		1212	123	0.	.3	.3	1		2212	223	0.	.6	.6
1		0218	24	0.	.0	.0	1		1218	124	0.	.3	.3	1		2218	224	0.	.6	.6
1		0224	25	0.	.0	.0	1		1224	125	0.	.3	.3	1		2224	225	0.	.6	.6
1		0230	26	0.	.0	.0	1		1230	126	0.	.3	.3	1		2230	226	0.	.6	.6
1		0236	27	0.	.0	.0	1		1236	127	0.	.3	.3	1		2236	227	0.	.6	.6
1		0242	28	0.	.0	.0	1		1242	128	0.	.4	.4	1		2242	228	0.	.6	.6
1		0248	29	0.	.0	.0	1		1248	129	0.	.4	.4	1		2248	229	0.	.6	.6
1		0254	30	0.	.0	.0	1		1254	130	0.	.4	.4	1		2254	230	0.	.6	.6
1		0300	31	0.	.0	.0	1		1300	131	0.	.4	.4	1		2300	231	0.	.6	.6
1		0306	32	0.	.0	.0	1		1306	132	0.	.4	.4	1		2306	232	0.	.6	.6
1		0312	33	0.	.0	.0	1		1312	133	0.	.4	.4	1		2312	233	0.	.6	.6
1		0318	34	0.	.0	.0	1		1318	134	0.	.4	.4	1		2318	234	0.	.6	.6
1		0324	35	0.	.0	.0	1		1324	135	0.	.4	.4	1		2324	235	0.	.6	.6
1		0330	36	0.	.0	.0	1		1330	136	0.	.4	.4	1		2330	236	0.	.6	.6
1		0336	37	0.	.0	.0	1		1336	137	0.	.4	.4	1		2336	237	0.	.6	.6
1		0342	38	0.	.0	.0	1		1342	138	0.	.4	.4	1		2342	238	0.	.6	.6
1		0348	39	0.	.0	.0	1		1348	139	0.	.4	.4	1		2348	239	0.	.6	.6
1		0354	40	0.	.0	.0	1		1354	140	0.	.4	.4	1		2354	240	0.	.6	.6
1		0400	41	0.	.0	.0	1		1400	141	0.	.4	.4	2		0000	241	0.	.6	.6
1		0406	42	0.	.0	.0	1		1406	142	0.	.4	.4	2		0006	242	0.	.6	.6
1		0412	43	0.	.0	.0	1		1412	143	0.	.4	.4	2		0012	243	0.	.6	.6
1		0418	44	0.	.0	.0	1		1418	144	0.	.4	.4	2		0018	244	0.	.6	.6
1		0424	45	0.	.0	.0	1		1424	145	0.	.4	.4	2		0024	245	0.	.6	.6
1		0430	46	0.	.0	.0	1		1430	146	0.	.4	.4	2		0030	246	0.	.6	.6
1		0436	47	0.	.0	.0	1		1436	147	0.	.4	.4	2		0036	247	0.	.6	.6
1		0442	48	0.	.0	.0	1		1442	148	0.	.4	.4	2		0042	248	0.	.6	.6
1		0448	49	0.	.0	.0	1		1448	149	0.	.4	.4	2		0048	249	0.	.6	.6
1		0454	50	0.	.0	.0	1		1454	150	0.	.5	.5	2		0054	250	0.	.6	.6
1		0500	51	0.	.0	.0	1		1500	151	0.	.5	.5	2		0100	251	0.	.6	.6
1		0506	52	0.	.0	.0	1		1506	152	0.	.5	.5	2		0106	252	0.	.6	.6
1		0512	53	0.	.0	.0	1		1512	153	0.	.5	.5	2		0112	253	0.	.6	.6
1		0518	54	0.	.0	.0	1		1518	154	0.	.5	.5	2		0118	254	0.	.6	.6
1		0524	55	0.	.0	.0	1		1524	155	0.	.5	.5	2		0124	255	0.	.6	.6
1		0530	56	0.	.0	.0	1		1530	156	0.	.5	.5	2		0130	256	0.	.6	.6
1		0536	57	0.	.0	.0	1		1536	157	0.	.5	.5	2		0136	257	0.	.6	.6
1		0542	58	0.	.0	.0	1		1542	158	0.	.5	.5	2		0142	258	0.	.6	.6
1		0548	59	0.	.0	.0	1		1548	159	0.	.5	.5	2		0148	259	0.	.6	.6
1		0554	60	0.	.0	.0	1		1554	160	0.	.5	.5	2		0154	260	0.	.6	.6
1		0600	61	0.	.0	.0	1		1600	161	0.	.5	.5	2		0200	261	0.	.6	.6
1		0606	62	0.	.0	.0	1		1606	162	0.	.5	.5	2		0206	262	0.	.6	.6
1		0612	63	0.	.0	.0	1		1612	163	0.	.5	.5	2		0212	263	0.	.6	.6
1		0618	64	0.	.0	.0	1		1618	164	0.	.5	.5	2		0218	264	0.	.6	.6
1		0624	65	0.	.0	.0	1		1624	165	0.	.5	.5	2		0224	265	0.	.6	.6
1		0630	66	0.	.0	.0	1		1630	166	0.	.5	.5	2		0230	266	0.	.6	.6
1		0636	67	0.	.0	.0	1		1636	167	0.	.5	.5	2		0236	267	0.	.6	.6
1		0642	68	0.	.0	.0	1		1642	168	0.	.5	.5	2		0242	268	0.	.6	.6
1		0648	69	0.	.0	.0	1		1648	169	0.	.5	.5	2		0248	269	0.	.6	.6
1		0654	70	0.	.0	.0	1		1654	170	0.	.5	.5	2		0254	270	0.	.6	.6
1		0700	71	0.	.0	.0	1		1700	171	0.	.5	.5	2		0300	271	0.	.6	.6
1		0706	72	0.	.0	.0	1		1706	172	0.	.5	.5	2		0306	272	0.	.6	.6
1		0712	73	0.	.0	.0	1		1712	173	0.	.5	.5	2		0312	273	0.	.6	.6
1		0718	74	0.	.0	.0	1		1718	174	0.	.5	.5	2		0318	274	0.	.6	.6
1		0724	75	0.	.0	.0	1		1724	175	0.	.5	.5	2		0324	275	0.	.6	.6
1		0730	76	0.	.0	.0	1		1730	176	0.	.5	.5	2		0330	276	0.	.6	.6
1		0736	77	0.	.0	.0	1		1736	177	0.	.5	.5	2		0336	277	0.	.6	.6
1		0742	78	0.	.0	.0	1		1742	178	0.	.5	.5	2		0342	278	0.	.6	.6
1		0748	79	0.	.0	.0	1		1748	179	0.	.5	.5	2		0348	279	0.	.6	.6
1		0754	80	0.	.0	.0	1		1754	180	0.	.5	.5	2		0354	280	0.	.6	.6
1		0800	81	0.	.0	.0	1		1800	181	0.	.5	.5	2		0400	281	0.	.6	.6
1		0806	82	0.	.0	.0	1		1806	182	0.	.5	.5	2		0406	282	0.	.6	.6
1		0812	83	0.	.0	.0	1		1812	183	0.	.5	.5	2		0412	283	0.	.6	.6
1		0818	84	0.	.0	.0	1		1818	184	0.	.5	.5	2		0418	284	0.	.6	.6

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  1     0824  85       0.       .0      .0 *  1     1824 185       0.       .5      .5 *  2     0424 285       0.       .6      .6
  1     0830  86       0.       .0      .0 *  1     1830 186       0.       .5      .5 *  2     0430 286       0.       .6      .6
  1     0836  87       0.       .0      .0 *  1     1836 187       0.       .5      .5 *  2     0436 287       0.       .6      .6
  1     0842  88       0.       .0      .0 *  1     1842 188       0.       .5      .5 *  2     0442 288       0.       .6      .6
  1     0848  89       0.       .0      .0 *  1     1848 189       0.       .5      .5 *  2     0448 289       0.       .6      .6
  1     0854  90       0.       .0      .0 *  1     1854 190       0.       .5      .5 *  2     0454 290       0.       .6      .6
  1     0900  91       0.       .0      .0 *  1     1900 191       0.       .6      .6 *  2     0500 291       0.       .6      .6
  1     0906  92       0.       .0      .0 *  1     1906 192       0.       .6      .6 *  2     0506 292       0.       .6      .6
  1     0912  93       0.       .0      .0 *  1     1912 193       0.       .6      .6 *  2     0512 293       0.       .6      .6
  1     0918  94       0.       .0      .0 *  1     1918 194       0.       .6      .6 *  2     0518 294       0.       .6      .6
  1     0924  95       0.       .0      .0 *  1     1924 195       0.       .6      .6 *  2     0524 295       0.       .6      .6
  1     0930  96       0.       .0      .0 *  1     1930 196       0.       .6      .6 *  2     0530 296       0.       .6      .6
  1     0936  97       0.       .0      .0 *  1     1936 197       0.       .6      .6 *  2     0536 297       0.       .6      .6
  1     0942  98       0.       .0      .0 *  1     1942 198       0.       .6      .6 *  2     0542 298       0.       .6      .6
  1     0948  99       0.       .0      .0 *  1     1948 199       0.       .6      .6 *  2     0548 299       0.       .6      .6
  1     0954 100       0.       .0      .0 *  1     1954 200       0.       .6      .6 *  2     0554 300       0.       .6      .6
                                                 *                                              *
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  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                      (CFS)
+       0.       .00                   0.          0.          0.          0.
                      (INCHES)      .000        .000        .000        .000
                       (AC-FT)        0.          0.          0.          0.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        1.     23.70                   1.          0.          0.          0.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
       .62     24.00                  .62         .41         .33         .33

                        CUMULATIVE AREA =     .02 SQ MI


  221 KO          OUTPUT CONTROL VARIABLES
                        IPRNT          1  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  222 RS          STORAGE ROUTING
                        NSTPS          1  NUMBER OF SUBREACHES
                         ITYP       STOR  TYPE OF INITIAL CONDITION
                        RSVRIC      -1.00  INITIAL CONDITION
                            X         .00 WORKING R AND D COEFFICIENT

  223 SV            STORAGE          .0    5000.0

  224 SE          ELEVATION         .00   5000.00

  225 SQ          DISCHARGE          0.        1.

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                                              HYDROGRAPH AT STATION   RSUB12
                                                  PLAN 1,   RATIO =  1.00

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                                                 *                                              *                                              *
 DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                                 *                                              *
  1     0000   1       0.       .0      .0 *  1     1000 101       0.       .0      .0 *  1     2000 201       0.       .1      .1
  1     0006   2       0.       .0      .0 *  1     1006 102       0.       .0      .0 *  1     2006 202       0.       .1      .1
  1     0012   3       0.       .0      .0 *  1     1012 103       0.       .0      .0 *  1     2012 203       0.       .1      .1
  1     0018   4       0.       .0      .0 *  1     1018 104       0.       .0      .0 *  1     2018 204       0.       .1      .1
  1     0024   5       0.       .0      .0 *  1     1024 105       0.       .0      .0 *  1     2024 205       0.       .1      .1
  1     0030   6       0.       .0      .0 *  1     1030 106       0.       .0      .0 *  1     2030 206       0.       .1      .1
  1     0036   7       0.       .0      .0 *  1     1036 107       0.       .0      .0 *  1     2036 207       0.       .1      .1
  1     0042   8       0.       .0      .0 *  1     1042 108       0.       .0      .0 *  1     2042 208       0.       .1      .1
  1     0048   9       0.       .0      .0 *  1     1048 109       0.       .0      .0 *  1     2048 209       0.       .1      .1
  1     0054  10       0.       .0      .0 *  1     1054 110       0.       .0      .0 *  1     2054 210       0.       .1      .1
  1     0100  11       0.       .0      .0 *  1     1100 111       0.       .0      .0 *  1     2100 211       0.       .1      .1
  1     0106  12       0.       .0      .0 *  1     1106 112       0.       .0      .0 *  1     2106 212       0.       .1      .1
  1     0112  13       0.       .0      .0 *  1     1112 113       0.       .0      .0 *  1     2112 213       0.       .1      .1
  1     0118  14       0.       .0      .0 *  1     1118 114       0.       .0      .0 *  1     2118 214       0.       .1      .1
  1     0124  15       0.       .0      .0 *  1     1124 115       0.       .0      .0 *  1     2124 215       0.       .1      .1
  1     0130  16       0.       .0      .0 *  1     1130 116       0.       .0      .0 *  1     2130 216       0.       .1      .1
  1     0136  17       0.       .0      .0 *  1     1136 117       0.       .0      .0 *  1     2136 217       0.       .1      .1
  1     0142  18       0.       .0      .0 *  1     1142 118       0.       .0      .0 *  1     2142 218       0.       .1      .1
  1     0148  19       0.       .0      .0 *  1     1148 119       0.       .0      .0 *  1     2148 219       0.       .1      .1
  1     0154  20       0.       .0      .0 *  1     1154 120       0.       .0      .0 *  1     2154 220       0.       .1      .1
  1     0200  21       0.       .0      .0 *  1     1200 121       0.       .1      .1 *  1     2200 221       0.       .1      .1
  1     0206  22       0.       .0      .0 *  1     1206 122       0.       .1      .1 *  1     2206 222       0.       .1      .1
  1     0212  23       0.       .0      .0 *  1     1212 123       0.       .1      .1 *  1     2212 223       0.       .1      .1
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   1     0218  24       0.       .0      .0 *  1     1218 124       0.       .1      .1 *  1     2218 224       0.       .1      .1
   1     0224  25       0.       .0      .0 *  1     1224 125       0.       .1      .1 *  1     2224 225       0.       .1      .1
   1     0230  26       0.       .0      .0 *  1     1230 126       0.       .1      .1 *  1     2230 226       0.       .1      .1
   1     0236  27       0.       .0      .0 *  1     1236 127       0.       .1      .1 *  1     2236 227       0.       .1      .1
   1     0242  28       0.       .0      .0 *  1     1242 128       0.       .1      .1 *  1     2242 228       0.       .1      .1
   1     0248  29       0.       .0      .0 *  1     1248 129       0.       .1      .1 *  1     2248 229       0.       .1      .1
   1     0254  30       0.       .0      .0 *  1     1254 130       0.       .1      .1 *  1     2254 230       0.       .1      .1
   1     0300  31       0.       .0      .0 *  1     1300 131       0.       .1      .1 *  1     2300 231       0.       .1      .1
   1     0306  32       0.       .0      .0 *  1     1306 132       0.       .1      .1 *  1     2306 232       0.       .1      .1
   1     0312  33       0.       .0      .0 *  1     1312 133       0.       .1      .1 *  1     2312 233       0.       .1      .1
   1     0318  34       0.       .0      .0 *  1     1318 134       0.       .1      .1 *  1     2318 234       0.       .1      .1
   1     0324  35       0.       .0      .0 *  1     1324 135       0.       .1      .1 *  1     2324 235       0.       .1      .1
   1     0330  36       0.       .0      .0 *  1     1330 136       0.       .1      .1 *  1     2330 236       0.       .1      .1
   1     0336  37       0.       .0      .0 *  1     1336 137       0.       .1      .1 *  1     2336 237       0.       .1      .1
   1     0342  38       0.       .0      .0 *  1     1342 138       0.       .1      .1 *  1     2342 238       0.       .1      .1
   1     0348  39       0.       .0      .0 *  1     1348 139       0.       .1      .1 *  1     2348 239       0.       .1      .1
   1     0354  40       0.       .0      .0 *  1     1354 140       0.       .1      .1 *  1     2354 240       0.       .1      .1
   1     0400  41       0.       .0      .0 *  1     1400 141       0.       .1      .1 *  2     0000 241       0.       .1      .1
   1     0406  42       0.       .0      .0 *  1     1406 142       0.       .1      .1 *  2     0006 242       0.       .1      .1
   1     0412  43       0.       .0      .0 *  1     1412 143       0.       .1      .1 *  2     0012 243       0.       .1      .1
   1     0418  44       0.       .0      .0 *  1     1418 144       0.       .1      .1 *  2     0018 244       0.       .1      .1
   1     0424  45       0.       .0      .0 *  1     1424 145       0.       .1      .1 *  2     0024 245       0.       .1      .1
   1     0430  46       0.       .0      .0 *  1     1430 146       0.       .1      .1 *  2     0030 246       0.       .1      .1
   1     0436  47       0.       .0      .0 *  1     1436 147       0.       .1      .1 *  2     0036 247       0.       .1      .1
   1     0442  48       0.       .0      .0 *  1     1442 148       0.       .1      .1 *  2     0042 248       0.       .1      .1
   1     0448  49       0.       .0      .0 *  1     1448 149       0.       .1      .1 *  2     0048 249       0.       .1      .1
   1     0454  50       0.       .0      .0 *  1     1454 150       0.       .1      .1 *  2     0054 250       0.       .1      .1
   1     0500  51       0.       .0      .0 *  1     1500 151       0.       .1      .1 *  2     0100 251       0.       .1      .1
   1     0506  52       0.       .0      .0 *  1     1506 152       0.       .1      .1 *  2     0106 252       0.       .1      .1
   1     0512  53       0.       .0      .0 *  1     1512 153       0.       .1      .1 *  2     0112 253       0.       .1      .1
   1     0518  54       0.       .0      .0 *  1     1518 154       0.       .1      .1 *  2     0118 254       0.       .1      .1
   1     0524  55       0.       .0      .0 *  1     1524 155       0.       .1      .1 *  2     0124 255       0.       .1      .1
   1     0530  56       0.       .0      .0 *  1     1530 156       0.       .1      .1 *  2     0130 256       0.       .1      .1
   1     0536  57       0.       .0      .0 *  1     1536 157       0.       .1      .1 *  2     0136 257       0.       .1      .1
   1     0542  58       0.       .0      .0 *  1     1542 158       0.       .1      .1 *  2     0142 258       0.       .1      .1
   1     0548  59       0.       .0      .0 *  1     1548 159       0.       .1      .1 *  2     0148 259       0.       .1      .1
   1     0554  60       0.       .0      .0 *  1     1554 160       0.       .1      .1 *  2     0154 260       0.       .1      .1
   1     0600  61       0.       .0      .0 *  1     1600 161       0.       .1      .1 *  2     0200 261       0.       .1      .1
   1     0606  62       0.       .0      .0 *  1     1606 162       0.       .1      .1 *  2     0206 262       0.       .1      .1
   1     0612  63       0.       .0      .0 *  1     1612 163       0.       .1      .1 *  2     0212 263       0.       .1      .1
   1     0618  64       0.       .0      .0 *  1     1618 164       0.       .1      .1 *  2     0218 264       0.       .1      .1
   1     0624  65       0.       .0      .0 *  1     1624 165       0.       .1      .1 *  2     0224 265       0.       .1      .1
   1     0630  66       0.       .0      .0 *  1     1630 166       0.       .1      .1 *  2     0230 266       0.       .1      .1
   1     0636  67       0.       .0      .0 *  1     1636 167       0.       .1      .1 *  2     0236 267       0.       .1      .1
   1     0642  68       0.       .0      .0 *  1     1642 168       0.       .1      .1 *  2     0242 268       0.       .1      .1
   1     0648  69       0.       .0      .0 *  1     1648 169       0.       .1      .1 *  2     0248 269       0.       .1      .1
   1     0654  70       0.       .0      .0 *  1     1654 170       0.       .1      .1 *  2     0254 270       0.       .1      .1
   1     0700  71       0.       .0      .0 *  1     1700 171       0.       .1      .1 *  2     0300 271       0.       .1      .1
   1     0706  72       0.       .0      .0 *  1     1706 172       0.       .1      .1 *  2     0306 272       0.       .1      .1
   1     0712  73       0.       .0      .0 *  1     1712 173       0.       .1      .1 *  2     0312 273       0.       .1      .1
   1     0718  74       0.       .0      .0 *  1     1718 174       0.       .1      .1 *  2     0318 274       0.       .1      .1
   1     0724  75       0.       .0      .0 *  1     1724 175       0.       .1      .1 *  2     0324 275       0.       .1      .1
   1     0730  76       0.       .0      .0 *  1     1730 176       0.       .1      .1 *  2     0330 276       0.       .1      .1
   1     0736  77       0.       .0      .0 *  1     1736 177       0.       .1      .1 *  2     0336 277       0.       .1      .1
   1     0742  78       0.       .0      .0 *  1     1742 178       0.       .1      .1 *  2     0342 278       0.       .1      .1
   1     0748  79       0.       .0      .0 *  1     1748 179       0.       .1      .1 *  2     0348 279       0.       .1      .1
   1     0754  80       0.       .0      .0 *  1     1754 180       0.       .1      .1 *  2     0354 280       0.       .1      .1
   1     0800  81       0.       .0      .0 *  1     1800 181       0.       .1      .1 *  2     0400 281       0.       .1      .1
   1     0806  82       0.       .0      .0 *  1     1806 182       0.       .1      .1 *  2     0406 282       0.       .1      .1
   1     0812  83       0.       .0      .0 *  1     1812 183       0.       .1      .1 *  2     0412 283       0.       .1      .1
   1     0818  84       0.       .0      .0 *  1     1818 184       0.       .1      .1 *  2     0418 284       0.       .1      .1
   1     0824  85       0.       .0      .0 *  1     1824 185       0.       .1      .1 *  2     0424 285       0.       .1      .1
   1     0830  86       0.       .0      .0 *  1     1830 186       0.       .1      .1 *  2     0430 286       0.       .1      .1
   1     0836  87       0.       .0      .0 *  1     1836 187       0.       .1      .1 *  2     0436 287       0.       .1      .1
   1     0842  88       0.       .0      .0 *  1     1842 188       0.       .1      .1 *  2     0442 288       0.       .1      .1
   1     0848  89       0.       .0      .0 *  1     1848 189       0.       .1      .1 *  2     0448 289       0.       .1      .1
   1     0854  90       0.       .0      .0 *  1     1854 190       0.       .1      .1 *  2     0454 290       0.       .1      .1
   1     0900  91       0.       .0      .0 *  1     1900 191       0.       .1      .1 *  2     0500 291       0.       .1      .1
   1     0906  92       0.       .0      .0 *  1     1906 192       0.       .1      .1 *  2     0506 292       0.       .1      .1
   1     0912  93       0.       .0      .0 *  1     1912 193       0.       .1      .1 *  2     0512 293       0.       .1      .1
   1     0918  94       0.       .0      .0 *  1     1918 194       0.       .1      .1 *  2     0518 294       0.       .1      .1
   1     0924  95       0.       .0      .0 *  1     1924 195       0.       .1      .1 *  2     0524 295       0.       .1      .1
   1     0930  96       0.       .0      .0 *  1     1930 196       0.       .1      .1 *  2     0530 296       0.       .1      .1
   1     0936  97       0.       .0      .0 *  1     1936 197       0.       .1      .1 *  2     0536 297       0.       .1      .1
   1     0942  98       0.       .0      .0 *  1     1942 198       0.       .1      .1 *  2     0542 298       0.       .1      .1
   1     0948  99       0.       .0      .0 *  1     1948 199       0.       .1      .1 *  2     0548 299       0.       .1      .1
   1     0954 100       0.       .0      .0 *  1     1954 200       0.       .1      .1 *  2     0554 300       0.       .1      .1
                                             *                                                  *
 ********************************************************************************************************************************************************

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                      (CFS)
+       0.       .00                 0.          0.          0.          0.
                          (INCHES)      .000        .000        .000        .000
                           (AC-FT)        0.          0.          0.          0.

  PEAK STORAGE   TIME                      MAXIMUM AVERAGE STORAGE
                                   6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        0.     23.50                 0.          0.          0.          0.
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 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                   6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
       .12     24.10                  .12         .08         .06          .06

                        CUMULATIVE AREA =     .00 SQ MI


 233 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

               HYDROGRAPH ROUTING DATA

 234 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
                        ITYP        STOR  TYPE OF INITIAL CONDITION
                       RSVRIC      -1.00  INITIAL CONDITION
                           X         .00 WORKING R AND D COEFFICIENT

 235 SV            STORAGE          .0    5000.0

 236 SE          ELEVATION         .00   5000.00

 237 SQ          DISCHARGE          0.        1.

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HYDROGRAPH AT STATION RSUB12A
PLAN 1, RATIO = 1.00

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	.2	.2
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	.2	.2
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	.2	.2
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	.2	.2
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	.2	.2
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	.2	.2
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	.2	.2
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	.2	.2
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	.2	.2
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	.2	.2
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	.2	.2
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	.2	.2
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	.2	.2
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	.2	.2
1		0124	15	0.	.0	.0	1		1124	115	0.	.0	.0	1		2124	215	0.	.2	.2
1		0130	16	0.	.0	.0	1		1130	116	0.	.0	.0	1		2130	216	0.	.2	.2
1		0136	17	0.	.0	.0	1		1136	117	0.	.0	.0	1		2136	217	0.	.2	.2
1		0142	18	0.	.0	.0	1		1142	118	0.	.1	.1	1		2142	218	0.	.2	.2
1		0148	19	0.	.0	.0	1		1148	119	0.	.1	.1	1		2148	219	0.	.2	.2
1		0154	20	0.	.0	.0	1		1154	120	0.	.1	.1	1		2154	220	0.	.2	.2
1		0200	21	0.	.0	.0	1		1200	121	0.	.1	.1	1		2200	221	0.	.2	.2
1		0206	22	0.	.0	.0	1		1206	122	0.	.1	.1	1		2206	222	0.	.2	.2
1		0212	23	0.	.0	.0	1		1212	123	0.	.1	.1	1		2212	223	0.	.2	.2
1		0218	24	0.	.0	.0	1		1218	124	0.	.1	.1	1		2218	224	0.	.2	.2
1		0224	25	0.	.0	.0	1		1224	125	0.	.1	.1	1		2224	225	0.	.2	.2
1		0230	26	0.	.0	.0	1		1230	126	0.	.1	.1	1		2230	226	0.	.2	.2
1		0236	27	0.	.0	.0	1		1236	127	0.	.1	.1	1		2236	227	0.	.2	.2
1		0242	28	0.	.0	.0	1		1242	128	0.	.1	.1	1		2242	228	0.	.2	.2
1		0248	29	0.	.0	.0	1		1248	129	0.	.1	.1	1		2248	229	0.	.2	.2
1		0254	30	0.	.0	.0	1		1254	130	0.	.1	.1	1		2254	230	0.	.2	.2
1		0300	31	0.	.0	.0	1		1300	131	0.	.1	.1	1		2300	231	0.	.2	.2
1		0306	32	0.	.0	.0	1		1306	132	0.	.1	.1	1		2306	232	0.	.2	.2
1		0312	33	0.	.0	.0	1		1312	133	0.	.1	.1	1		2312	233	0.	.2	.2
1		0318	34	0.	.0	.0	1		1318	134	0.	.1	.1	1		2318	234	0.	.2	.2
1		0324	35	0.	.0	.0	1		1324	135	0.	.1	.1	1		2324	235	0.	.2	.2
1		0330	36	0.	.0	.0	1		1330	136	0.	.1	.1	1		2330	236	0.	.2	.2
1		0336	37	0.	.0	.0	1		1336	137	0.	.1	.1	1		2336	237	0.	.2	.2
1		0342	38	0.	.0	.0	1		1342	138	0.	.1	.1	1		2342	238	0.	.2	.2
1		0348	39	0.	.0	.0	1		1348	139	0.	.1	.1	1		2348	239	0.	.2	.2
1		0354	40	0.	.0	.0	1		1354	140	0.	.1	.1	1		2354	240	0.	.2	.2
1		0400	41	0.	.0	.0	1		1400	141	0.	.1	.1	2		0000	241	0.	.2	.2
1		0406	42	0.	.0	.0	1		1406	142	0.	.1	.1	2		0006	242	0.	.2	.2
1		0412	43	0.	.0	.0	1		1412	143	0.	.1	.1	2		0012	243	0.	.2	.2
1		0418	44	0.	.0	.0	1		1418	144	0.	.1	.1	2		0018	244	0.	.2	.2
1		0424	45	0.	.0	.0	1		1424	145	0.	.1	.1	2		0024	245	0.	.2	.2
1		0430	46	0.	.0	.0	1		1430	146	0.	.1	.1	2		0030	246	0.	.2	.2
1		0436	47	0.	.0	.0	1		1436	147	0.	.1	.1	2		0036	247	0.	.2	.2
1		0442	48	0.	.0	.0	1		1442	148	0.	.1	.1	2		0042	248	0.	.2	.2
1		0448	49	0.	.0	.0	1		1448	149	0.	.1	.1	2		0048	249	0.	.2	.2
1		0454	50	0.	.0	.0	1		1454	150	0.	.1	.1	2		0054	250	0.	.2	.2
1		0500	51	0.	.0	.0	1		1500	151	0.	.1	.1	2		0100	251	0.	.2	.2
1		0506	52	0.	.0	.0	1		1506	152	0.	.1	.1	2		0106	252	0.	.2	.2
1		0512	53	0.	.0	.0	1		1512	153	0.	.1	.1	2		0112	253	0.	.2	.2
1		0518	54	0.	.0	.0	1		1518	154	0.	.2	.2	2		0118	254	0.	.2	.2
1		0524	55	0.	.0	.0	1		1524	155	0.	.2	.2	2		0124	255	0.	.2	.2

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   1     0530  56       0.       .0      .0 *  1     1530 156       0.       .2      .2 *  2     0130 256       0.       .2      .2
   1     0536  57       0.       .0      .0 *  1     1536 157       0.       .2      .2 *  2     0136 257       0.       .2      .2
   1     0542  58       0.       .0      .0 *  1     1542 158       0.       .2      .2 *  2     0142 258       0.       .2      .2
   1     0548  59       0.       .0      .0 *  1     1548 159       0.       .2      .2 *  2     0148 259       0.       .2      .2
   1     0554  60       0.       .0      .0 *  1     1554 160       0.       .2      .2 *  2     0154 260       0.       .2      .2
   1     0600  61       0.       .0      .0 *  1     1600 161       0.       .2      .2 *  2     0200 261       0.       .2      .2
   1     0606  62       0.       .0      .0 *  1     1606 162       0.       .2      .2 *  2     0206 262       0.       .2      .2
   1     0612  63       0.       .0      .0 *  1     1612 163       0.       .2      .2 *  2     0212 263       0.       .2      .2
   1     0618  64       0.       .0      .0 *  1     1618 164       0.       .2      .2 *  2     0218 264       0.       .2      .2
   1     0624  65       0.       .0      .0 *  1     1624 165       0.       .2      .2 *  2     0224 265       0.       .2      .2
   1     0630  66       0.       .0      .0 *  1     1630 166       0.       .2      .2 *  2     0230 266       0.       .2      .2
   1     0636  67       0.       .0      .0 *  1     1636 167       0.       .2      .2 *  2     0236 267       0.       .2      .2
   1     0642  68       0.       .0      .0 *  1     1642 168       0.       .2      .2 *  2     0242 268       0.       .2      .2
   1     0648  69       0.       .0      .0 *  1     1648 169       0.       .2      .2 *  2     0248 269       0.       .2      .2
   1     0654  70       0.       .0      .0 *  1     1654 170       0.       .2      .2 *  2     0254 270       0.       .2      .2
   1     0700  71       0.       .0      .0 *  1     1700 171       0.       .2      .2 *  2     0300 271       0.       .2      .2
   1     0706  72       0.       .0      .0 *  1     1706 172       0.       .2      .2 *  2     0306 272       0.       .2      .2
   1     0712  73       0.       .0      .0 *  1     1712 173       0.       .2      .2 *  2     0312 273       0.       .2      .2
   1     0718  74       0.       .0      .0 *  1     1718 174       0.       .2      .2 *  2     0318 274       0.       .2      .2
   1     0724  75       0.       .0      .0 *  1     1724 175       0.       .2      .2 *  2     0324 275       0.       .2      .2
   1     0730  76       0.       .0      .0 *  1     1730 176       0.       .2      .2 *  2     0330 276       0.       .2      .2
   1     0736  77       0.       .0      .0 *  1     1736 177       0.       .2      .2 *  2     0336 277       0.       .2      .2
   1     0742  78       0.       .0      .0 *  1     1742 178       0.       .2      .2 *  2     0342 278       0.       .2      .2
   1     0748  79       0.       .0      .0 *  1     1748 179       0.       .2      .2 *  2     0348 279       0.       .2      .2
   1     0754  80       0.       .0      .0 *  1     1754 180       0.       .2      .2 *  2     0354 280       0.       .2      .2
   1     0800  81       0.       .0      .0 *  1     1800 181       0.       .2      .2 *  2     0400 281       0.       .2      .2
   1     0806  82       0.       .0      .0 *  1     1806 182       0.       .2      .2 *  2     0406 282       0.       .2      .2
   1     0812  83       0.       .0      .0 *  1     1812 183       0.       .2      .2 *  2     0412 283       0.       .2      .2
   1     0818  84       0.       .0      .0 *  1     1818 184       0.       .2      .2 *  2     0418 284       0.       .2      .2
   1     0824  85       0.       .0      .0 *  1     1824 185       0.       .2      .2 *  2     0424 285       0.       .2      .2
   1     0830  86       0.       .0      .0 *  1     1830 186       0.       .2      .2 *  2     0430 286       0.       .2      .2
   1     0836  87       0.       .0      .0 *  1     1836 187       0.       .2      .2 *  2     0436 287       0.       .2      .2
   1     0842  88       0.       .0      .0 *  1     1842 188       0.       .2      .2 *  2     0442 288       0.       .2      .2
   1     0848  89       0.       .0      .0 *  1     1848 189       0.       .2      .2 *  2     0448 289       0.       .2      .2
   1     0854  90       0.       .0      .0 *  1     1854 190       0.       .2      .2 *  2     0454 290       0.       .2      .2
   1     0900  91       0.       .0      .0 *  1     1900 191       0.       .2      .2 *  2     0500 291       0.       .2      .2
   1     0906  92       0.       .0      .0 *  1     1906 192       0.       .2      .2 *  2     0506 292       0.       .2      .2
   1     0912  93       0.       .0      .0 *  1     1912 193       0.       .2      .2 *  2     0512 293       0.       .2      .2
   1     0918  94       0.       .0      .0 *  1     1918 194       0.       .2      .2 *  2     0518 294       0.       .2      .2
   1     0924  95       0.       .0      .0 *  1     1924 195       0.       .2      .2 *  2     0524 295       0.       .2      .2
   1     0930  96       0.       .0      .0 *  1     1930 196       0.       .2      .2 *  2     0530 296       0.       .2      .2
   1     0936  97       0.       .0      .0 *  1     1936 197       0.       .2      .2 *  2     0536 297       0.       .2      .2
   1     0942  98       0.       .0      .0 *  1     1942 198       0.       .2      .2 *  2     0542 298       0.       .2      .2
   1     0948  99       0.       .0      .0 *  1     1948 199       0.       .2      .2 *  2     0548 299       0.       .2      .2
   1     0954 100       0.       .0      .0 *  1     1954 200       0.       .2      .2 *  2     0554 300       0.       .2      .2
                                                    *                                          *

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  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                    (CFS)
+       0.       .00                  0.          0.          0.           0.
                (INCHES)       .000        .000        .000         .000
                 (AC-FT)         0.          0.          0.           0.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        0.     23.60                  0.          0.          0.           0.

  PEAK STAGE    TIME                         MAXIMUM AVERAGE STAGE
                                    6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
       .20     24.00                 .20         .13         .11          .11

                          CUMULATIVE AREA =     .01 SQ MI


  245 KO          OUTPUT CONTROL VARIABLES
                        IPRNT           1  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

                HYDROGRAPH ROUTING DATA

  246 RS          STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        STOR  TYPE OF INITIAL CONDITION
                        RSVRIC       -1.00  INITIAL CONDITION
                            X         .00 WORKING R AND D COEFFICIENT

  247 SV            STORAGE          .0    5000.0

  248 SE          ELEVATION         .00   5000.00

  249 SQ          DISCHARGE          0.        1.

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                                                HYDROGRAPH AT STATION   RSUB3A
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PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	.0	1		1000	101	0.	.0	.0	1		2000	201	0.	.1	.1
1		0006	2	0.	.0	.0	1		1006	102	0.	.0	.0	1		2006	202	0.	.1	.1
1		0012	3	0.	.0	.0	1		1012	103	0.	.0	.0	1		2012	203	0.	.1	.1
1		0018	4	0.	.0	.0	1		1018	104	0.	.0	.0	1		2018	204	0.	.1	.1
1		0024	5	0.	.0	.0	1		1024	105	0.	.0	.0	1		2024	205	0.	.1	.1
1		0030	6	0.	.0	.0	1		1030	106	0.	.0	.0	1		2030	206	0.	.2	.2
1		0036	7	0.	.0	.0	1		1036	107	0.	.0	.0	1		2036	207	0.	.2	.2
1		0042	8	0.	.0	.0	1		1042	108	0.	.0	.0	1		2042	208	0.	.2	.2
1		0048	9	0.	.0	.0	1		1048	109	0.	.0	.0	1		2048	209	0.	.2	.2
1		0054	10	0.	.0	.0	1		1054	110	0.	.0	.0	1		2054	210	0.	.2	.2
1		0100	11	0.	.0	.0	1		1100	111	0.	.0	.0	1		2100	211	0.	.2	.2
1		0106	12	0.	.0	.0	1		1106	112	0.	.0	.0	1		2106	212	0.	.2	.2
1		0112	13	0.	.0	.0	1		1112	113	0.	.0	.0	1		2112	213	0.	.2	.2
1		0118	14	0.	.0	.0	1		1118	114	0.	.0	.0	1		2118	214	0.	.2	.2
1		0124	15	0.	.0	.0	1		1124	115	0.	.0	.0	1		2124	215	0.	.2	.2
1		0130	16	0.	.0	.0	1		1130	116	0.	.0	.0	1		2130	216	0.	.2	.2
1		0136	17	0.	.0	.0	1		1136	117	0.	.0	.0	1		2136	217	0.	.2	.2
1		0142	18	0.	.0	.0	1		1142	118	0.	.0	.0	1		2142	218	0.	.2	.2
1		0148	19	0.	.0	.0	1		1148	119	0.	.0	.0	1		2148	219	0.	.2	.2
1		0154	20	0.	.0	.0	1		1154	120	0.	.1	.1	1		2154	220	0.	.2	.2
1		0200	21	0.	.0	.0	1		1200	121	0.	.1	.1	1		2200	221	0.	.2	.2
1		0206	22	0.	.0	.0	1		1206	122	0.	.1	.1	1		2206	222	0.	.2	.2
1		0212	23	0.	.0	.0	1		1212	123	0.	.1	.1	1		2212	223	0.	.2	.2
1		0218	24	0.	.0	.0	1		1218	124	0.	.1	.1	1		2218	224	0.	.2	.2
1		0224	25	0.	.0	.0	1		1224	125	0.	.1	.1	1		2224	225	0.	.2	.2
1		0230	26	0.	.0	.0	1		1230	126	0.	.1	.1	1		2230	226	0.	.2	.2
1		0236	27	0.	.0	.0	1		1236	127	0.	.1	.1	1		2236	227	0.	.2	.2
1		0242	28	0.	.0	.0	1		1242	128	0.	.1	.1	1		2242	228	0.	.2	.2
1		0248	29	0.	.0	.0	1		1248	129	0.	.1	.1	1		2248	229	0.	.2	.2
1		0254	30	0.	.0	.0	1		1254	130	0.	.1	.1	1		2254	230	0.	.2	.2
1		0300	31	0.	.0	.0	1		1300	131	0.	.1	.1	1		2300	231	0.	.2	.2
1		0306	32	0.	.0	.0	1		1306	132	0.	.1	.1	1		2306	232	0.	.2	.2
1		0312	33	0.	.0	.0	1		1312	133	0.	.1	.1	1		2312	233	0.	.2	.2
1		0318	34	0.	.0	.0	1		1318	134	0.	.1	.1	1		2318	234	0.	.2	.2
1		0324	35	0.	.0	.0	1		1324	135	0.	.1	.1	1		2324	235	0.	.2	.2
1		0330	36	0.	.0	.0	1		1330	136	0.	.1	.1	1		2330	236	0.	.2	.2
1		0336	37	0.	.0	.0	1		1336	137	0.	.1	.1	1		2336	237	0.	.2	.2
1		0342	38	0.	.0	.0	1		1342	138	0.	.1	.1	1		2342	238	0.	.2	.2
1		0348	39	0.	.0	.0	1		1348	139	0.	.1	.1	1		2348	239	0.	.2	.2
1		0354	40	0.	.0	.0	1		1354	140	0.	.1	.1	1		2354	240	0.	.2	.2
1		0400	41	0.	.0	.0	1		1400	141	0.	.1	.1	2		0000	241	0.	.2	.2
1		0406	42	0.	.0	.0	1		1406	142	0.	.1	.1	2		0006	242	0.	.2	.2
1		0412	43	0.	.0	.0	1		1412	143	0.	.1	.1	2		0012	243	0.	.2	.2
1		0418	44	0.	.0	.0	1		1418	144	0.	.1	.1	2		0018	244	0.	.2	.2
1		0424	45	0.	.0	.0	1		1424	145	0.	.1	.1	2		0024	245	0.	.2	.2
1		0430	46	0.	.0	.0	1		1430	146	0.	.1	.1	2		0030	246	0.	.2	.2
1		0436	47	0.	.0	.0	1		1436	147	0.	.1	.1	2		0036	247	0.	.2	.2
1		0442	48	0.	.0	.0	1		1442	148	0.	.1	.1	2		0042	248	0.	.2	.2
1		0448	49	0.	.0	.0	1		1448	149	0.	.1	.1	2		0048	249	0.	.2	.2
1		0454	50	0.	.0	.0	1		1454	150	0.	.1	.1	2		0054	250	0.	.2	.2
1		0500	51	0.	.0	.0	1		1500	151	0.	.1	.1	2		0100	251	0.	.2	.2
1		0506	52	0.	.0	.0	1		1506	152	0.	.1	.1	2		0106	252	0.	.2	.2
1		0512	53	0.	.0	.0	1		1512	153	0.	.1	.1	2		0112	253	0.	.2	.2
1		0518	54	0.	.0	.0	1		1518	154	0.	.1	.1	2		0118	254	0.	.2	.2
1		0524	55	0.	.0	.0	1		1524	155	0.	.1	.1	2		0124	255	0.	.2	.2
1		0530	56	0.	.0	.0	1		1530	156	0.	.1	.1	2		0130	256	0.	.2	.2
1		0536	57	0.	.0	.0	1		1536	157	0.	.1	.1	2		0136	257	0.	.2	.2
1		0542	58	0.	.0	.0	1		1542	158	0.	.1	.1	2		0142	258	0.	.2	.2
1		0548	59	0.	.0	.0	1		1548	159	0.	.1	.1	2		0148	259	0.	.2	.2
1		0554	60	0.	.0	.0	1		1554	160	0.	.1	.1	2		0154	260	0.	.2	.2
1		0600	61	0.	.0	.0	1		1600	161	0.	.1	.1	2		0200	261	0.	.2	.2
1		0606	62	0.	.0	.0	1		1606	162	0.	.1	.1	2		0206	262	0.	.2	.2
1		0612	63	0.	.0	.0	1		1612	163	0.	.1	.1	2		0212	263	0.	.2	.2
1		0618	64	0.	.0	.0	1		1618	164	0.	.1	.1	2		0218	264	0.	.2	.2
1		0624	65	0.	.0	.0	1		1624	165	0.	.1	.1	2		0224	265	0.	.2	.2
1		0630	66	0.	.0	.0	1		1630	166	0.	.1	.1	2		0230	266	0.	.2	.2
1		0636	67	0.	.0	.0	1		1636	167	0.	.1	.1	2		0236	267	0.	.2	.2
1		0642	68	0.	.0	.0	1		1642	168	0.	.1	.1	2		0242	268	0.	.2	.2
1		0648	69	0.	.0	.0	1		1648	169	0.	.1	.1	2		0248	269	0.	.2	.2
1		0654	70	0.	.0	.0	1		1654	170	0.	.1	.1	2		0254	270	0.	.2	.2
1		0700	71	0.	.0	.0	1		1700	171	0.	.1	.1	2		0300	271	0.	.2	.2
1		0706	72	0.	.0	.0	1		1706	172	0.	.1	.1	2		0306	272	0.	.2	.2
1		0712	73	0.	.0	.0	1		1712	173	0.	.1	.1	2		0312	273	0.	.2	.2
1		0718	74	0.	.0	.0	1		1718	174	0.	.1	.1	2		0318	274	0.	.2	.2
1		0724	75	0.	.0	.0	1		1724	175	0.	.1	.1	2		0324	275	0.	.2	.2
1		0730	76	0.	.0	.0	1		1730	176	0.	.1	.1	2		0330	276	0.	.2	.2
1		0736	77	0.	.0	.0	1		1736	177	0.	.1	.1	2		0336	277	0.	.2	.2
1		0742	78	0.	.0	.0	1		1742	178	0.	.1	.1	2		0342	278	0.	.2	.2
1		0748	79	0.	.0	.0	1		1748	179	0.	.1	.1	2		0348	279	0.	.2	.2
1		0754	80	0.	.0	.0	1		1754	180	0.	.1	.1	2		0354	280	0.	.2	.2
1		0800	81	0.	.0	.0	1		1800	181	0.	.1	.1	2		0400	281	0.	.2	.2
1		0806	82	0.	.0	.0	1		1806	182	0.	.1	.1	2		0406	282	0.	.2	.2
1		0812	83	0.	.0	.0	1		1812	183	0.	.1	.1	2		0412	283	0.	.2	.2
1		0818	84	0.	.0	.0	1		1818	184	0.	.1	.1	2		0418	284	0.	.2	.2
1		0824	85	0.	.0	.0	1		1824	185	0.	.1	.1	2		0424	285	0.	.2	.2
1		0830	86	0.	.0	.0	1		1830	186	0.	.1	.1	2		0430	286	0.	.2	.2
1		0836	87	0.	.0	.0	1		1836	187	0.	.1	.1	2		0436	287	0.	.2	.2

```
   1     0842  88       0.       .0      .0 *  1     1842 188       0.       .1      .1 *  2     0442 288       0.       .2      .2
   1     0848  89       0.       .0      .0 *  1     1848 189       0.       .1      .1 *  2     0448 289       0.       .2      .2
   1     0854  90       0.       .0      .0 *  1     1854 190       0.       .1      .1 *  2     0454 290       0.       .2      .2
   1     0900  91       0.       .0      .0 *  1     1900 191       0.       .1      .1 *  2     0500 291       0.       .2      .2
   1     0906  92       0.       .0      .0 *  1     1906 192       0.       .1      .1 *  2     0506 292       0.       .2      .2
   1     0912  93       0.       .0      .0 *  1     1912 193       0.       .1      .1 *  2     0512 293       0.       .2      .2
   1     0918  94       0.       .0      .0 *  1     1918 194       0.       .1      .1 *  2     0518 294       0.       .2      .2
   1     0924  95       0.       .0      .0 *  1     1924 195       0.       .1      .1 *  2     0524 295       0.       .2      .2
   1     0930  96       0.       .0      .0 *  1     1930 196       0.       .1      .1 *  2     0530 296       0.       .2      .2
   1     0936  97       0.       .0      .0 *  1     1936 197       0.       .1      .1 *  2     0536 297       0.       .2      .2
   1     0942  98       0.       .0      .0 *  1     1942 198       0.       .1      .1 *  2     0542 298       0.       .2      .2
   1     0948  99       0.       .0      .0 *  1     1948 199       0.       .1      .1 *  2     0548 299       0.       .2      .2
   1     0954 100       0.       .0      .0 *  1     1954 200       0.       .1      .1 *  2     0554 300       0.       .2      .2
                                             *                                                  *
 ************************************************************************************************************************************************

  PEAK FLOW     TIME                        MAXIMUM AVERAGE FLOW
                                   6-HR        24-HR       72-HR     29.90-HR
+   (CFS)       (HR)
                        (CFS)
+       0.       .00                  0.          0.          0.          0.
                          (INCHES)    .000        .000        .000        .000
                           (AC-FT)      0.          0.          0.          0.

 PEAK STORAGE   TIME                      MAXIMUM AVERAGE STORAGE
                                   6-HR        24-HR       72-HR     29.90-HR
+  (AC-FT)      (HR)
        0.     23.90                    0.          0.          0.          0.

  PEAK STAGE    TIME                        MAXIMUM AVERAGE STAGE
                                   6-HR        24-HR       72-HR     29.90-HR
+   (FEET)      (HR)
       .16     24.30                   .16         .11         .09         .09

                          CUMULATIVE AREA =     .00 SQ MI

1

               PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                                   FLOWS IN CUBIC FEET PER SECOND,  AREA IN SQUARE MILES
                                                TIME TO PEAK IN HOURS


                                                                          RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION     AREA    PLAN                        RATIO 1
                                                                     1.00

 HYDROGRAPH AT
+                  SUB1       .03     1   FLOW                      16.
                                           TIME                    11.70

 ROUTED TO
+                 RSUB1       .03     1   FLOW                      15.
                                           TIME                    11.70

 HYDROGRAPH AT
+                  SUB2       .01     1   FLOW                       6.
                                           TIME                    11.70

  2 COMBINED AT
+                 CWPS1       .04     1   FLOW                      20.
                                           TIME                    11.70

 HYDROGRAPH AT
+                  SLLE       .03     1   FLOW                      14.
                                           TIME                    11.80

 ROUTED TO
+                 RSLLE       .03     1   FLOW                      13.
                                           TIME                    11.80

  2 COMBINED AT
+                  CWPS       .07     1   FLOW                      32.
                                           TIME                    11.70

 ROUTED TO
+                 RCWPS       .07     1   FLOW                       0.
                                           TIME                     .00

                                         ** PEAK STAGES IN FEET **
                                         1   STAGE                 2.59
                                             TIME                24.40

 HYDROGRAPH AT
+                 SUB2A       .02     1   FLOW                       9.
                                           TIME                    11.70

 ROUTED TO
+                RSUB2A       .02     1   FLOW                       9.
                                           TIME                    11.80

 HYDROGRAPH AT
+                 SUB2B       .01     1   FLOW                       5.
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                                        TIME        11.70

 HYDROGRAPH AT
+                 SUB2C       .01     1   FLOW           4.
                                        TIME        11.70

 ROUTED TO
+                RSUB2C       .01     1   FLOW           4.
                                        TIME        11.70

 HYDROGRAPH AT
+                  SUB3       .01     1   FLOW           4.
                                        TIME        11.80

  4 COMBINED AT
+                  SWB1       .04     1   FLOW          21.
                                        TIME        11.70

 ROUTED TO
+                 RSWB1       .04     1   FLOW           0.
                                        TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE        1.69
                                           TIME        24.50

 HYDROGRAPH AT
+                  SUB4       .03     1   FLOW          15.
                                        TIME        11.80

 ROUTED TO
+                 RSUB4       .03     1   FLOW          15.
                                        TIME        11.80

 HYDROGRAPH AT
+                  SUB5       .00     1   FLOW           3.
                                        TIME        11.70

 ROUTED TO
+                 RSUB5       .00     1   FLOW           3.
                                        TIME        11.70

 HYDROGRAPH AT
+                 SUB5A       .00     1   FLOW           2.
                                        TIME        11.70

  3 COMBINED AT
+                  SWB4       .04     1   FLOW          17.
                                        TIME        11.80

 ROUTED TO
+                 RSWB4       .04     1   FLOW           0.
                                        TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE        1.52
                                           TIME        24.60

 HYDROGRAPH AT
+                  SUB6       .02     1   FLOW          10.
                                        TIME        11.80

 HYDROGRAPH AT
+                  SUB7       .01     1   FLOW           5.
                                        TIME        11.70

 ROUTED TO
+                 RSUB7       .01     1   FLOW           5.
                                        TIME        11.70

  2 COMBINED AT
+                  SWB5       .03     1   FLOW          15.
                                        TIME        11.70

 ROUTED TO
+                 RSWB5       .03     1   FLOW           0.
                                        TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE        1.15
                                           TIME        24.40

 HYDROGRAPH AT
+                  SUB8       .00     1   FLOW           3.
                                        TIME        11.70

 ROUTED TO
+                 RSUB8       .00     1   FLOW           3.
                                        TIME        11.70

 HYDROGRAPH AT
+                  SUB9       .01     1   FLOW           4.
                                        TIME        11.70
```

```
 ROUTED TO
+                  RSUB9       .01     1   FLOW           4.
                                           TIME        11.70

 HYDROGRAPH AT
+                  SUB10       .01     1   FLOW           3.
                                           TIME        11.70

  3 COMBINED AT
+                   SWB8       .02     1   FLOW          10.
                                           TIME        11.70

 ROUTED TO
+                  RSWB8       .02     1   FLOW           0.
                                           TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE         .62
                                           TIME        24.00

 HYDROGRAPH AT
+                  SUB12       .00     1   FLOW           2.
                                           TIME        11.70

 ROUTED TO
+                 RSUB12       .00     1   FLOW           0.
                                           TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE         .12
                                           TIME        24.10

 HYDROGRAPH AT
+                 SUB12A       .01     1   FLOW           3.
                                           TIME        11.70

 ROUTED TO
+                RSUB12A       .01     1   FLOW           0.
                                           TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE         .20
                                           TIME        24.00

 HYDROGRAPH AT
+                  SUB3A       .00     1   FLOW           2.
                                           TIME        11.70

 ROUTED TO
+                 RSUB3A       .00     1   FLOW           0.
                                           TIME          .00

                                       ** PEAK STAGES IN FEET **
                                       1   STAGE         .16
                                           TIME        24.30

 HYDROGRAPH AT
+                  SUB11       .02     1   FLOW           7.
                                           TIME        11.90
1
                                           SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                               (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                    INTERPOLATED TO
                                                                                  COMPUTATION INTERVAL
            ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                      PEAK                                     PEAK

                                  (MIN)     (CFS)      (MIN)     (IN)     (MIN)     (CFS)     (MIN)       (IN)

          FOR PLAN = 1  RATIO=  .00
             RSUB1  MANE         2.37     15.48    703.67       .72      6.00     14.70    702.00         .72


 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1056E+01 EXCESS= .0000E+00 OUTFLOW= .1056E+01 BASIN STORAGE= .2975E-03 PERCENT ERROR=    .0


          FOR PLAN = 1  RATIO=  .00
             RSLLE  MANE          .83     13.55    708.84       .72      6.00     13.47    708.00         .72


 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1095E+01 EXCESS= .0000E+00 OUTFLOW= .1095E+01 BASIN STORAGE= .5327E-04 PERCENT ERROR=    .0


          FOR PLAN = 1  RATIO=  .00
            RSUB2A  MANE         1.16      9.20    704.51       .72      6.00      9.02    708.00         .72


 CONTINUITY SUMMARY (AC-FT) - INFLOW= .7208E+00 EXCESS= .0000E+00 OUTFLOW= .7208E+00 BASIN STORAGE= .1059E-03 PERCENT ERROR=    .0


          FOR PLAN = 1  RATIO=  .00
            RSUB2C  MANE         1.15      3.86    703.26       .72      6.00      3.82    702.00         .72
```

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2467E+00 EXCESS= .0000E+00 OUTFLOW= .2467E+00 BASIN STORAGE= .8328E-04 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RSUB4	MANE	.37	14.82	708.41	.72	6.00	14.73	708.00	.72	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1253E+01 EXCESS= .0000E+00 OUTFLOW= .1253E+01 BASIN STORAGE= .3586E-04 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RSUB5	MANE	.66	2.69	701.79	.72	6.00	2.69	702.00	.72	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1657E+00 EXCESS= .0000E+00 OUTFLOW= .1657E+00 BASIN STORAGE= .4239E-04 PERCENT ERROR= .0

FOR PLAN = 1 RATIO= .00

RSUB7	MANE	2.44	5.12	703.56	.72	6.00	4.92	702.00	.72	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3468E+00 EXCESS= .0000E+00 OUTFLOW= .3469E+00 BASIN STORAGE= .2294E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00

RSUB8	MANE	1.48	2.66	702.00	.72	6.00	2.66	702.00	.73	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1696E+00 EXCESS= .0000E+00 OUTFLOW= .1696E+00 BASIN STORAGE= .1069E-03 PERCENT ERROR= -.1

FOR PLAN = 1 RATIO= .00

RSUB9	MANE	.39	4.03	702.18	.72	6.00	4.03	702.00	.72	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2505E+00 EXCESS= .0000E+00 OUTFLOW= .2505E+00 BASIN STORAGE= .2838E-04 PERCENT ERROR= .0

*** NORMAL END OF HEC-1 ***

Attachment 5
Updated Runoff and Run-On Hydraulic Calculations

Worksheets

Worksheet for CWPS Ditch Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	5.00	%
Normal Depth	1.00	ft
Left Side Slope	3.00	H:V
Right Side Slope	15.00	H:V

Results		
Discharge	74.81	cfs
Flow Area	9.0	ft²
Wetted Perimeter	18.2	ft
Hydraulic Radius	0.49	ft
Top Width	18.00	ft
Critical Depth	1.34	ft
Critical Slope	1.06	%
Velocity	8.31	ft/s
Velocity Head	1.07	ft
Specific Energy	2.07	ft
Froude Number	2.072	
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.00	ft
Critical Depth	1.34	ft
Channel Slope	5.00	%
Critical Slope	1.06	%

Worksheet for V-DITCH 1 Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	2.00	%
Normal Depth	1.00	ft
Left Side Slope	20.00	H:V
Right Side Slope	2.00	H:V

Results		
Discharge	57.79	cfs
Flow Area	11.0	ft²
Wetted Perimeter	22.3	ft
Hydraulic Radius	0.49	ft
Top Width	22.00	ft
Critical Depth	1.11	ft
Critical Slope	1.12	%
Velocity	5.25	ft/s
Velocity Head	0.43	ft
Specific Energy	1.43	ft
Froude Number	1.310	
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.00	ft
Critical Depth	1.11	ft
Channel Slope	2.00	%
Critical Slope	1.12	%

Worksheet for V-DITCH 2 (MIN SLOPE) Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	0.30	%
Normal Depth	1.50	ft
Left Side Slope	20.00	H:V
Right Side Slope	20.00	H:V

Results		
Discharge	120.83	cfs
Flow Area	45.0	ft²
Wetted Perimeter	60.1	ft
Hydraulic Radius	0.75	ft
Top Width	60.00	ft
Critical Depth	1.18	ft
Critical Slope	1.09	%
Velocity	2.69	ft/s
Velocity Head	0.11	ft
Specific Energy	1.61	ft
Froude Number	0.547	
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	0.00	ft/s
Upstream Velocity	0.00	ft/s
Normal Depth	1.50	ft
Critical Depth	1.18	ft
Channel Slope	0.30	%
Critical Slope	1.09	%

Worksheet for V-DITCH 2 (MAX SLOPE) Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	2.50	%
Normal Depth	1.00	ft
Left Side Slope	4.00	H:V
Right Side Slope	3.00	H:V

Results		
Discharge	20.18	cfs
Flow Area	3.5	ft²
Wetted Perimeter	7.3	ft
Hydraulic Radius	0.48	ft
Top Width	7.00	ft
Critical Depth	1.16	ft
Critical Slope	1.15	%
Velocity	5.76	ft/s
Velocity Head	0.52	ft
Specific Energy	1.52	ft
Froude Number	1.437	
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.00	ft
Critical Depth	1.16	ft
Channel Slope	2.50	%
Critical Slope	1.15	%

Worksheet for V-DITCH 3 Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	2.00	%
Normal Depth	1.00	ft
Left Side Slope	25.00	H:V
Right Side Slope	2.50	H:V

Results		
Discharge	72.44	cfs
Flow Area	13.8	ft²
Wetted Perimeter	27.7	ft
Hydraulic Radius	0.50	ft
Top Width	27.50	ft
Critical Depth	1.12	ft
Critical Slope	1.12	%
Velocity	5.27	ft/s
Velocity Head	0.43	ft
Specific Energy	1.43	ft
Froude Number	1.313	
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.00	ft
Critical Depth	1.12	ft
Channel Slope	2.00	%
Critical Slope	1.12	%

Worksheet for BERM 2 Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	1.60	%
Normal Depth	1.50	ft
Left Side Slope	2.50	H:V
Right Side Slope	2.50	H:V
Bottom Width	10.00	ft

Results		
Discharge	169.31	cfs
Flow Area	20.6	ft²
Wetted Perimeter	18.1	ft
Hydraulic Radius	1.14	ft
Top Width	17.50	ft
Critical Depth	1.77	ft
Critical Slope	0.86	%
Velocity	8.21	ft/s
Velocity Head	1.05	ft
Specific Energy	2.55	ft
Froude Number	1.333	
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.50	ft
Critical Depth	1.77	ft
Channel Slope	1.60	%
Critical Slope	0.86	%

Worksheet for BERM 4 Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	0.35	%
Normal Depth	1.00	ft
Left Side Slope	8.00	H:V
Right Side Slope	6.00	H:V

Results		
Discharge	15.40	cfs
Flow Area	7.0	ft²
Wetted Perimeter	14.1	ft
Hydraulic Radius	0.49	ft
Top Width	14.00	ft
Critical Depth	0.79	ft
Critical Slope	1.26	%
Velocity	2.20	ft/s
Velocity Head	0.08	ft
Specific Energy	1.08	ft
Froude Number	0.549	
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	0.00	ft/s
Upstream Velocity	0.00	ft/s
Normal Depth	1.00	ft
Critical Depth	0.79	ft
Channel Slope	0.35	%
Critical Slope	1.26	%

Worksheet for AZ CROSSING (SUB4) Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

Input Data		
Roughness Coefficient	0.025	
Channel Slope	1.00	%
Normal Depth	1.00	ft
Left Side Slope	5.00	H:V
Right Side Slope	5.00	H:V
Bottom Width	15.00	ft

Results		
Discharge	101.90	cfs
Flow Area	20.0	ft²
Wetted Perimeter	25.2	ft
Hydraulic Radius	0.79	ft
Top Width	25.00	ft
Critical Depth	1.00	ft
Critical Slope	0.99	%
Velocity	5.10	ft/s
Velocity Head	0.40	ft
Specific Energy	1.40	ft
Froude Number	1.004	
Flow Type	Supercritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.00	ft
Critical Depth	1.00	ft
Channel Slope	1.00	%
Critical Slope	0.99	%

Worksheet for Run-On SLLE Ditch Capacity

Project Description	
Friction Method	Manning Formula
Solve For	Discharge

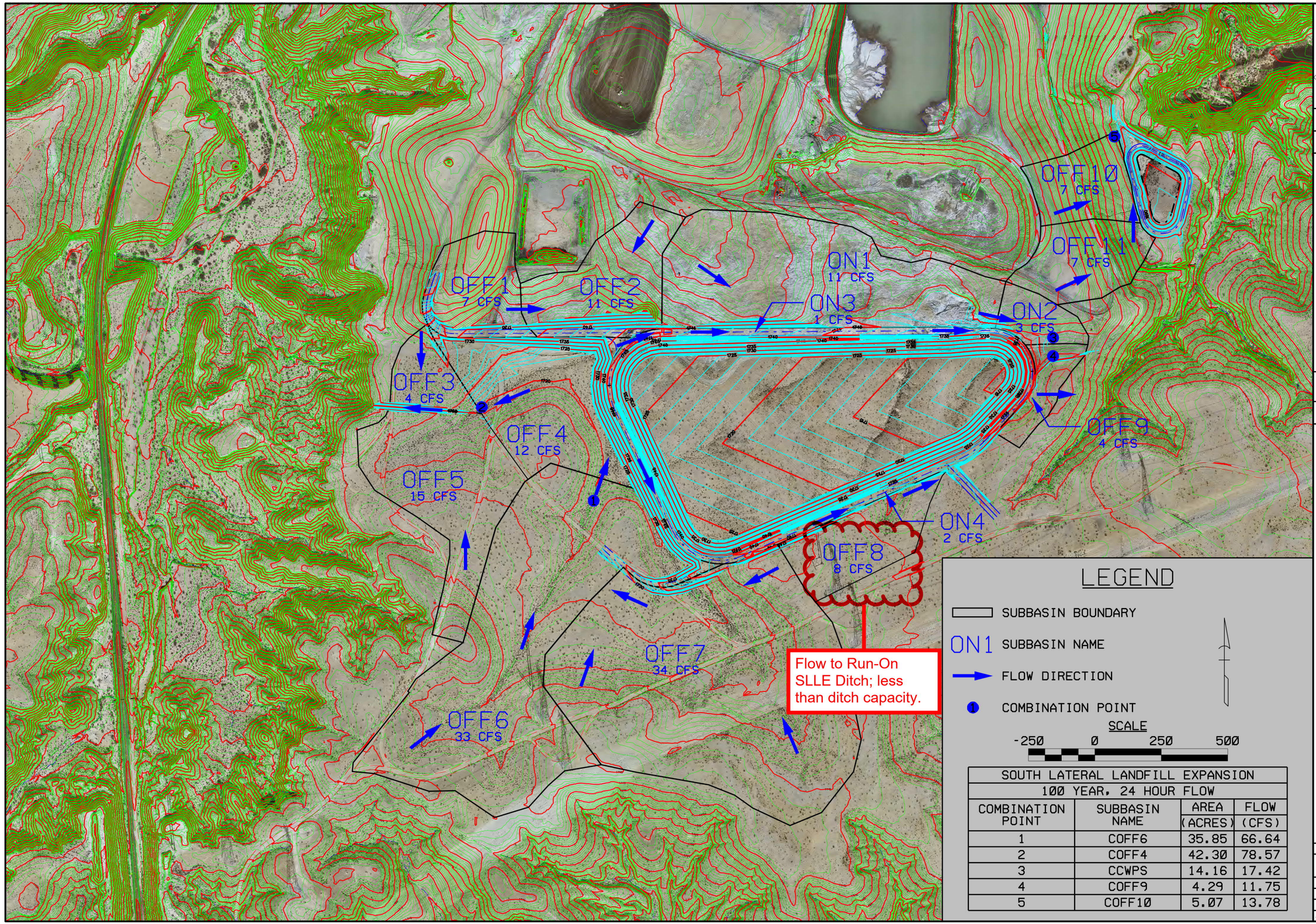
Input Data		
Roughness Coefficient	0.025	
Channel Slope	0.70	%
Normal Depth	1.00	ft
Left Side Slope	6.00	H:V
Right Side Slope	4.00	H:V

Results		
Discharge	15.45	cfs
Flow Area	5.0	ft²
Wetted Perimeter	10.2	ft
Hydraulic Radius	0.49	ft
Top Width	10.00	ft
Critical Depth	0.90	ft
Critical Slope	1.22	%
Velocity	3.09	ft/s
Velocity Head	0.15	ft
Specific Energy	1.15	ft
Froude Number	0.771	
Flow Type	Subcritical	

GVF Input Data		
Downstream Depth	0.00	ft
Length	0.0	ft
Number Of Steps	0	

GVF Output Data		
Upstream Depth	0.00	ft
Profile Description	N/A	
Profile Headloss	0.00	ft
Downstream Velocity	0.00	ft/s
Upstream Velocity	0.00	ft/s
Normal Depth	1.00	ft
Critical Depth	0.90	ft
Channel Slope	0.70	%
Critical Slope	1.22	%

SLLE Drainage Map



LEGEND

- SUBBASIN BOUNDARY
- ON1 SUBBASIN NAME
- FLOW DIRECTION
- COMBINATION POINT

SCALE

-250 0 250 500

SOUTH LATERAL LANDFILL EXPANSION 100 YEAR, 24 HOUR FLOW			
COMBINATION POINT	SUBBASIN NAME	AREA (ACRES)	FLOW (CFS)
1	COFF6	35.85	66.64
2	COFF4	42.30	78.57
3	CCWPS	14.16	17.42
4	COFF9	4.29	11.75
5	COFF10	5.07	13.78

PRELIMINARY NOT FOR CONSTRUCTION

NO	DATE	DESCRIPTION	DSGN	SWD
NO.	DATE	REVISION	BY	APVD
DSGN	MS	DR SB CHK JG	APVD	JG

2485 VILLAGE VIEW DRIVE, SUITE 350
HENDERSON, NEVADA 89074
PHONE: 702-368-6175

CH2MHILL

REID GARDNER STATION
Facility Improvement Program
Moapa, Nevada

SUBBASIN MAP
SOUTH LATERAL LANDFIL EXPANSION
NVE

DATE
PROJ 387230
DWG
SHEET

PRELIMINARY - NOT FOR CONSTRUCTION

NDM-LAS:RGS Mesa Facility IDP\ NVE_SLLE_SPBala_Working.dgn PLOT DATE: $PLOTDATE PLOT TIME: $PLOTTIME

Culvert Calculations

HY-8 Culvert Analysis Report

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 0 cfs

Design Flow: 19 cfs

Maximum Flow: 19 cfs

Table 1 - Summary of Culvert Flows at Crossing: SWB5

Headwater Elevation (ft)	Total Discharge (cfs)	SWB5 Culvert Discharge (cfs)	Roadway Discharge (cfs)	Iterations
1741.25	0.00	0.00	0.00	1
1741.88	1.90	1.90	0.00	1
1742.16	3.80	3.80	0.00	1
1742.41	5.70	5.70	0.00	1
1742.62	7.60	7.60	0.00	1
1742.81	9.50	9.50	0.00	1
1742.99	11.40	11.40	0.00	1
1743.17	13.30	13.30	0.00	1
1743.35	15.20	15.20	0.00	1
1743.55	17.10	17.10	0.00	1
1743.76	19.00	19.00	0.00	1
1746.00	32.45	32.45	0.00	Overtopping

Rating Curve Plot for Crossing: SWB5

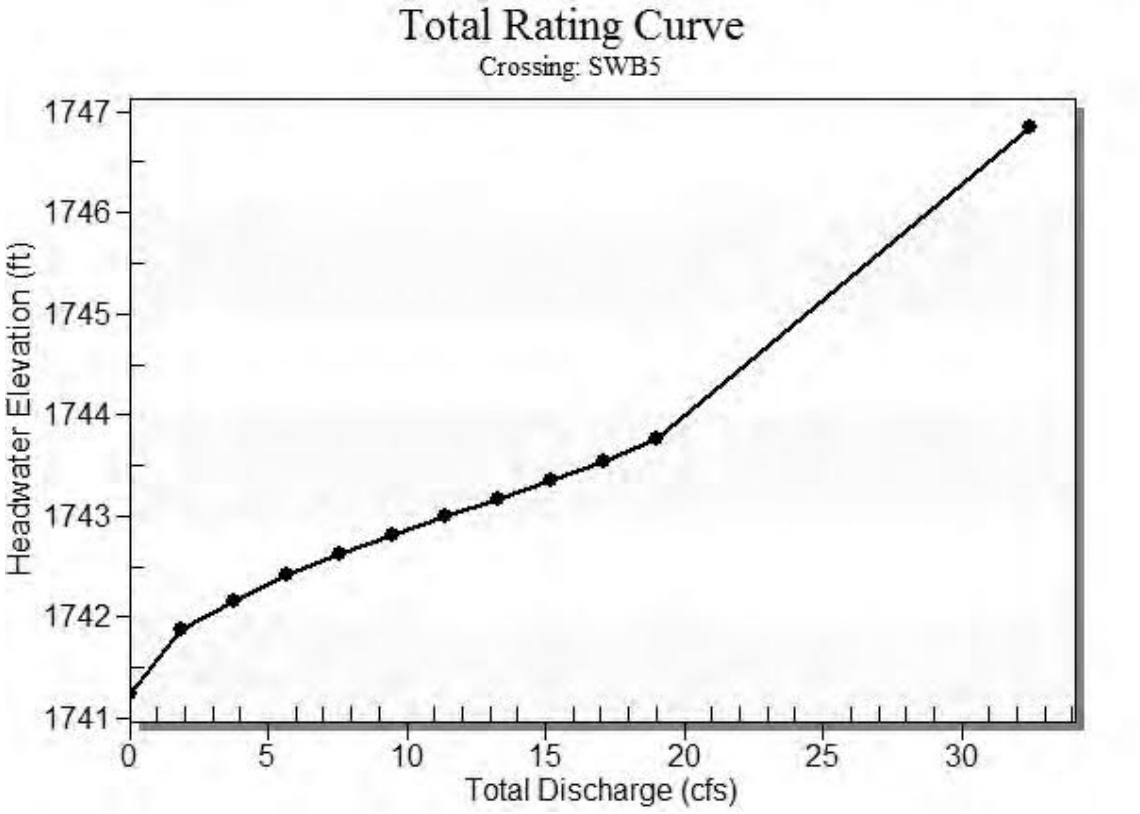


Table 2 - Culvert Summary Table: SWB5 Culvert

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
0.00	0.00	1741.25	0.000	0.000	0-NF	0.000	0.000	0.000	0.000	0.000	0.000
1.90	1.90	1741.88	0.632	0.0*	1-S2n	0.296	0.476	0.296	0.508	6.376	3.675
3.80	3.80	1742.16	0.914	0.0*	1-S2n	0.426	0.678	0.434	0.659	7.479	4.371
5.70	5.70	1742.41	1.159	0.0*	1-S2n	0.530	0.841	0.530	0.768	8.524	4.837
7.60	7.60	1742.62	1.374	0.0*	1-S2n	0.612	0.980	0.612	0.855	9.284	5.198
9.50	9.50	1742.81	1.563	0.0*	1-S2n	0.691	1.098	0.701	0.930	9.652	5.496
11.40	11.40	1742.99	1.740	0.0*	1-S2n	0.763	1.207	0.788	0.995	9.893	5.752
13.30	13.30	1743.17	1.916	0.0*	1-S2n	0.829	1.310	0.829	1.055	10.792	5.978
15.20	15.20	1743.35	2.099	0.0*	5-S2n	0.896	1.401	0.924	1.109	10.711	6.181
17.10	17.10	1743.55	2.297	0.058	5-S2n	0.958	1.489	0.988	1.159	11.052	6.366
19.00	19.00	1743.76	2.513	0.610	5-S2n	1.019	1.566	1.058	1.206	11.271	6.536

* Full Flow Headwater elevation is below inlet invert.

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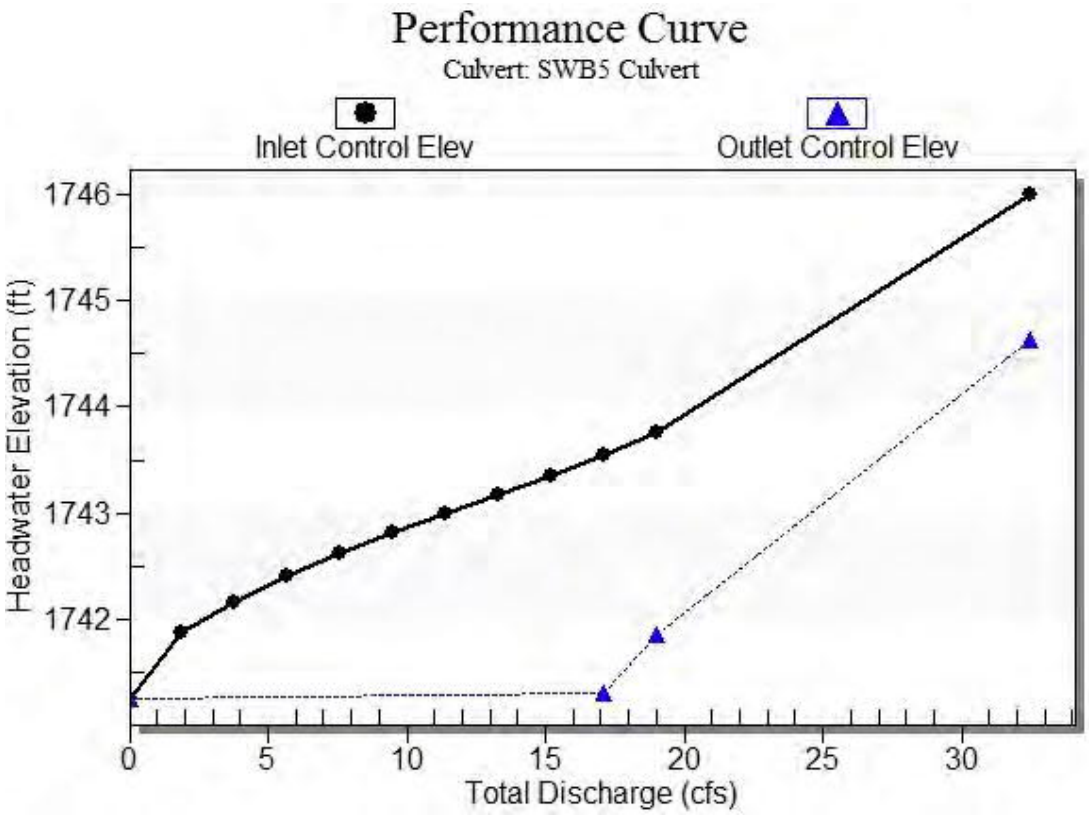
Straight Culvert

Inlet Elevation (invert): 1741.25 ft, Outlet Elevation (invert): 1738.72 ft

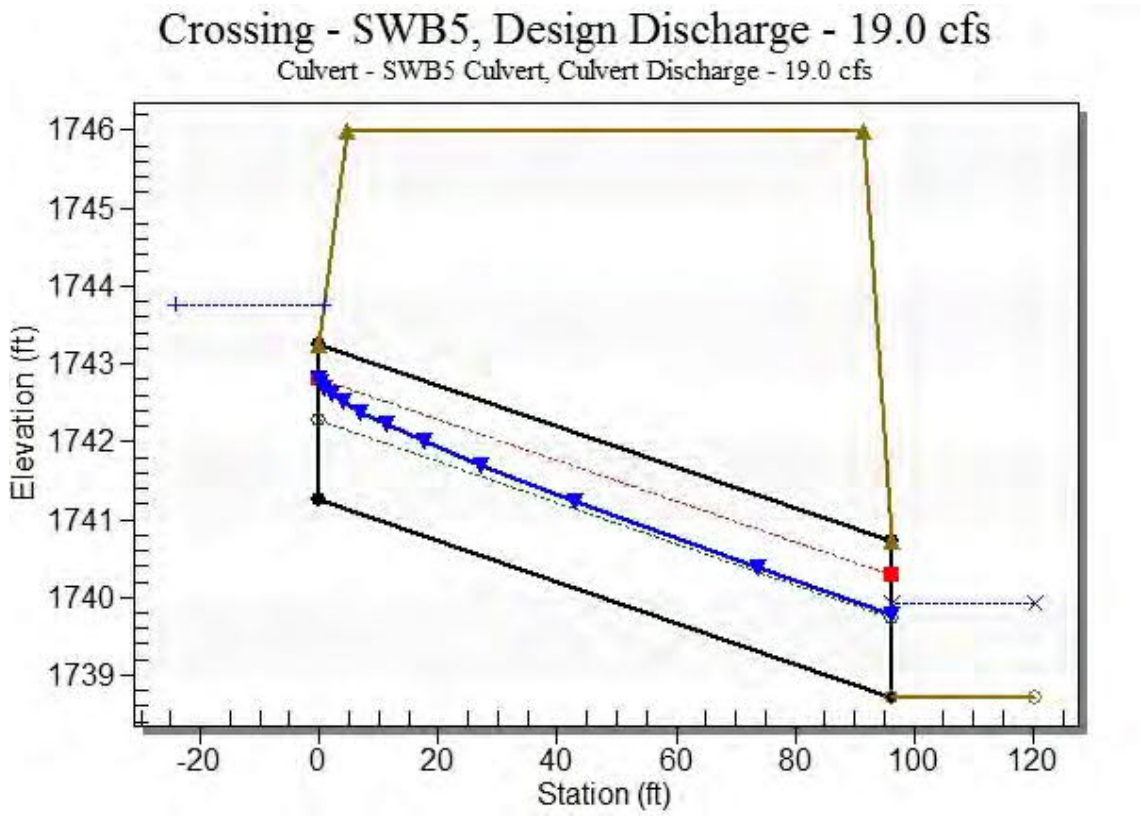
Culvert Length: 96.26 ft, Culvert Slope: 0.0263

****

Culvert Performance Curve Plot: SWB5 Culvert



Water Surface Profile Plot for Culvert: SWB5 Culvert



Site Data - SWB5 Culvert

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 1741.25 ft

Outlet Station: 96.23 ft

Outlet Elevation: 1738.72 ft

Number of Barrels: 1

Culvert Data Summary - SWB5 Culvert

Barrel Shape: Circular

Barrel Diameter: 2.00 ft

Barrel Material: Concrete

Embedment: 0.00 in

Barrel Manning's n: 0.0130

Culvert Type: Straight

Inlet Configuration: Grooved End Projecting

Inlet Depression: NONE

Table 3 - Downstream Channel Rating Curve (Crossing: SWB5)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
0.00	1738.72	0.00	0.00	0.00	0.00
1.90	1739.23	0.51	3.68	1.52	1.28
3.80	1739.38	0.66	4.37	1.97	1.34
5.70	1739.49	0.77	4.84	2.30	1.38
7.60	1739.58	0.86	5.20	2.56	1.40
9.50	1739.65	0.93	5.50	2.78	1.42
11.40	1739.72	1.00	5.75	2.98	1.44
13.30	1739.77	1.05	5.98	3.16	1.45
15.20	1739.83	1.11	6.18	3.32	1.46
17.10	1739.88	1.16	6.37	3.47	1.47
19.00	1739.93	1.21	6.54	3.61	1.48

Tailwater Channel Data - SWB5

Tailwater Channel Option: Triangular Channel

Side Slope (H:V): 2.00 (_:1)

Channel Slope: 0.0480

Channel Manning's n: 0.0330

Channel Invert Elevation: 1738.72 ft

Roadway Data for Crossing: SWB5

Roadway Profile Shape: Constant Roadway Elevation

Crest Length: 20.00 ft

Crest Elevation: 1746.00 ft

Roadway Surface: Paved

Roadway Top Width: 87.00 ft

HY-8 Culvert Analysis Report

Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow

Minimum Flow: 1 cfs

Design Flow: 10 cfs

Maximum Flow: 15 cfs

Table 1 - Summary of Culvert Flows at Crossing: SWB8 Culvert

Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
1731.97	1.00	1.00	0.00	1
1732.27	2.40	2.40	0.00	1
1732.52	3.80	3.80	0.00	1
1732.73	5.20	5.20	0.00	1
1732.93	6.60	6.60	0.00	1
1733.14	8.00	8.00	0.00	1
1733.39	9.40	9.40	0.00	1
1733.50	10.00	10.00	0.00	1
1733.99	12.20	12.20	0.00	1
1734.37	13.60	13.60	0.00	1
1734.69	15.00	14.71	0.26	18
1734.66	14.61	14.61	0.00	Overtopping

Rating Curve Plot for Crossing: SWB8 Culvert

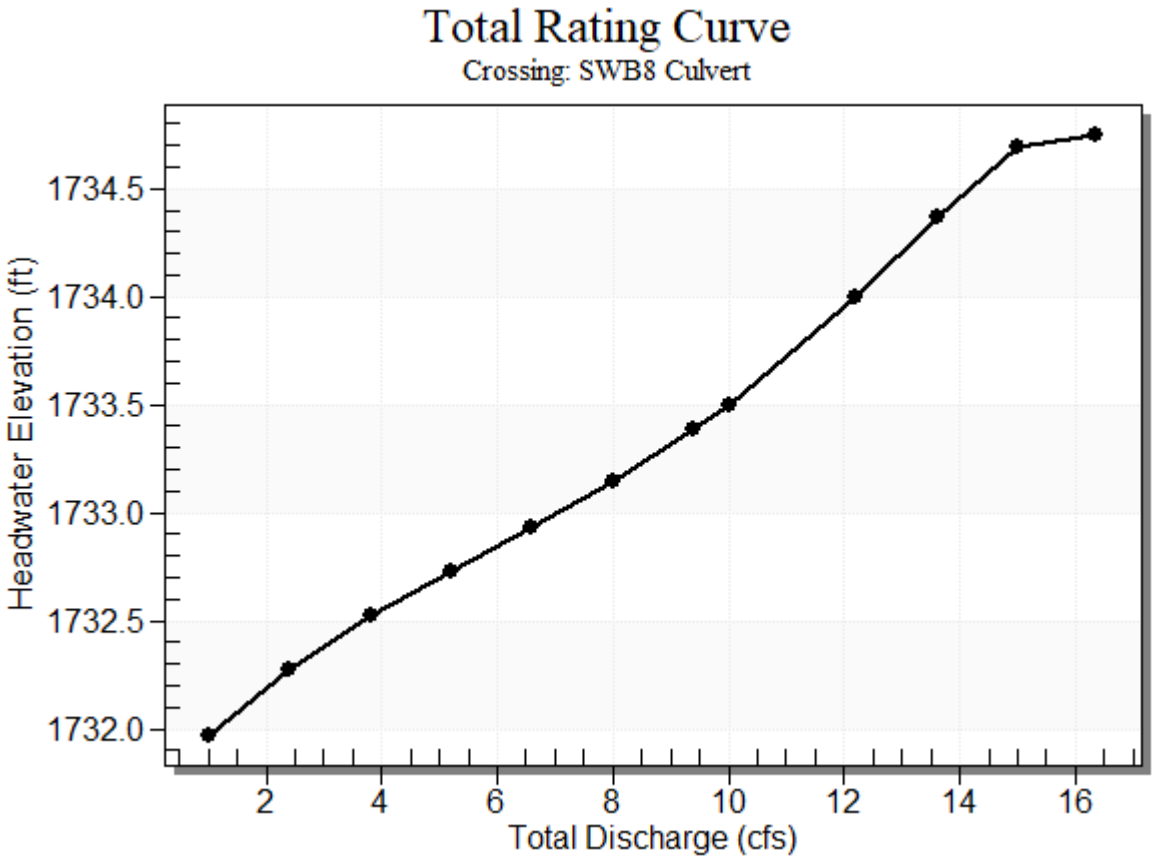


Table 2 - Culvert Summary Table: Culvert 1

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
1.00	1.00	1731.97	0.493	0.0*	1-S2n	0.224	0.369	0.232	0.037	5.653	3.344
2.40	2.40	1732.27	0.789	0.0*	1-S2n	0.345	0.582	0.356	0.062	7.280	4.699
3.80	3.80	1732.52	1.040	0.0*	1-S2n	0.436	0.745	0.453	0.082	8.175	5.618
5.20	5.20	1732.73	1.249	0.0*	1-S2n	0.513	0.876	0.535	0.099	8.880	6.340
6.60	6.60	1732.93	1.448	0.0*	1-S2n	0.584	0.991	0.605	0.114	9.568	6.942
8.00	8.00	1733.14	1.662	0.0*	5-S2n	0.650	1.092	0.650	0.128	10.549	7.464
9.40	9.40	1733.39	1.905	0.0*	5-S2n	0.712	1.183	0.746	0.141	10.364	7.933
10.00	10.00	1733.50	2.021	0.0*	5-S2n	0.739	1.218	0.768	0.146	10.625	8.122
12.20	12.20	1733.99	2.514	0.407	5-S2n	0.834	1.322	0.834	0.164	11.705	8.747
13.60	13.60	1734.37	2.885	0.935	5-S2n	0.895	1.370	0.948	0.175	11.206	9.108
15.00	14.71	1734.69	3.210	1.387	5-S2n	0.944	1.396	0.944	0.186	12.185	9.445

* Full Flow Headwater elevation is below inlet invert.

****

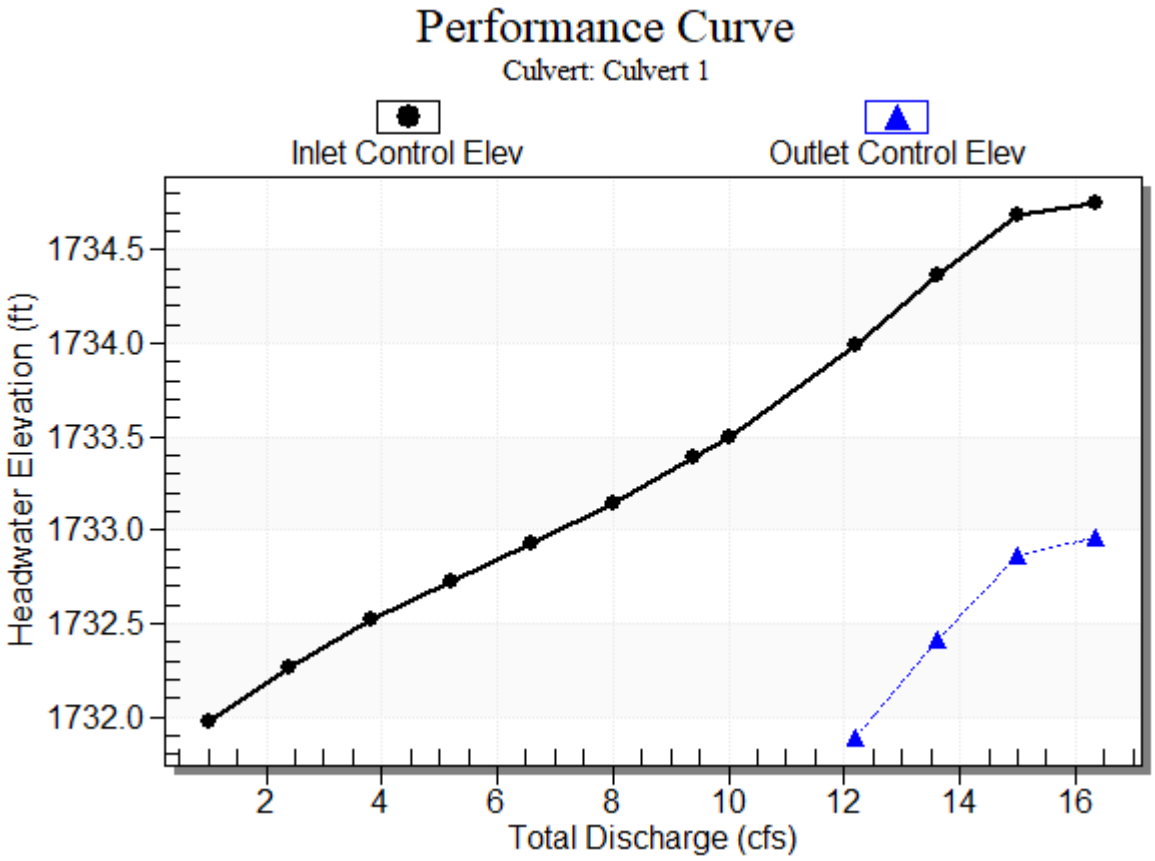
Straight Culvert

Inlet Elevation (invert): 1731.48 ft, Outlet Elevation (invert): 1728.40 ft

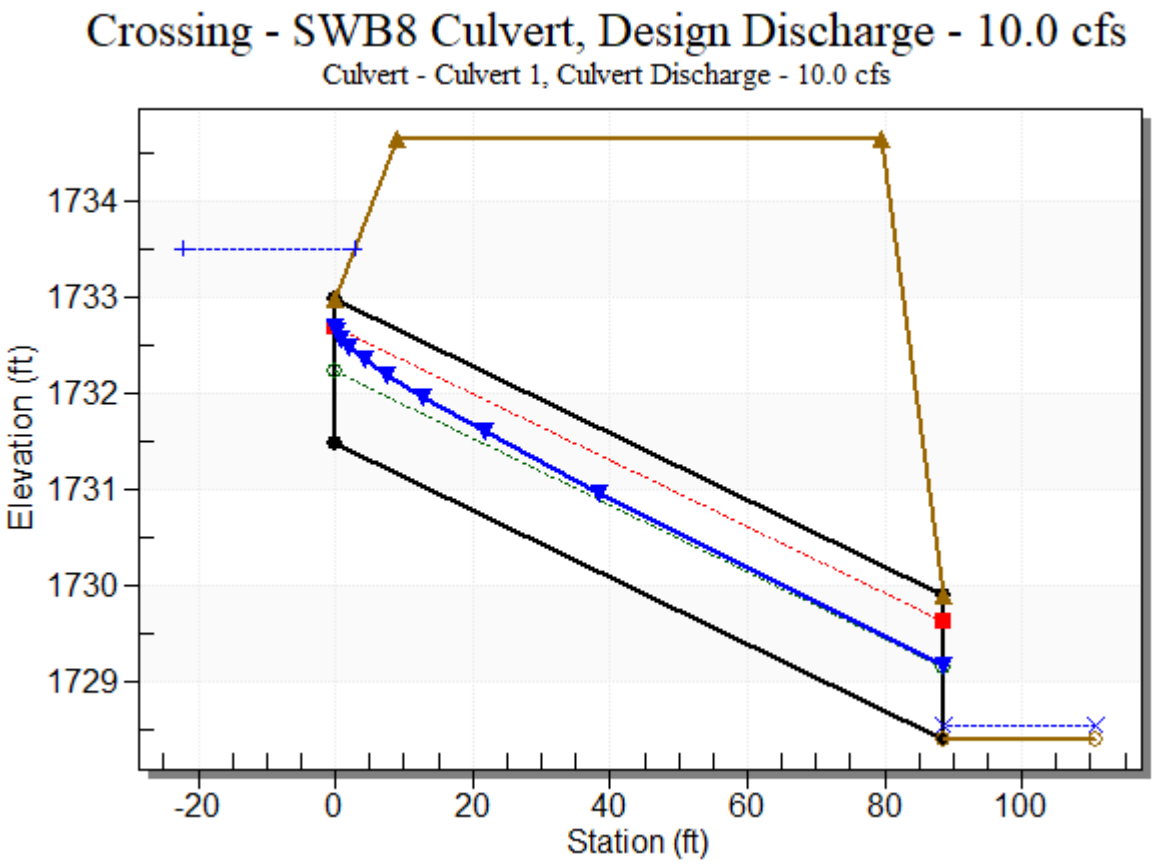
Culvert Length: 88.58 ft, Culvert Slope: 0.0348

****

Culvert Performance Curve Plot: Culvert 1



Water Surface Profile Plot for Culvert: Culvert 1



Site Data - Culvert 1

Site Data Option: Culvert Invert Data

Inlet Station: 0.00 ft

Inlet Elevation: 1731.48 ft

Outlet Station: 88.53 ft

Outlet Elevation: 1728.40 ft

Number of Barrels: 1

Culvert Data Summary - Culvert 1

Barrel Shape: Circular

Barrel Diameter: 1.50 ft

Barrel Material:

Embedment: 0.00 in

Barrel Manning's n: 0.0130

Culvert Type: Straight

Inlet Configuration: Grooved End Projecting

Inlet Depression: None

Table 3 - Downstream Channel Rating Curve (Crossing: SWB8 Culvert)

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
1.00	1728.44	0.04	3.34	1.05	3.09
2.40	1728.46	0.06	4.70	1.78	3.35
3.80	1728.48	0.08	5.62	2.33	3.51
5.20	1728.50	0.10	6.34	2.81	3.62
6.60	1728.51	0.11	6.94	3.24	3.70
8.00	1728.53	0.13	7.46	3.64	3.76
9.40	1728.54	0.14	7.93	4.00	3.82
10.00	1728.55	0.15	8.12	4.15	3.84
12.20	1728.56	0.16	8.75	4.67	3.91
13.60	1728.58	0.18	9.11	4.98	3.95
15.00	1728.59	0.19	9.45	5.28	3.99

Tailwater Channel Data - SWB8 Culvert

Tailwater Channel Option: Trapezoidal Channel

Bottom Width: 8.00 ft

Side Slope (H:V): 3.00 (_:1)

Channel Slope: 0.4560

Channel Manning's n: 0.0330

Channel Invert Elevation: 1728.40 ft

Roadway Data for Crossing: SWB8 Culvert

Roadway Profile Shape: Constant Roadway Elevation

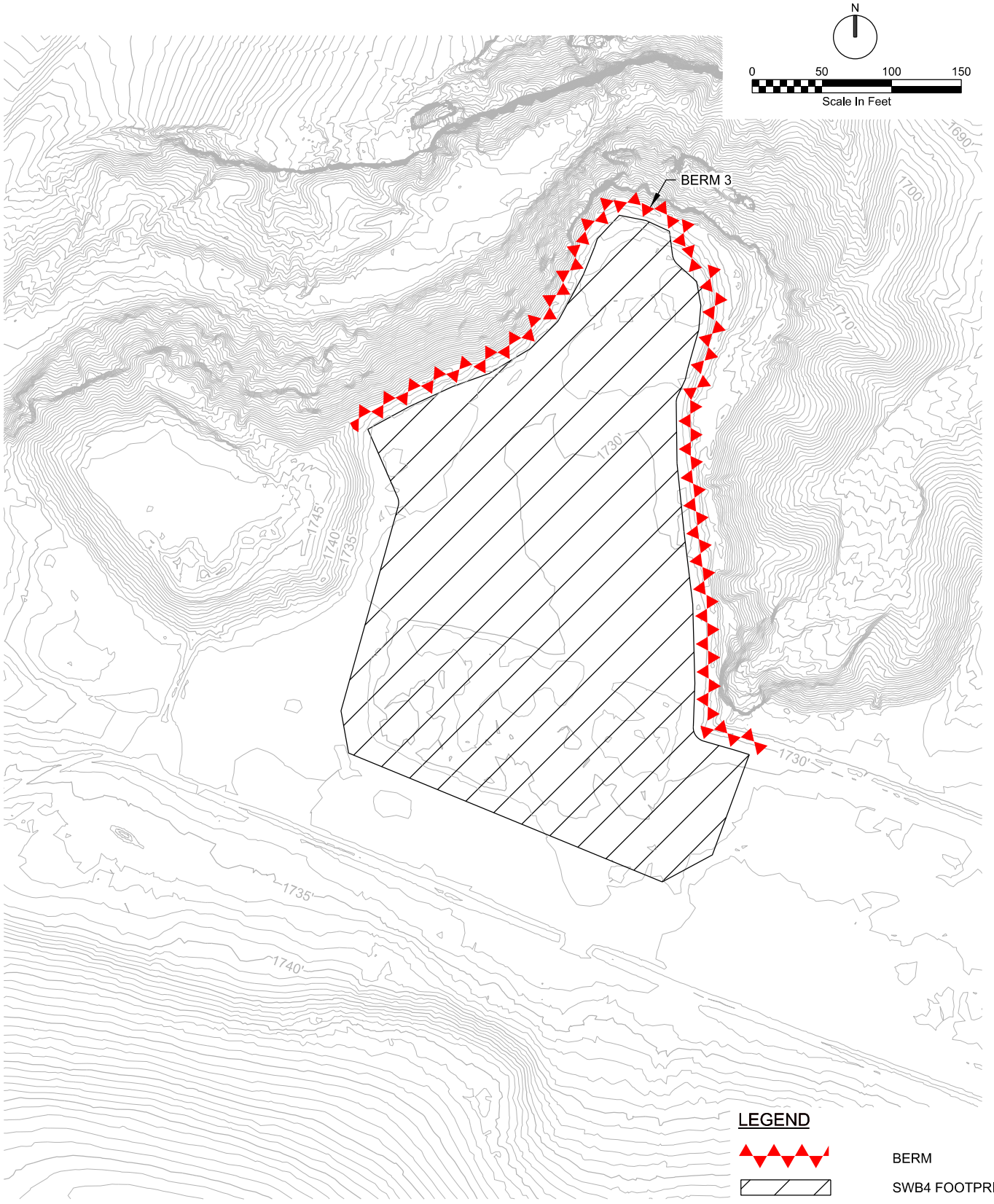
Crest Length: 20.00 ft

Crest Elevation: 1734.66 ft

Roadway Surface: Gravel

Roadway Top Width: 70.41 ft

SWB4 Exhibit



UPDATED SWB4 STORMWATER BASIN FOOTPRINT

REID GARDNER STATION

Berm_Exhibit_3D.dgn

NOTES:

DATE: 10/14/2021

BERM ELEVATION: 1731.50'
FILL VOLUME: 4,858 C. Y.